Appendix A: Draft EIR Comment Letters

From: Raihan Saleh <RSaleh@valleywater.org>
Sent: Monday, September 26, 2022 2:54 PM
To: Garg, Tina <Tina.Garg@sanjoseca.gov>
Cc: Colleen Haggerty <chaggerty@valleywater.org>
Subject: Valley Water Comments: Berryessa Mixed Use Project

Hello,

Valley Water has reviewed the Draft Environmental Impact Report for the Berryessa Mixed Use Project at 1655 Berryessa Road. Based on our review of the report we have the following comments:

Groundwater:

1. **Section 3.10, various subsections**: In several subsections, the DEIR refers to the Santa Clara Plain subbasin. Please note this terminology is inconsistent with Valley Water's Groundwater Management Plan. The project is in the Santa Clara Subbasin, which Valley Water subdivides into two groundwater management areas, the Coyote Valley and the Santa Clara Plain. The project is in the Santa Clara Plain groundwater management area of the Santa Clara Subbasin. All references in the DEIR should be updated appropriately. The subbasin and groundwater management areas are described in Valley Water's 2021 Groundwater Management Plan: https://s3.us-west-2.amazonaws.com/assets.valleywater.org/2021_GWMP_web_version.pdf A.1

   The DEIR also references Valley Water's 2016 Groundwater Management Plan, which was superseded in November 2021. Valley Water recommends all references be updated to the 2021 Groundwater Management Plan.

2. **Section 3.10.2.1, Dewatering**: The project DEIR notes that shallow groundwater is likely present at depths of 5 to 15 feet and that excavation could extend to 30 feet below grade. The DEIR also notes construction will comply with terms of the Construction General Permit and if groundwater dewatering is needed design-level geotechnical investigations will be prepared to evaluate the potential for settlement.

   Since the project is located on a regulated contaminant release site, Valley Water recommends that the geotechnical investigations evaluate the potential for dewatering to mobilize the contaminants noted in the site assessment reports submitted to the County Department of Environmental Health. Valley Water also recommends that a more detailed analysis of construction dewatering be conducted, including an evaluation of related impacts based on estimated dewatering volumes and durations. Lastly, Valley Water recommends that the construction dewatering system be designed such that the volume and duration of dewatering are minimized to the greatest extent possible. A.2

3. **Section 3.10.2.1, Post-Construction and Appendix E**: Soil testing performed by Cornerstone Earth Group (detailed in Appendix E of the DEIR) noted that the site consists of primarily clayey soils and infiltration tests showed very low permeability and non-draining conditions. Valley Water recommends further geotechnical analysis to determine whether the proposed bioretention areas would be feasible in this location since stormwater infiltration devices (SWIDs) do not work well in clay soils. This is also aligned with the recommendations in Section 6.4 of the Santa Clara Valley Urban Runoff Pollution Prevention Program C.3 Stormwater Handbook for confirming infiltration rates.

   Per Table A-1 of Appendix A of the C.3 Stormwater Handbook (Table A-1), the required groundwater separation for a SWID is 10 feet. Since the depth to first groundwater in the area appears to be within this range, any SWIDs used at this site would likely not meet the groundwater separation requirement. Table A-1 also requires a 1,500-foot setback or regulatory agency approval from any known contamination sites. The DEIR should clarify whether the Site Management Plan required by DEH constitutes "regulatory approval" for SWID design/implementation. A.3

   Additionally, Valley Water is concerned about the potential for the proposed SWIDs to mobilize contaminants from shallow soil to deeper soil and/or groundwater that could have negative impacts on groundwater quality. Therefore, Valley Water recommends additional detail about operation of the proposed SWIDs. In addition, there appears to be an active well (06S01E32H001) located within 1,500 feet of the project site, Table A-1 requires a horizontal setback of 1,500 feet or more. Hence, the proposed SWIDs for the project site do not appear to meet several of the guidelines outlined in Table A-1.

4. **Section 3.7.1.2 Existing Conditions, Site Geology**: This section notes that: "Groundwater flows toward the south or southwest.". However, the regional groundwater flow gradient in the Santa Clara Subbasin is toward the San Francisco Bay (north or northwest) as documented in Valley Water's 2021 Groundwater Management Plan (https://s3.us-west-2.amazonaws.com/assets.valleywater.org/2021_GWMP_web_version.pdf). If there are locally available data that supports shallow groundwater flow "toward the south or southwest" Valley Water recommends providing a supporting reference or citation A.4

   Although the project location is within an area of known historical land subsidence (prior to the early 1970s), this DEIR section has no related information. Valley Water recommends adding a brief description about the historical subsidence and Valley Water activities to minimize the risk of resumed subsidence in the Santa Clara Subbasin per Valley Water's 2021 Groundwater Management Plan.

5. **Section 3.10.1.1, Regulatory Framework**: This section does not describe the Sustainable Groundwater Management Act (SGMA) of 2014. Valley Water suggests adding a subsection about SGMA and Valley Water's role as a Groundwater Sustainability Agency (GSA) for the Santa Clara Subbasin because the project overlies this subbasin. Valley Water also recommends adding language about the 2021 Groundwater Management Plan, which is the first five-year periodic update of Valley Water's state-approved Alternative to a Groundwater Sustainability Plan. A brief history is available on Valley Water's website here: https://www.valleywater.org/your-water/where-your-water-comes/groundwater/sustainable and within the 2021 Groundwater Management Plan, which is available here: https://s3.us-west-2.amazonaws.com/assets.valleywater.org/2021_GWMP_web_version.pdf. A.5

6. Valley Water records show 1 active well on APN: 241-03-025. If the well will continue to be used following permitted activity, it must be protected so that it does not become lost or damaged during completion of permitted activity. If the well will not be used following permitted activity, it must be properly destroyed under permit from the District. While the District has records for most wells located in the County, it is always possible that a well exists that is not in the District's records. If previously unknown wells are found on the subject property during development, they must be properly destroyed under permit from the District or registered with the District and protected from damage. Additionally, it should be clarified that well construction, including borings 45 feet or more in depth, and destruction permits are required under Valley Water's Well Ordinance 90-1. Under Valley Water's Water Resources Protection Ordinance, projects within Valley Water property or easements are required to obtain permits. A.6

Water Supply:

7. As noted in the Water Supply Assessment, there is the potential for water shortages in multiple dry years. The Urban Water Management Plans (UWMP) for the San Jose Water Company and for Valley Water assume substantial increases in water conservation which is an important component of the county's future water supply. To meet future needs as projected in the UWMP, additional water demand management and conservation measures will need to be implemented. Consistent with General Plan Policies MS-18.5 and 18.6, the 2030 Greenhouse Gas Reduction Strategy, and to meet water conservation targets assumed in the Water Supply Assessment, Valley Water suggests that all new multifamily development be required to install separate submeters to each unit to encourage efficient water use. Studies have shown that adding submeters can reduce water use 15 to 30 percent. A.7

Water Use:

8. Water use efficiency is a key pillar of Valley Water's program to maintain and improve water supply reliability into the future. Valley Water recommends that the developers include water efficient appliances and landscaping. Where feasible, landscaping should get fed with recycled water and the developer could discuss with San Jose the feasibility of a hook up to the South Bay's recycled water system. In addition, Valley Water recommends the developer include recommended actions from our Model New Development Water Efficient Ordinance. A.8

If there are any further questions or concerns please contact Raihan Saleh at rsaleh@valleywater.org and reference Valley Water file 24204.

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Santa Clara Valley Water District is now known as:

Valley Water

Clean Water • Healthy Environment • Flood Protection

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www.valleywater.org

San Francisco Bay Regional Water Quality Control Board

Date

August 30, 2022

Sent via electronic mail: No hardcopy to follow

City of San Jose, Department of Planning, Building and Code Enforcement
ATTN: Tina Garg (Tina.Garg@sanjoseca.gov)
200 East Santa Clara St., 3rd Floor
San José, CA 95113

Subject: San Francisco Bay Regional Water Quality Control Board Comments on the Draft Environmental Impact Report for the Berryessa Mixed Use Project, City of San Jose, Santa Clara County, California
File Nos.: PDC18-036/PD21-009/PT21-030/ER20-260
SCH No. 2021070467

Dear Ms. Garg:

San Francisco Bay Regional Water Quality Control Board (Water Board) staff appreciates the opportunity to review the *Draft Environmental Impact Report for the Berryessa Mixed Use Project* (DEIR). The DEIR evaluates the potential environmental impacts associated with implementing the Berryessa Mixed Use Project (Project). The 13-acre Project site is located at 1655 Berryessa Road in the City of San José. The Project's applicant seeks to rezone the project site from the LI - Light Industrial Zoning District to a PD - Planned Development Zoning District. In addition, the Project's applicant is seeking approval of a Planned Development Permit to develop up to 850 residential units and up to 480,000 square feet of commercial space, and to create an approximately 0.9-acre open space area. A Vesting Tentative Map to merge three parcels into one; and re-subdivide the merged parcel into 35 lots; and create up to 590 condominium units and new streets is also included in the project. Under the Project, the three existing industrial buildings and ancillary structures and parking lot would be demolished. Trees on the site would be removed and replaced. B.1

Summary
As is discussed below, the proposed fill of a 0.34-acre pond is a relatively large impact to waters of the State for a single project, and the Project applicant should not assume that the Water Board will issue a permit for the fill of the pond present at the Project site. B.2

In addition, the DEIR does not provide an adequate discussion of potential mitigation measures for Project impacts to waters of the State. B.2

Comment 1. The Project applicant should not assume that the Water Board will approve the fill of the 0.34-acre pond at the Project site.

Section 3.4, *Biological Resources*, includes a discussion of existing conditions in Section 3.4.1.2. A 0.34-acre pond with a depth of 10 feet and a wetland fringe is located on the Project site. Arroyo willow and Fremont cottonwood grow around the pond. This pond was constructed between 1968 and 1981. The U.S. Army Corps of Engineers determined that the pond was not a water of the U.S in a jurisdictional determination dated August 23, 2022 (SPN-2022-00077S). However, the jurisdictional determination noted that the pond may still be regulated as a water of the State. This pond is perennial and may intercept the local groundwater table. Regardless of its origin, the pond has been present at the site for half a century and is self-sustaining. Therefore, it is regulated as a water of the State pursuant to the State's Porter-Cologne Water Quality Act. As the DEIR correctly notes, the Water Board considers all areas below the top of bank to be waters of the State. The DEIR should clarify if the complete area below top of bank is greater than 0.34 acres. Since the pond is not subject to federal jurisdiction, fill of the pond will require the issuance of Waste Discharge Requirements (WDRs) from the Water Board. Issuance of WDRs will require public noticing of the proposed WDRs and approval by a vote of the Board at one of our monthly Board meetings. B.3

When the Water Board receives an application for certification and/or WDRs, staff reviews the project to verify that the project proponent has taken all feasible measures to avoid impacts to waters of the State (these impacts usually consist of the placement of fill in waters of the State). Where impacts to waters of the State cannot be avoided, projects are required to minimize impacts to waters of the State to the maximum extent practicable (i.e., the footprint of the project in waters of the state is reduced as much as possible). Compensatory mitigation is then required for those impacts to waters of the state that cannot be avoided or minimized. Avoidance and minimization of impacts is a prerequisite to developing an acceptable project and identifying appropriate compensatory mitigation for an approved project's impacts. Avoidance and minimization cannot be used as compensatory mitigation. After avoidance and minimization of direct impacts to waters of the State have been maximized for the proposed project, the necessary type and quantity of compensatory mitigation for the remaining impacts to waters of the State are assessed on a case-by-case basis. B.4

Under both the Clean Water Act and the *San Francisco Bay Basin Water Quality Control Plan* (Basin Plan), projects are required to avoid impacts to waters of the U.S. and waters of the State, in conformance with U.S. Environmental Protection Agency's CWA 404(b)(1) Guidelines (Guidelines). The Guidelines provide guidance in evaluating the circumstances under which the fill of jurisdictional waters may be permitted. Projects must first exhaust all opportunities, to the maximum extent practicable, to avoid, and then to minimize impacts to jurisdictional waters. Only after all options for avoidance and minimization of impacts have been exhausted, is it appropriate to develop mitigation for adverse impacts to waters of State. Since mixed use development is not a water dependent project, it is assumed that impacts to waters of the State can be avoided.

The Water Boards only allow compensatory mitigation to be implemented for those impacts to waters of the State that cannot be avoided and/or minimized; "avoidance and minimization" in the context of reviewing applications for WDRs refers to minimizing the proposed project's footprint in waters of the State. The current Project proposes to fill all waters of the State that are present at the Project site. It is unusual for the Water Board to issue permits for projects that include no avoidance or minimization of impacts to waters of the State. The Project applicant is encouraged to revise the DEIR to fully explore an alternative that completely avoids fill of the pond and incorporates it into the Project's landscaping and open space. B.4

Comment 2. The DEIR does not describe acceptable mitigation for the proposed fill of 0.34 acres of waters of the State at the Project site.

Section 3.4.2.1, Project Impacts, states that the 0.34-acre pond on the Project site is proposed to be filled by the Project. The discussion of impacts states that:

> The project would comply with all applicable conditions of the Habitat Plan, including measures to protect water quality and payment of land cover and wetland specialty fees for pond impacts. As described in the response to checklist question b), payment of land cover and specialty wetland impact fees for the pond will reduce the project's impact to on-site pond habitat to a less than significant level by contributing to the Habitat Plan's conservation program, which includes creation, maintenance, and management of pond habitats. The San Francisco Bay RWQCB or USACE could impose additional requirements as part of Section 404/401 permits that goes beyond what the City as the Lead Agency would require as mitigation under CEQA (i.e., payment of Habitat Plan fees) to off-set impacts from filling the pond under the State of California Porter-Cologne Water Quality Control Act.
> **(Less than Significant Impact)**

B.5

The Habitat Plan does not currently provide mitigation for impacts to waters of the State that satisfies the requirements of the State's no net loss policy. At this time, there are also no mitigation banks with service areas that include the Project site that provide mitigation for the fill of open waters or wetlands. Therefore, if the Water Board determines that it is appropriate to approve the fill of the 0.34-acre pond, the Project's applicant will be required to provide permittee-responsible mitigation. The DEIR's conclusion that fill of the pond will be a less than significant impact is not supported by the information provided in the DEIR.

Please note that the required amount of mitigation will depend on the similarity of the impacted water of the state to the provided mitigation water of the State, the uncertainty associated with successful implementation of the mitigation project, and the distance B.6

between the site of the impact and the site of the mitigation water. In-kind mitigation for the fill of open waters consists of the creation of new open waters. If the mitigation consists of restoration or enhancement of open waters, the amount of mitigation will be greater than if the mitigation consists of the creation of open waters. If there are uncertainties with respect to the availability of sufficient water to support a mitigation water or sufficiently impermeable soils to sustain ponding, then the amount of mitigation would also have to be greater. Finally, the amount of required mitigation increases as the distance between the impact site and the mitigation site increases.

A mitigation ratio of 1:1 may be acceptable if a mitigation pond is established on the Project site. For mitigation projects that are offsite and/or out-of-kind, the required mitigation ratio will increase with distance from the Project site and any differences between the type of water body that is impacted and the type of water body that is provide at the mitigation site. For an off-site mitigation project, the applicant will need to acquire fee title to a property with the proper hydrology to support an appropriately-sized mitigation feature. In addition, the applicant will need to monitor and maintain the mitigation feature for at least five years, until final performance criteria are attained. The applicant will also need to place a conservation easement or deed restriction over the property and establish an endowment for the long-term maintenance of the mitigation feature. B.6

Without a description of a viable mitigation project, the DEIR does not demonstrate that the Project's impacts to waters of the State can be mitigated to a less than significant level. B.7

In a CEQA document, a project's potential impacts and proposed mitigation measures should be presented in sufficient detail for readers of the CEQA document to evaluate the likelihood that the proposed remedy will actually reduce impacts to a less than significant level. CEQA requires that mitigation measures for each significant environmental effect be adequate, timely, and resolved by the lead agency. In an adequate CEQA document, mitigation measures must be feasible and fully enforceable through permit conditions, agreements, or other legally binding instruments (CEQA Guidelines Section 15126.4). Mitigation measures to be identified at some future time are not acceptable. It has been determined by court ruling that such mitigation measures would be improperly exempted from the process of public and governmental scrutiny which is required under the California Environmental Quality Act. The current text of the DEIR does not demonstrate that it is feasible to mitigate all potentially significant impacts to waters of the State that may result from project implementation to a less than significant level. Impacts to the jurisdictional waters at the project site, as well as proposed mitigation measures for such impacts, will require review under CEQA before the Water Board can issue permits for those proposed impacts. B.8

Conclusion

The DEIR does not provide sufficient detail with respect to mitigation for Project impacts to waters of the State. The DEIR should be revised to provide specific mitigation measures for all impacts to waters of the State. These mitigation measures should be B.9

in-kind and on-site mitigation measures to the maximum extent possible. The amount of
proposed mitigation should include mitigation for temporal losses of any impacted
waters of the State. If mitigation is out-of-kind and/or off-site, then the amount of the
proposed mitigation should be increased. Proposed mitigation measures should include
designs with sufficient detail to show that any created waters will have sufficient
hydrology to sustain pond hydrology and vegetation without human intervention. A B.9
proposed program for monitoring the success of the mitigation features should also be
included with the mitigation proposal(s). In addition, before the Water Board issues a
permit that authorizes the fill of the 0.34-acre pond, we must be provided with an
alternatives analysis that demonstrates that avoidance of some or all of the waters of
the State at the Project site is infeasible.

If the DEIR is adopted without providing concrete mitigation proposals for impacts to
waters of the State, it is likely that the DEIR will not be adequate to support the issuance B.10
of Waste Discharge Requirements for the Project.

If you have any questions, please contact me at (510) 622-5680, or via e-mail at brian.wines@waterboards.ca.gov.

Sincerely,

Brian K. Wines

Brian Wines
Water Resources Control Engineer
South and East Bay Watershed Section

cc: State Clearinghouse (state.clearinghouse@opr.ca.gov)
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September 28, 2022

Via Email
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Re: Comments on the Draft Environmental Impact Report for the Berryessa Road Mixed-Use Development Project (PDC18-036/PD21-009 and PT21-030; SCH# 2021070467)

Dear Ms. Garg:

We are writing on behalf of Silicon Valley Residents for Responsible Development ("Silicon Valley Residents") to provide comments on the Draft Environmental Impact Report ("DEIR") prepared by the City of José ("City") for the Berryessa Road Mixed-Use Development Project, PDC18-036/PD21-009 and PT21-030; SCH# 2021070467, ("Project"), proposed by Terracommercial Real Estate Corporation ("Applicant").

The Project is located at 1655 Berryessa Road, San Jose 95133. The site's Assessor's Parcel Numbers ("APNs") are 241-03-023, 241-03-024, and 241-03-025. The site currently contains two industrial buildings, a portable office structure, ancillary structures, an associated parking lot, a vegetated stormwater detention pond, and trees. C.1

The Project proposes a Planned Development ("PD") Zoning for development of up to 850 residential units, 480,000 square feet of commercial space, and a 0.9-acre park at the Project site. The proposed residential units include 614 market rate multi-family, 189 affordable multi-family, 23 townhouse, and 24 single-family units. The proposed residences would be located in the northeastern and central areas and along the northern and western perimeter of the site. The proposed commercial space would be located in the southern area of the site, fronting Berryessa Road, and the open space park would be located on the northwestern corner of the site. Several discretionary approvals will be required to implement the Project, including: PD Rezoning, PD Permit, Subdivision Maps, and Tree Removal Permits.[1]

We reviewed the DEIR and its technical appendices with the assistance of air quality and health risk experts Matt Hagemann, P.G, C.Hg. and Paul E. Rosenfeld, PhD from Soil / Water / Air Protection Enterprise ("SWAPE"),[2] and noise expert Derek Watry.[3] The City must separately respond to these technical comments.

Based upon our review of the DEIR and supporting documentation, we conclude that the DEIR fails to comply with the requirements of CEQA. As explained more fully below, the DEIR fails to accurately analyze, disclose, and mitigate the Project's potentially significant air quality, public health, greenhouse gas ("GHG"), hazards, noise, growth-inducing, and land use impacts. As a result of its shortcomings, the DEIR lacks substantial evidence to support its conclusions and fails to properly mitigate the Project's significant environmental impacts. The City cannot approve the Project until the errors and omissions in the DEIR are remedied, and a revised DEIR is recirculated for public review and comment which fully discloses and mitigates the Project's potentially significant environmental impacts. C.1

I. STATEMENT OF INTEREST

Silicon Valley Residents is an unincorporated association of individuals and labor organizations that may be adversely affected by the potential public and worker health and safety hazards, and the environmental and public service impacts of the Project. Residents includes the International Brotherhood of Electrical Workers Local 332, Plumbers & Steamfitters Local 393, Sheet Metal Workers Local 104, Sprinkler Fitters Local 483 and their members and their families; and other individuals that live and/or work in the City of San José and Santa Clara County. C.2

Individual members of Silicon Valley Residents, including City resident Erica Valentine, live, work, recreate, and raise their families in the City and in the surrounding communities. Accordingly, they would be directly affected by the Project's environmental and health and safety impacts. Individual members may

[1] DEIR, pg. 17.
[2] Mr. Hagemann's and Dr. Rosenfeld's comments and curricula vitae are attached hereto as **Exhibit A** ("SWAPE Comments").
[3] Mr. Watry's comments and curricula vitae and are attached hereto as **Exhibit B** ("Watry Comments").

also work on the Project itself. They will be first in line to be exposed to any health and safety hazards that exist on site.

In addition, Silicon Valley Residents has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for businesses and industries to expand in the region, and by making the area less desirable for new businesses and new residents. Indeed, continued environmental degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduce future employment opportunities. C.2

I. LEGAL BACKGROUND

CEQA has two basic purposes, neither of which the DEIR satisfies. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project.[4] CEQA requires that an agency analyze potentially significant environmental impacts in an EIR.[5] The EIR should not rely on scientifically outdated information to assess the significance of impacts, and should result from "extensive research and information gathering," including consultation with state and federal agencies, local officials, and the interested public.[6] To be adequate, the EIR should evidence the lead agency's good faith effort at full disclosure.[7] The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return."[8] "Thus, the EIR protects not only the environment but also informed self-government."[9] C.3

Second, CEQA directs public agencies to avoid or reduce environmental damage when possible by requiring alternatives or mitigation measures.[10] The EIR serves to provide public agencies and the public in general with information about the effect that a proposed project is likely to have on the environment and to

[4] CEQA Guidelines, § 15002, subd. (a)(1).
[5] *See* Pub. Resources Code, § 21000; CEQA Guidelines, § 15002.
[6] *Berkeley Keep Jets Over the Bay Comm. v. Board of Port Comm.* ("*Berkeley Jets*") (2001) 91 Cal.App.4th 1344, 1367.; *Schaeffer Land Trust v. San Jose City Council* (1989) 215 Cal.App.3d 612, 620.
[7] CEQA Guidelines, § 15151; *see also Laurel Heights Improvement Assn. v. Regents of University of California* ("*Laurel Heights I")* (1988) 47 Cal.3d 376, 406.
[8] *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.
[9] *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 564 (citations omitted).
[10] CEQA Guidelines, § 15002, subd. (a)(2)-(3); *Berkeley Keep Jets Over the Bay Com. v. Bd. of Port Comrs.,* 91 Cal.App.4th at 1354.

"identify ways that environmental damage can be avoided or significantly reduced."[11] If a project has a significant effect on the environment, the agency may approve the project only upon a finding that it has "eliminated or substantially lessened all significant effects on the environment where feasible," and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns" specified in CEQA section 21081.[12]

As these comments will demonstrate, the DEIR fails to comply with the requirements of CEQA and may not be used as the basis for approving the Project. It fails in significant aspects to perform its function as an informational document that is meant "to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment" and "to list ways in which the significant effects of such a project might be minimized."[13] The DEIR also lacks substantial evidence to support the City's proposed findings that the Project will not result in any significant, unmitigated impacts. C.3

II. THE CITY FAILED TO PROVIDE TIMELY ACCESS TO DOCUMENTS REFERENCED AND INCORPORATED BY REFERENCE IN THE DEIR

The City improperly truncated the DEIR public comment period by failing to make all documents referenced and incorporated by reference in the DEIR available for public review during the Project's public comment period, which ends on September 28, 2022.[14]

Access to all of the documents referenced in the DEIR is necessary to conduct a meaningful review of its analyses, conclusions, and mitigation measures, and to assess the Project's potential environmental impacts. CEQA requires that "all documents referenced" and "incorporated by reference" in the draft environmental impact report be available for review and "readily accessible" during the entire comment period.[15] The courts have held that the failure to provide even a few pages of a CEQA document for a portion of the review and comment period invalidates the entire CEQA process, and that such a failure must be remedied by permitting C.4

[11] CEQA Guidelines, § 15002, subd. (a)(2).
[12] *Id.*, subd. (b)(2)(A)-(B).
[13] *Laurel Heights I, supra,* 47 Cal.3d at pg. 391.
[14] *See* PRC § 21092(b)(1); 14 CCR § 15087(c)(5).
[15] PRC § 21092(b)(1).

additional public comment.[16] It is also well-settled that a CEQA document may not rely on hidden studies or documents that are not provided to the public.[17]

Here, the City failed to provide public access to the Water Supply Assessment ("WSA") prepared for the Project during the comment period. The DEIR describes a WSA prepared for the Project in January 2022: "[t]his discussion is based in part upon a Water Supply Assessment completed by San José Water Company in January 2022. A copy of this assessment is included in Appendix J of this EIR.[18] But Appendix J does not include the WSA, nor is the WSA elsewhere made available on the City website. The public is precluded from evaluating the adequacy of the EIR's discussion of water supply impacts without access to the underlying study on which the City's analysis relies. C.4

The City's approach thus violates CEQA. We reserve our right to submit supplemental comments on the DEIR at a future date.

III. THE DEIR FAILS TO ADEQUATELY ANALYZE, QUANTIFY, AND MITIGATE THE PROJECT'S POTENTIALLY SIGNIFICANT IMPACTS

An EIR must fully disclose all potentially significant impacts of a project, and implement all feasible mitigation to reduce those impacts to less than significant levels. The lead agency's significance determination with regard to each impact must be supported by accurate scientific and factual data.[19] An agency cannot conclude that an impact is less than significant unless it produces rigorous analysis and concrete substantial evidence justifying the finding.[20] C.5

The failure to provide information required by CEQA is a failure to proceed in the manner required by law.[21] Challenges to an agency's failure to proceed in the manner required by CEQA, such as the failure to address a subject required to be covered in an EIR or to disclose information about a project's environmental effects or alternatives, are subject to a less deferential standard than challenges to an

[16] See *Ultramar v. South Coast Air Quality Man. Dist.* (1993) 17 Cal.App.4th 689, 699.
[17] *Santiago County Water Dist. V. County of Orange* (1981) 118 Cal.App.3d 818, 831 ("Whatever is required to be considered in an EIR must be in that formal report; what any official might have known from other writings or oral presentations cannot supply what is lacking in the report.").
[18] DEIR, pg. 241.
[19] 14 CCR § 15064(b).
[20] *Kings Cty. Farm Bur. v. Hanford* (1990) 221 Cal.App.3d 692, 732.
[21] *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 512; *Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236.

agency's factual conclusions.[22] In reviewing challenges to an agency's approval of an EIR based on a lack of adequate information, the court will "determine de novo whether the agency has employed the correct procedures, scrupulously enforcing all legislatively mandated CEQA requirements."[23]

Even when the substantial evidence standard is applicable to agency decisions to certify an EIR and approve a project, reviewing courts will not 'uncritically rely on every study or analysis presented by a project proponent in support of its position. A clearly inadequate or unsupported study is entitled to no judicial deference.'"[24] C.5

A. The DEIR Fails to Adequately Disclose, Analyze, and Mitigate Potentially Significant Air Quality Impacts

The DEIR concludes that the Project's construction and operational criteria air pollutant emissions will be less than significant after mitigation. This conclusion relies on analysis using CalEEMod Version 2020.4.0 modeling software.[25] SWAPE reviewed the DEIR's CalEEMod analysis and found that several modeling inputs were either unsubstantiated or inconsistent with information disclosed elsewhere in the DEIR. As a result, the Project's construction and operational emissions are underestimated, and unsupported by substantial evidence. SWAPE corrected the errors in the DEIR's analysis, finding that the Project would result in a significant air quality impact that was not previously identified or addressed by the DEIR. C.6

1. The DEIR Underestimates the Project's Air Quality Impacts by Erroneously Assuming Use of Tier 4 Equipment

The DEIR's CalEEMod analysis assumes that the Project's offroad construction equipment will meet Tier 4 Interim standards.[26] This assumption is not supported by substantial evidence. MM AIR-1.1 requires use of Tier 4 equipment "if feasible."[27] And "[i]f use of Tier 4 equipment is not available," MM AIR-1.1 permits use of equipment with less stringent emissions standards: C.7

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[22] *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 435.
[23] *Id.*; *Madera Oversight Coal., Inc. v. County of Madera* (2011) 199 Cal. App. 4th 48, 102.
[24] *Berkeley Jets*, 91 Cal.App.4th at 1355.
[25] Appendix B, pg. 13.
[26] DEIR, Appendix B, pg. 27 ("The CalEEMod model was used to estimate the effectiveness of MM AQ-2 using Tier 4 interim construction equipment.").
[27] DEIR, pg. vi.

> …alternatively use equipment that meets U.S. EPA emission standards for Tier 2 or 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices that altogether achieve a 60 percent reduction in particulate matter exhaust in comparison to uncontrolled equipment; alternatively (or in combination).[28]

C.7

The DEIR's assumption that Project's offroad construction equipment will meet Tier 4 Interim standards is unjustified because the above measure simply does not commit the City to using Tier 4 Interim equipment. Merely requiring use of Tier 4 equipment "if feasible" does not bind the City to this level of mitigation. Further, it is unrealistic to assume the Project will certainly obtain an entire off-road construction equipment fleet that meets Tier 4 Interim emissions, and the DEIR lacks a discussion or supporting evidence describing the feasibility of obtaining Tier 4 Interim equipment during Project construction.[29]

C.8

Nevertheless, the DEIR's construction emissions modeling assumes that Project construction will use exclusively Tier 4 Interim equipment:

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
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tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

[30]

Although off-road Tier 4 equipment is available for purchase, it is new technology that may not yet be readily available at all construction equipment

[28] DEIR, pg. vi.
[29] San Francisco Clean Construction Ordinance Implementation Guide for San Francisco Public Projects." August 2015, *available at:* https://www.sfdph.org/dph/files/EHSdocs/AirQuality/San_Francisco_Clean_Construction_Ordinance_2015.pdf, pg. 6.
[30] SWAPE Comments, p. 7, citing DEIR Appendix B, pp. 65, 124.

vendors, may require special procurement by the Applicant, and is more costly than lower tier equipment.[31] It is therefore unreasonable to presume, without analysis, that all construction equipment that will be used for the Project will use Tier 4 engines. And absent supporting evidence, such as vendor contracts for the Tier 4 equipment, or a binding condition which requires all off-road construction equipment to be exclusively Tier 4, the assumption that Project contractors will have ongoing access to Tier 4 Interim equipment for all of the Project's off-road equipment over the Project's lengthy 44-month construction phase is entirely unreasonable.

The DEIR's emissions calculations using Tier 4 Interim equipment do not provide the City with substantial evidence demonstrating that the Project construction emissions will be less than significant because Tier 4 Interim equipment achieves greater emissions reductions than required by MM AIR-2. Tier 4 standards require that emissions of PM and NOx be reduced by about 90% over uncontrolled emissions.[32] The DEIR's emission calculations therefore assume an approximately 90% reduction in construction emissions. By contrast, MM AIR-2 expressly allows lower-tiered equipment which would "achieve a ***60 percent*** reduction in particulate matter exhaust in comparison to uncontrolled equipment."[33] In reality, the Project's construction emissions may therefore be 30% higher than the emissions calculated in the DEIR. C.8

Because Tier 2 and 3 equipment emits substantially more than Tier 4 Interim equipment, the City's CalEEMod analysis substantially underestimates emissions.[34] SWAPE explains that until the DEIR can provide substantial evidence that Tier 4 Interim equipment is readily available for use at the Project site, the CalEEMod model should not include Tier 4 Interim construction equipment.[35]

[31] *Id.*
[32] See Emissions Standards, US Nonroad Diesel Engines, available at https://dieselnet.com/standards/us/nonroad.php.
[33] See DEIR App. B, p. 26.
[34] SWAPE Comments, pg. 7; San Francisco Clean Construction Ordinance Implementation Guide for San Francisco Public Projects." August 2015, *available at:* https://www.sfdph.org/dph/files/EHSdocs/AirQuality/San_Francisco_Clean_Construction_Ordinance_2015.pdf, pg. 6.
[35] SWAPE Comments, pg. 7.

2. The DEIR Underestimates the Project's Air Quality Impacts by Incorrectly Reducing Area Coating Emission Factors

SWAPE's review of the CalEEMod output files demonstrates that the "1655 Berryessa Mixed Use with VOC Mitigation" model includes two manual reductions to the default area coating emissions.[36] Specifically, the residential and nonresidential exterior area coating emission factors are each reduced from their default values of 150- to 15-grams per liter ("g/L"). The justification provided in the DEIR for these changes is: "At least 90% of paints have to be super-compliant VOC = 15g/L exterior."[37] But this justification is not supported by substantial evidence, as the DEIR's VOC mitigation – MM AIR-1.4 – only requires the use of low VOC coatings for 60% of exterior paints. As such, the use of low VOC coatings for 90% of exterior paints in the model may underestimate the Project's operational ROG/VOC emissions and should not be relied upon to determine Project significance.[38] C.9

3. The DEIR Underestimates the Project's Air Quality Impacts by Relying on an Unsubstantiated Reduction to Consumer Product Emission Factor

SWAPE's review of the Project's CalEEMod output files demonstrates that the "1655 Berryessa Mixed Use" and "1655 Berryessa Mixed Use with VOC Mitigation" models include a manual reduction to the default consumer product emission factor.[39] The justification the DEIR provides for this change is: "Adjusted ROG for Santa Clara County 2027."[40] But SWAPE explains that this justification is insufficient, as the DEIR fails to mention or justify the revised consumer product emission factor whatsoever. By including a reduced, unsubstantiated change to the default consumer product emission factors, the Project's area-source operational emissions may be underestimated and should not be relied upon to determine Project significance.[41] C.10

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[36] SWAPE Comments, pg. 2.
[37] DEIR, Appendix B, pp. 123
[38] SWAPE Comments, pg. 3.
[39] SWAPE Comments, Appendix B, pp. 65, 124.
[40] DEIR, Appendix B, pp. 64, 123.
[41] SWAPE Comments, pg. 3-4.

4. The DEIR Underestimates the Project's Air Quality Impacts by Underestimating Number of Hauling Trips Required for Grading

SWAPE's review of the CalEEMod output files demonstrates that the "1655 Berryessa Mixed Use" and "1655 Berryessa Mixed Use with VOC Mitigation" models fail to include any hauling trips for the grading phase of construction.[42] SWAPE explains that this approach is not supported by substantial evidence because the DEIR elsewhere states that the project requires about 14,585 truckloads of soil export and import combined."[43] As a result, the total number of one-way hauling trips during grading is underestimated by 29,170 trips.[44] This underestimation in turn results in the underestimation of construction-related emissions associated with on-road vehicles. C.11

5. The DEIR Underestimates the Project's Air Quality Impacts Due to Unsubstantiated Changes to Wastewater System Treatment Percentages

SWAPE's review of the CalEEMod output files demonstrates that the "1655 Berryessa Mixed Use" and "1655 Berryessa Mixed Use with VOC Mitigation" models include several changes to the default wastewater treatment system percentage.[45] Specifically, the model assumes that the Project's wastewater would be treated 100% aerobically.[46] But SWAPE's review of the San Jose-Santa Clara Regional Wastewater Facilities treatment process reveals the use of anaerobic bacteria in the digesters phase of treatment.[47] Therefore, the assumption that the Project's wastewater would be treated 100% aerobically is not supported by substantial evidence. SWAPE explains that because each type of wastewater treatment system is associated with different GHG emission factors, the DEIR's unsubstantiated changes to the default wastewater treatment system percentages may underestimate the Project's GHG emissions.[48] C.12

6. The DEIR Underestimates the Project's Air Quality Impacts Due to Incorrect Application of Operational Energy-Related Mitigation Measure C.14

[42] DEIR, Appendix B, pp. 89, 148, 149.
[43] DEIR, pg. 31.
[44] SWAPE Comments, pg. 4.
[45] DEIR, Appendix B, pp. 83, 84, 143.
[46] SWAPE Comments, pg. 5.
[47] SWAPE Comments, pg. 5.
[48] SWAPE Comments, pg. 5-6.

C.14

SWAPE's review of the CalEEMod output files demonstrates that the "1655 Berryessa Mixed Use" and "1655 Berryessa Mixed Use with VOC Mitigation" models assume that electricity would to be 100-percent carbon free.[49] Specifically, the model assumes the implementation of the below mitigation measure:

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

This measure is inputted as a mitigation measure for on-site renewable energy generation. The City justified this input on the premise that the project would use 100-percent carbon free electricity supplied by San José Clean Energy ("SJCE").[50] However, SWAPE argues that this justification remains insufficient, as the above-mentioned energy-related mitigation measure can only refer to renewable energy generation *on-site* according to the CalEEMod User's Guide.[51] As such, SWAPE argues that electricity obtained from the City's grid is not applicable and the inclusion of the energy-related operational mitigation measure in the models is incorrect.

The City's assumption that all electricity will be 100% carbon free is also legally unsupported. The DEIR's Energy section states that "the project would enroll in SJCE's TotalGreen program, which provides 100 percent carbon-free energy."[52] This excerpt is the DEIR's only statement requiring enrolling in the TotalGreen program. This statement must be identified as a binding mitigation measure for the City to rely on it in their model. CEQA provides that any action that is designed to minimize, reduce, or avoid a significant environmental impact qualifies as a mitigation measure.[53] Mitigation measures must be incorporated into the design of the Project or "fully enforceable through permit conditions, agreements, or other legally binding instruments."[54]

Here, enrollment in TotalGreen must be considered a mitigation measure because it is designed to minimize a significant environmental impact. As shown in Table 8 of the DEIR's air emissions study identifies a significant air impact before mitigation.[55] After mitigation, which includes "Energy Mitigation - SJCE goes 100%

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[49] DEIR, Appendix B, pg. 29.
[50] DEIR, Appendix B, pg. 29;
[51] SWAPE Comments, pg. 6.
[52] DEIR, pg. 105.
[53] 14 Cal Code Regs Section 15370
[54] CEQA Guidelines, § 15126.4, subd. (a)(2).
[55] DEIR, Appendix B, pg. 31, Table 8.

renewable in 2021," the DEIR concludes that impacts are less than significant. The above is evidence that enrollment in TotalGreen is a mitigation measure designed to minimize a significant environmental impact. Further showing that enrollment in TotalGreen is a mitigation measure is the fact that TotalGreen must be opted into, and "is the highest-priced option" SJCE offers.[56] TotalGreen is priced at either $0.005 or $0.01 per kWh above GreenSource, which is the default option.[57] Because TotalGreen must be specifically opted into and costs more, the City cannot argue that enrollment in TotalGreen has an independent purpose from reducing the Project's significant environmental impacts. C.14

Having established that enrollment in SCJE's TotalGreen program is a mitigation measure, this mitigation measure is not clearly incorporated into the Project's design – there is only a single statement in the DEIR's Energy section reflecting intent to enroll. And in the Project Description section, the DEIR merely states that "[e]lectricity at the project site would be provided by San José Clean Energy (SJCE)," without mentioning TotalGreen.[58] Further, the mixed-use buildings proposed by the Project do not themselves require enrollment in the TotalGreen program, showing that enrollment is not a built-in aspect of the Project's design. C.15

This mitigation measure is currently not identified as such, nor is "fully enforceable through permit conditions, agreements, or other legally binding instruments."[59] Thus, the DEIR must be revised to include enrollment in TotalGreen as a binding mitigation measure included in the Project's mitigation monitoring and reporting program.

7. SWAPE's Updated Analysis Indicates a Significant Air Quality Impact

To more accurately estimate the Project's construction-related and operational emissions, SWAPE prepared an updated CalEEMod model.[60] SWAPE's updated model omits the unsubstantiated changes to the consumer product emission factor, area coating emission factors, and wastewater systems treatment C.16

[56] Memorandum from Lori Mitchell to San Jose City Council re: 2022 Power Mix and Rates (November 29, 2021), available at https://www.sanjoseca.gov/home/showpublisheddocument/80600/637752673325570000.
[57] *Id.* at pg. 4.
[58] DEIR, pg. 13.
[59] CEQA Guidelines, § 15126.4, subd. (a)(2).
[60] SWAPE Comments, pg. 7-8.

percentages; and excludes the incorrect energy-related mitigation measure. SWAPE's model still includes the incorrect Tier 4 Interim mitigation.

SWAPE's updated analysis estimates that the reactive organic gas ("ROG") emissions associated with Project construction and operation exceed the applicable BAAQMD thresholds of 54-pounds per day ("lbs/day") and 10-tons per year ("tons/year").[61]

SWAPE Criteria Air Pollutant Emissions

Model	Construction ROG (2026) (lbs/day)	Operational ROG (lbs/day)	Operational ROG (tons/year)
DEIR	36.03	51.26	9.36
SWAPE	134.99	94.82	15.00
% Increase	275%	85%	60%
BAAQMD Threshold	**54**	**54**	**10**
Exceeds?	***Yes***	***Yes***	***Yes***

C.16

These significant air quality impacts were not previously identified or addressed by the DEIR. As a result, a revised EIR should be prepared to adequately assess and mitigate the potential air quality impacts that the Project may have on the environment.

8. Feasible Mitigation Measures are Available to Reduce Emissions

Because the Project's air emissions exceed significance thresholds with the current mitigation measures identified in the DEIR, the City must consider additional feasible mitigation measures to reduce the impact to a less-than-significant level. SWAPE identified several additional mitigation measures that are applicable to the proposed Project.[62] These measures must be considered in a revised and recirculated DEIR.

[61] SWAPE Comments, pg. 8.
[62] SWAPE Comments, pg. 14.

B. The DEIR's Assessment of Health Risk Impacts from Air Emissions is Not Supported by Substantial Evidence.

The DEIR includes a health risk assessment analyzing the health risk impacts from exposure to diesel particulate matter ("DPM") generated by the Project's construction and operations. In the table below, the DEIR acknowledges that the Project's health risk impacts would exceed BAAQMD thresholds before mitigation.[63]

Table 11. Construction and Operation Risk Impacts at the Off-Site Project MEIs and Daycare Receptors

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Construction (Years 0-4)	Unmitigated MEIs	**23.38 (infant)**	**0.40**	0.01
	Mitigated MEI*	4.67 (infant)	0.09	<0.01
Project Traffic on Berryessa Road and Project Site (Years 5-30)				
	Unmitigated MEIs	0.77 (infant)	0.21	<0.01
	Mitigated MEI	1.01 (infant)	0.21	<0.01
Project Generators (Years 5-30)	Unmitigated MEIs	0.04 (infant)	<0.01	<0.01
	Mitigated MEI	0.24 (infant)	<0.01	<0.01
Total/Maximum Project Impact (Years 0-30)	Unmitigated MEIs	**24.19 (infant)**	**0.40**	0.01
	Mitigated MEI*	5.92 (infant)	0.21	<0.01
	BAAQMD Single-Source Threshold	***10.0***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated MEIs	***Yes***	***Yes***	*No*
	Mitigated MEI*	*No*	*No*	*No*
Genius Kids Berryessa Daycare Infant Receptor				
Project Construction (Years 0-4)	Unmitigated	**17.92 (infant)**	0.08	<0.01
	Mitigated*	3.69 (infant)	0.02	<0.01
Project Traffic (Years 5-12)		1.31	0.11	0.02
Project Generator (Years 5-12)		0.06	<0.01	<0.01
Unmitigated Total/Maximum Project (Years 0-4)	Unmitigated	**19.29 (infant)**	0.11	0.02
	Mitigated*	5.06 (infant)	0.11	0.02
BAAQMD Single-Source Threshold		***10.0***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	***Yes***	*No*	*No*
	Mitigated*	*No*	*No*	*No*

* Construction equipment with Tier 4 engines and enhanced BMPs as Mitigation.

C.17

As with criteria pollutants, the DEIR explains that its analysis of the Project's mitigated impacts incorrectly relied on use of Tier 4 construction equipment:

> CalEEMod was used to compute mitigated emissions assuming that all equipment larger than 25 horsepower met U.S. EPA Tier 4 standards along

[63] DEIR, Appendix B, Table 11.

with enhanced BAAQMD best management practices for construction were included. With these mitigation measures implemented, the project's construction cancer risk levels (assuming infant exposure) would be reduced by 80 percent to 4.67 chances per million for the residential MEI and 3.69 chances per million for the daycare MEI. The project's annual PM2.5 concentrations from construction would be reduced by 78 percent to 0.09 µg/m3 at the residential MEI and 0.02 µg/m3 at the daycare MEI.[64] C.17

As discussed above, this assumption is not supported by substantial evidence, and actual emissions are likely to be substantially higher than analyzed. MM AIR-1.1 requires use of Tier 4 equipment only "if feasible."[65] And "[i]f use of Tier 4 equipment is not available," MM AIR-1.1 permits use of equipment with less stringent emissions standards. As a result, the City's health risk assessment underestimates the levels of toxic air contaminants that would be emitted by construction equipment if lower-tier equipment is used, and therefore fails to disclose the Project's actual health risk impacts. These impacts might exceed BAAQMD thresholds when the analysis is corrected to reflect the least-stringent emission standards allowed under MM AIR-1.1. A revised EIR must be prepared to adequately evaluate this potentially significant impact. C.18

C. The DEIR's Discussion of the Project's Greenhouse Gas Impacts is Not Supported by Substantial Evidence.

Under the CEQA Guidelines, a lead agency must analyze a project's impacts on GHG emissions.[66] The Guidelines provide that "[i]n determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable."[67] C.19

In 2020, the City adopted a Greenhouse Gas Reduction Strategy ("GHGRS") that outlines the actions the City will undertake to achieve its proportional share of State greenhouse gas emission reductions for the interim target year 2030. Appendix H states that "a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it

[64] DEIR, Appendix B, pg. 43.
[65] DEIR, pg. vi.
[66] 14 C.C.R §15064.4
[67] 14 CCR § 15064.4 (b)(3).

complies with the requirements of the GHGRS."[68] The GHGRS requires (1) all projects to demonstrate consistency with the Envision San José 2040 General Plan's relevant policies for Land Use & Design, Transportation, Green Building, and Water Conservation, (2) demonstrate consistency with the GHGRS reduction strategies listed in Table B of the GHGRS or document why the strategies are not applicable or are infeasible, and (3) provide an explanation of additional or alternative proposed GHG mitigation measures.[69] Here, the DEIR has not demonstrated that the Project complies with the GHGRS. As a result, the DEIR's less-than-significant impact conclusion[70] should not be relied upon. C.19

1. The DEIR Fails to Demonstrate Consistency with the Envision San José 2040 General Plan

The DEIR does not demonstrate consistency with Envision San José 2040 General Plan Goal MS-2.2, which states: "Encourage maximized use of on-site generation of renewable energy for all new and existing buildings." The DEIR's Compliance Checklist states: "The proposed project would be fully electric. The project could include solar hot water heating systems."[71]

SWAPE explains that this response is insufficient, as simply stating that the Project would be fully electric fails to demonstrate how the Project would encourage the use of on-site renewable energy for all new and existing buildings.[72] Second, the Compliance Checklist states that the Project "could" include solar hot water heating systems but fails to require their implementation. Environmental documents, including EIRs, must mitigate significant impacts through measures that are "fully enforceable through permit conditions, agreements, or other legally binding instruments."[73] Because the inclusion of solar hot water heating is not included as a mitigation measure or a binding condition of approval, its inclusion is speculative and unenforceable. Third, the DEIR fails to demonstrate how the Project's potential renewable energy features represent "maximized use" of on-site generation of renewable energy. The DEIR must be revised to include analysis regarding what specific options are available for this Project to generate renewable energy onsite. Since the Project lacks such analysis, the DEIR fails to demonstrate consistency with MS-2.2. C.20

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[68] Appendix H, pg. 1.
[69] Appendix H, pg. 2-3.
[70] DEIR, pg. 141.
[71] DEIR, Appendix F, pg. 5.
[72] SWAPE Comments, pg. 9.
[73] CEQA Guidelines, § 15126.4, subd. (a)(2).

The DEIR does not demonstrate consistency with MS-2.3, which states: "Encourage consideration of solar orientation, including building placement, landscaping, design and construction techniques for new construction to minimize energy consumption." The DEIR's Compliance Checklist responds:

> The project would include landscaping, including trees throughout the site, providing shading. The project would be compliance with 2019 Title 24 standards for energy efficiency and the City's Code of Ordinances, Chapter 15.11, Water Efficient Landscape Standards for New and Rehabilitated Landscaping.[74]

This response is insufficient because it does not demonstrate consideration of building placement, landscaping, design and construction techniques to minimize energy consumption. The DEIR's response must revised to include analysis of how the Project's building placement, landscaping, design and construction techniques can minimize energy consumption. SWAPE also explains that by simply stating that the Project would comply with "2019 Title 24 standards for energy efficiency," the "City's Code of Ordinances," and "Water Efficient Landscape Standards for New and Rehabilitated Landscaping," the Project commits to the bare minimum requirements, rather than attempting to minimize energy consumption. As a result of this inadequate analysis, the DEIR fails to demonstrate consistency with MS-2.3.[75] C.21

The DEIR does not demonstrate consistency with MS-2.11, which states:

> Require new development to incorporate green building practices, including those required by the Green Building Ordinance. Specifically, target reduced energy use through construction techniques (e.g., design of building envelopes and systems to maximize energy performance), through architectural design (e.g., design to maximize cross ventilation and interior daylight) and through site design techniques (e.g., orienting buildings on sites to maximize the effectiveness of passive solar design). C.22

In response, the DEIR's Compliance Checklist states that the "proposed project would be in compliance with the City's Reach Code, the 2019 Title 24 standards for energy efficiency, and achieve a GreenPoint Rated score of 50 points or higher for the residential component and LEED Silver for the commercial

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[74] DEIR, Appendix F, pg. 5.
[75] SWAPE Comments, pg. 10.

component."[76] This response is insufficient because it fails to analyze what green building practices could feasibly be used for the Project. SWAPE explains that the DEIR fails to analyze a Project design that includes building envelopes and systems to maximize energy performance, the maximization of cross ventilation and interior daylight, and the orientation of buildings, per the directives of MS-2.11.[77] Furthermore, SWAPE explains that the DEIR fails to provide any evidence of concrete actions designed to target reduced energy use. Thus, the DEIR fails to demonstrate consistency with MS-2.11. C.22

The DEIR does not demonstrate consistency with CD-2.5, which states: "Integrate Green Building Goals and Policies of the Envision San José 2040 General Plan into site design to create healthful environments. Consider factors such as shaded parking areas, pedestrian connections, minimization of impervious surfaces, incorporation of stormwater treatment measures, appropriate building orientations, etc." In response, the DEIR's Compliance Checklist states: "The project would include landscaping to reduce impervious surfaces, enclosed parking, bioretention areas to treat stormwater."[78] This response is insufficient because the DEIR fails to demonstrate *minimization* of impervious surfaces. The response also does not address whether the proposed building orientations achieve the goals of CD-2.5. Overall, the DEIR does not provide sufficient detail to demonstrate consistency with CD-2.5. C.23

The DEIR does not demonstrate consistency with MS-3.2, which states: "Promote the use of green building technology or techniques that can help reduce the depletion of the City's potable water supply, as building codes permit. For example, promote the use of captured rainwater, graywater, or recycled water as the preferred source for non-potable water needs such as irrigation and building cooling, consistent with Building Codes or other regulations." In response, the Compliance Checklist states: "The project will use water-efficient landscaping that conforms to the State's Model Water Efficient Landscape Ordinance and adhere to the 2019 plumbing code efficiency standards."[79] C.24

This response is insufficient. SWAPE explains that by simply stating that the Project would comply with the "State's Model Water Efficient Landscape Ordinance and adhere to the 2019 plumbing code efficiency standards," the Project commits to the bare minimum requirements.[80] Merely complying with regulatory standards

[76] DEIR, Appendix F, pg. 5
[77] SWAPE Comments, pg. 10.
[78] DEIR, Appendix F, pg. 6.
[79] DEIR, Appendix F, pg. 9.
[80] SWAPE Comments, pg. 12.

does not address how the Project would "promote the use of captured rainwater, graywater, or recycled water." The City's response must be revised to discuss the applicability of concrete actions or measures would help reduce the depletion of the City's potable water supply, such as the use of captured rainwater, graywater, or recycled water as the preferred source for non-potable water needs.[81] Thus, the Compliance Checklist fails to demonstrate that the Project would satisfy this measure. C.24

The DEIR does not demonstrate consistency with MS-21.3, which states: "Ensure that San José's Community Forest is comprised of species that have low water requirements and are well adapted to its Mediterranean climate. Select and plant diverse species to prevent monocultures that are vulnerable to pest invasions. Furthermore, consider the appropriate placement of tree species and their lifespan to ensure the perpetuation of the Community Forest." In response, the Compliance Checklist states: "The project would include a wide range of water-efficient and drought tolerant trees, shrubs, and ground cover that is well adapted to San José's climate."[82] SWAPE's comments explain that this response is insufficient because it fails to analyze all the issues specified in MS-21.3 (monocultures, pest control, placement of tree species), and does not provide evidence of concrete actions or measures proposed to satisfy this measure.[83] Thus, the Project does not demonstrate consistency with the GHGRS. C.25

The DEIR does not demonstrate consistency with MS-19.4, which states: "Require the use of recycled water wherever feasible and cost-effective to serve existing and new development." The DEIR's Compliance Checklist states: "The project site does not currently have access to recycled water facilities."[84] The DEIR's response is insufficient because it fails to explain the circumstances surrounding the lack of access to recycled water facilities. The basis for the DEIR's claim is unclear, as it elsewhere states that "a recycled water supply connection is located less than one mile west of the project site in Berryessa Road, approximately 400 feet east of US-101."[85] The response must be expanded to explain what actions and expenses would need to be taken to obtain access to recycled water. Thus, the Compliance Checklist does not demonstrate the Project's consistency with the GHGRS, and the less-than-significant impact conclusion should not be relied upon. C.26

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[81] SWAPE Comments, pg. 12.
[82] DEIR, Appendix F, pg. 9.
[83] SWAPE Comments, pg. 12-13.
[84] Appendix F, pg. 9.
[85] DEIR, pg. 246.

2. The DEIR Fails to Demonstrate Consistency with GHGRS Reduction Strategies

Table B of the GHGRS identifies GHG reduction strategies and recommended consistency options.[86] Projects need to demonstrate consistency with the GHGRS reduction strategies listed in Table B or document why the strategies are not applicable or are infeasible.[87]

The Project fails to adequately demonstrate consistency with strategies intended to promote "Zero Net Carbon Residential Development." In addition to achieving/exceeding the City's Reach Code, the Project must either (1) exclude natural gas infrastructure, (2) install on-site renewable energy systems or participate in a community solar program to offset 100% of the project's estimated energy demand, or (3) participate in San José Clean Energy at the Total Green level (i.e., 100% carbon-free electricity). Otherwise, the DEIR is required to explain why such measures are not feasible. In response, the DEIR states, "[t]he project will achieve the City's Reach Code by being fully electric and by excluding natural gas infrastructure in the proposed residences. Strategies 3 and 4 may not be feasible."[88] But the DEIR fails to support to its claim that Strategies 3 and 4 are not feasible. The DEIR's response must be expanded in a revised DEIR. C.27

The Project fails to demonstrate consistency with strategies intended to promote "Renewable Energy Development." These include (1) installing solar panels, solar hot water, or other clean energy power generation sources on development sites, (2) participating in community solar programs to support development of renewable energy in the community, or (3) participating in San José Clean Energy at the Total Green level (i.e., 100% carbon-free electricity) for electricity accounts associated with the project. Here, the Compliance Checklist states: "The project may include solar hot water systems. However, Strategies 2 and 3 may not be feasible."[89] But as discussed above, the Project fails to identify binding measures requiring installation of solar facilities on the Project site.[90] Further, the DEIR fails to support to its claim that Strategies 2 and 3 are not feasible. The DEIR's response must be expanded in a revised DEIR. C.28

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[86] DEIR, Appendix F, pg. 2.
[87] DEIR, Appendix F, pg. 3.
[88] DEIR, Appendix F, pg. 10.
[89] DEIR, Appendix F, pg. 11.
[90] SWAPE Comments, pg. 9 (As the DEIR fails to require the Project to incorporate solar hot water heating systems, we cannot guarantee that these measures would be implemented, monitored, and enforced on the Project site).

Overall, the Project has not demonstrated consistency with the GHGRS, and the less-than-significant GHG impact conclusion is not supported by substantial evidence. C.28

D. The DEIR Fails to Adequately Disclose and Mitigate Potentially Significant Noise Impacts

1. The Project's Construction Noise Impacts Exceed Significance Criteria in the General Plan

The DEIR claims that the Project has less-than-significant construction noise impacts after mitigation. This conclusion is not supported by substantial evidence, as the Project exceeds significance thresholds established by the Envision San José 2040 General Plan.

General Plan Policy EC-1.7 establishes the threshold for construction noise, which the DEIR adopts as the significance threshold for this impact:[91]

> The City considers significant construction noise impacts to occur if a project located within 500 feet of residential uses or 200 feet of commercial or office uses would: Involve substantial noise generating activities (such as building demolition, grading, excavation, pile driving, use of impact equipment, or building framing) continuing for more than 12 months. C.29

This project meets the three basic conditions established for a significant impact to occur:

1. The entire project site is within 500 feet of existing residential use[92]
2. Project construction will require substantial noise-generating activities
3. Project construction will take 44 months[93]

The City acknowledges that the Project meets these conditions, and that "[b]ased on City of San José General Plan Policy EC-1.7, this is a significant impact."[94] But the City argues that the Project's construction noise impacts would be mitigated by the implementation of General Plan Policy EC-1.7, which provides:

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[91] DEIR, Appendix H, pg. 31.
[92] Watry Comments, pg. 3, Figure 1.
[93] DEIR, pg. 169.
[94] DEIR, Appendix H, pg. 34.

> Require construction operations within San José to use best available noise suppression devices and techniques and limit construction hours near residential uses per the City's Municipal Code […] For such large or complex projects, a construction noise logistics plan that specifies hours of construction, noise and vibration minimization measures, posting or notification of construction schedules, and designation of a noise disturbance coordinator who would respond to neighborhood complaints will be required to be in place prior to the start of construction and implemented during construction to reduce noise impacts on neighboring residents and other uses.

Accordingly, the DEIR concludes construction noise impacts would be reduced to a less-than-significant level through implementation of standard noise control measures and implementation of a construction noise logistics plan.[95]

But the DEIR's reasoning is inconsistent with the clear numeric noise threshold in Policy EC-1.7, and the Policy does not state that projects that implement the measures identified in the Policy are presumed to have a less-than-significant impact. C.29

Further, the DEIR's reliance on noise limits set forth in its municipal code is not legally supported, as courts have held that compliance with noise regulations alone is not substantial evidence of a less-than-significant impact.[96] In *Keep our Mountains Quiet v. County of Santa Clara*,[97] neighbors of a wedding venue sued over the County of Santa Clara's failure to prepare an EIR for a proposed project to allow use permits for wedding and other party events at a residential property abutting an open space preserve. Neighbors and their noise expert contended that previous events at the facility had caused significant noise impacts that reverberated in neighbors' homes and disrupted the use and enjoyment of their property.[98] Similar to the DEIR in this case, the County had prepared a mitigated negative declaration ("MND"), which employed the noise standards set forth in the County's noise ordinance and general plan as the County's thresholds for significant noise exposure from the project, deeming any increase to be insignificant so long as the absolute noise level did not exceed those standards.[99]

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[95] See DEIR, Appendix H, pp. 35-36.
[96] *King & Gardiner Farms, LLC v. Cnty. of Kern* (2020) 45 Cal.App.5th 814, 865.
[97] *Keep our Mountains Quiet v. County of Santa Clara* (2015) 236 Cal.App.4th 714.
[98] *Id.* at 724.
[99] *Id.* at 732.

The Court examined a long line of CEQA cases which have uniformly held that conformity with land use regulations is not conclusive of whether or not a project has significant noise impacts.[100] In particular, citing *Berkeley Keep Jets Over the Bay Com. v. Board of Port Cmrs.*, the Court explained that "the fact that residential uses are considered compatible with a [County noise ordinance maximum] noise level of 65 decibels for purposes of land use planning is not determinative in setting a threshold of significance under CEQA."[101] The Court further explained that, as required by CEQA Guidelines Appendix G, § XII, subd. (d), the CEQA lead agency is required to "consider both the increase in noise level and the absolute noise level associated with a project" in evaluating whether a project has significant noise impacts. The Court held that the evidence submitted by local residents and their expert attesting to significant noise impacts felt directly on their residences amounted to substantial evidence demonstrating that the project would have potentially significant noise impacts. The Court also held that the County's reliance on the project's compliance with noise regulations did not constitute substantial evidence supporting the County's finding of no significant impacts.[102] C.30

Here, the City's threshold – compliance with Policy EC-1.7 by meeting municipal code noise levels – does not consider both the increase in noise level and the absolute noise level associated with a project. Thus, as in *Keep Our Mountains Quiet*, the City's reliance on compliance with noise regulations does not provide substantial evidence to support the City's conclusion that the Project will not have significant noise impacts. And whereas the noise threshold in *Keep Our Mountains Quiet* was held insufficient for merely setting a maximum noise level, the City's construction noise threshold does not even set a maximum allowable noise level or increase. Thus, the City lacks substantial evidence that compliance with the General Plan standards alone would ensure less-than-significant construction noise impacts.

[100] Id., citing *Citizens for Responsible & Open Government v. City of Grand Terrace* (2008) 160 Cal.App.4th 1323, 1338; *Oro Fino Gold Mining Corp. v. County of El Dorado* (1990) 225 Cal.App.3d 872, 881–882; *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, 1416 (project's effects can be significant even if "they are not greater than those deemed acceptable in a general plan"); *Environmental Planning & Information Council v. County of El Dorado* (1982) 131 Cal.App.3d 350, 354, ("CEQA nowhere calls for evaluation of the impacts of a proposed project on an existing general plan").
[101] *Id.,* citing (2001) 91 Cal.App.4th 1344, 1381, 111 Cal.Rptr.2d 598 ("*Berkeley Jets*").
[102] *Id.* at 732-734.

2. Substantial Evidence Shows that the Project's Mitigated Construction Noise Impacts Remain Significant

The CEQA Guidelines call for analysis of a "substantial temporary or permanent increase in ambient noise levels in the vicinity of the project **in excess of standards established in the local general plan** or noise ordinance, or applicable standards of other agencies" [emphasis added].[103] The City's General Plan sets an acceptable exterior noise level objective of 60 dBA DNL or less for residential and most institutional land uses.[104] And though the General Plan does not specifically adopt a threshold for the increase in noise due to construction, Policy EC-1.2, which applies to permanent noise increases, states: "Where future noise levels are at or below the "normally acceptable" noise level standard, noise level increases of 5 dBA DNL or more would be considered significant."

For this project, the existing ambient noise level for the western property line is 48 dBA Leq and for the northern property line is 43 dBA Leq.[105] These residences are located 25 feet north and west of the site.[106] Mr. Watry explains that at that distance, the Project's mitigated noise levels would be around 78 dBA Leq, some 30 to 35 dBA above the existing ambient levels.[107] C.31

Mr. Watry also explains that, in addition to the acute noise impacts on the nearest residences, work done at the Project site that is within 200 feet of a residence will cause noise levels at that residence to exceed 60 dBA Leq.[108] 75% of the Project site is within 200 feet of a residence, meaning that the 60 dBA General Plan threshold would be exceeded during most of the construction process.[109]

These increased noise levels would be above the "Normally Acceptable" levels identified in the General Plan. And the 30-35 dBA increase is greater than the 5 dBA increase identified in the General Plan as significant for permanent noise sources. Further, Mr. Watry's comments explain that heightened noise levels can result in impacts like noise-induced hearing loss, speech interference, impaired cognitive performance, and physiological effects.[110]

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[103] CEQA Guidelines, Appendix G, § XII, subd. (d)
[104] Envision San José 2040 General Plan, Table EC-1.
[105] DEIR, Table 3.13-2, pg. 166.
[106] DEIR, pg. 168.
[107] Watry Comments, pg. 5.
[108] Watry Comments, pg. 4.
[109] Watry Comments, pg. 4.
[110] Watry Comments, pg. 2.

In sum, substantial evidence demonstrates that the Project's construction noise impacts are significant even after mitigation and applying the noise threshold used in the DEIR. C.31

3. The DEIR's Claimed Noise Reductions Lack the Support of Substantial Evidence

The DEIR claims, "[w]ith the implementation of GP Policy EC-1.7, Municipal Code requirements, and the above measures, overall construction noise levels would be reduced by 5 to 10 dBA at nearby noise-sensitive receptors, and the temporary construction noise impact would be reduced to a less-than-significant level."[111] This claim is unsubstantiated. Because the City relies on this noise reduction to claim impacts would be reduced to a less-than-significant level, the City's significance determination is not supported by substantial evidence. C.32

4. The DEIR does not Disclose a Potentially Significant Off-Site Construction Noise Impact

The DEIR fails to analyze or disclose the impacts of the Project's off-site construction traffic.

Construction traffic involving spoils removal, materials deliveries, worker access, and other activities generate noise.[112] Noise impacts from construction traffic may be experienced beyond the Project site, which was not disclosed in the DEIR. For this project, Mr. Watry explains that the construction traffic route will necessarily be via Berryessa Road, which has residences facing the street.[113] Further, Genius Kids Berryessa is a daycare facility with children ages two months to 12 years of age located opposite of Berryessa Road, approximately 700 feet east of the project site. Sensitive receptors like these may be impacted by the Project's construction traffic, which would continue for 44 months.[114] Mr. Watry states that the noise analysis should be expanded to include a description of the haul and transit routes, estimates of the number of trips by vehicles type, and noise estimates associated with those trips.[115] C.33

Because the DEIR fails to analyze this potentially significant off-site construction noise impact, the DEIR must be revised.

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[111] DEIR, Appendix H, pg. 36.
[112] Watry Comments, pg. 6.
[113] Watry Comments, pg. 6.
[114] DEIR, pg. 169.
[115] Watry, pg. 6.

5. The DEIR Fails to Fully Mitigate the Project's Noise Impacts

As explained above, the Project's construction noise will increase ambient noise levels in the vicinity of the project in excess of standards established in the General Plan. But the City fails to adopt binding mitigation to reduce the impacts to a less-than-significant level. MM NOI-1.1 states:

> Prior to the issuance of any demolition or grading permits (whichever occurs first), an acoustic engineer shall prepare and implement a construction noise logistics plan, in accordance with General Plan Policy EC-1.7, prior to issuance of any demolition or grading permits. A typical construction noise logistics plan includes, but is not limited to, the following measures to reduce construction noise levels: […][116]

C.34

This deferred noise logistics plan does not meet the standards of the CEQA Guidelines, which prohibit deferring formulation of mitigation measures unless the agency (1) commits itself to the mitigation, (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the types of potential actions that can feasibly achieve that performance standard."[117]

First, MM NOI-1.1 must be revised to explicitly require the measures listed, rather than identifying them as potential measures in a "typical construction logistics plan."

Second, MM NOI-1.1 lacks specific performance standards. Since the Project's construction noise impacts increase noise levels above the General Plan's acceptable exterior noise level objective of 60 dBA DNL, the mitigation measure must be revised to ensure the proposed noise logistics plan reduce impacts below General Plan thresholds.

Third, MM NOI-1.1 should also be revised to include standards for its proposed temporary noise barriers. The noise attenuation of noise barriers depends largely on their height and form of construction. Mr. Watry's comments show that tall (18-20 feet), heavy noise barriers are available that could provide around 10 to 15 dB of attenuation.[118] Without more specificity MM NOI-1.1, the City is not clearly required to employ this quality of noise barrier. C.35

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[116] DEIR, pg. xii.
[117] CEQA Guidelines, § 15126.4(a)(1)(B).
[118] Watry Comments, pp. 5-6.

Fourth, MM NOI-1.1 does not include any text requiring approval of the noise logistics plan by the City. The measure must be revised to require the noise logistics plan to be submitted to the Director of Planning, Building and Code Enforcement or Director's designee prior to the issuance of any grading or demolition permits.[119] And the measure must only allow the City to approve the logistics plan if substantial evidence demonstrates that the plan would reduce noise impacts to a less-than-significant level, and adopt the best available devices and techniques. C.35

In sum, because the City fails to adopt binding mitigation to reduce noise impacts to a less-than-significant level, the DEIR must be revised and recirculated.

E. The City Fails to Adequately Analyze and Mitigate Potentially Significant Health Risks from Hazardous Materials

1. The DEIR Fails to Analyze for Asbestos Prior to Project Approval

The DEIR acknowledges that "[d]ue to the age of the structures on-site, building materials may contain asbestos and/or lead-based paint, which could expose construction workers to toxins and particulates during demolition."[120] Accordingly, the DEIR includes Standard Permit Conditions calling for a visual inspection/pre-demolition survey, and possible sampling, prior to the demolition of on-site buildings to determine the presence of asbestos-containing-materials and lead-based paint.[121] However, deferring inspection and sampling for asbestos until after the Project is approved conflicts with the Envision San José 2040 General Plan Policy EC-7.4, which states: "On redevelopment sites, determine the presence of hazardous building materials **during the environmental review process or prior to project approval**" [emphasis added]. Here, the DEIR fails to conduct an inspection and sampling for asbestos during the environmental review process or prior to project approval – the Phase I ESA prepared for the Project does not reference any visual inspections or sampling for asbestos.[122] C.36

Further, this approach conflicts with CEQA, which requires lead agencies to disclose the extent and severity of a project's impacts in the CEQA document, before

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[119] *Endangered Habitats League, Inc. v. County of Orange,* (2005) 131 Cal.App.4th 777, 794 (courts have held that mitigation that does no more than allow approval by a local department without setting enforceable standards is inadequate).
[120] DEIR, pg. 135.
[121] DEIR, pg. 136.
[122] DEIR, Appendix G.

the project is approved. By deferring environmental assessment to a future date, the DEIR runs counter to CEQA's requirement of environmental review at the earliest feasible stage in the planning process.[123] In *Bozung v. Local Agency Formation Commission* the Supreme Court of California approved "the principle that the environmental impact should be assessed as early as possible in government planning."[124] A study conducted after approval of a project will inevitably have a diminished influence on decision-making.[125] Even if the study is subject to administrative approval, it is analogous to the sort of post hoc rationalization of agency actions that has been repeatedly condemned in decisions construing CEQA.[126] C.36

Therefore, sampling and an inspection for asbestos must be conducted prior to the Project's approval, and the findings must be included in a revised DEIR circulated for public review.

2. The DEIR Improperly Defers Analysis of Soil Contamination Near Southern Portion of Project Site

Soil samples from the Project site were collected and analyzed for organochlorine pesticides, due to the site's former agricultural uses, and soil and groundwater samples were analyzed for TPH, due to former USTs and the truck parking and storage uses on-site.[127] But since the samples were primarily collected in the northern portion of the site, there is a potential for contaminated soils in other portions of the site.[128] To address this potentially significant impact, the DEIR adopts MM HAZ-1.3, which provides in part: "Prior to the issuance of any demolition or grading permits (whichever occurs first), additional shallow soil sampling shall be completed at the southern portion of the site including areas near the existing industrial buildings and former residence and outbuildings." This deferred analysis of potential soil contamination conflicts with General Plan Policy EC-7.2, which calls for identification of "existing soil, soil vapor, groundwater and indoor air contamination and mitigation for identified human health and environmental hazards to future users and **provide as part of the environmental review process** for all development and redevelopment projects" C.37

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[123] *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 307; PRC § 21003.1; *No Oil, Inc. v. City of Los Angeles*, supra, 13 Cal.3d 68, 84.
[124] (1975) 13 Cal.3d 263, 282.
[125] *Sundstrom v. County of Mendocino*, supra, 202 Cal.App.3d 296, 307.
[126] *Id.*; *No Oil, Inc. v. City of Los Angeles*, supra, 13 Cal.3d 68, 81; *Environmental Defense Fund, Inc. v. Coastside County Water Dist.* (1972) 27 Cal.App.3d 695, 706.
[127] DEIR, pg. 133.
[128] DEIR, pg. 133.

[emphasis added]. Because the DEIR defers sampling on a significant portion of the Project site until after Project approval, the DEIR fails to provide identification of existing contamination "as part of the environmental review process."

Further, this approach conflicts with CEQA, which requires lead agencies to disclose the extent and severity of a project's impacts in the CEQA document, before the project is approved. Here, the City defers sampling of much of the Project site (only the northern part was sampled) until after Project approval. The DEIR does not provide justification for why this analysis is not currently feasible. As a result, the City conflicts with CEQA's limits on deferred analysis. The City must complete the soil contamination sampling before Project approval, and include the findings in a revised DEIR. C.37

3. The DEIR's Soil Contamination Mitigation is Not Sufficiently Protective

MM HAZ-2.1 calls for evaluation for the presence of TPH, volatile organic compounds ("VOCs"), and metals after Project approval.[129] If elevated concentrations of these contaminants are discovered, the Applicant will prepare a remedial action plan in accordance with SCCDEH requirements. But this mitigation measure is not fully protective. Although the mitigation measure calls for preparation of a remedial action plan after detection of elevated concentrations of contaminants, the measure fails to require that this contamination is mitigated before construction begins. As a result, workers on the Project site are not sufficiently protected from soil contamination. MM HAZ-2.1 must be revised to explicitly require any detected soil contamination to be removed from the Project site before workers proceed with construction. C.38

MM HAZ-2.1 is also flawed because it does not specify the standards to which the soil contamination will be mitigated. The measure must be revised to explicitly state that the soil will be remediated to residential standards.

F. The Project is Inconsistent With Local Land Use Goals, Objectives, and Policies

The Project site is within the boundaries of the 270-acre Berryessa BART Urban Village ("BBUV") Plan area.[130] The Project is inconsistent with BBUV policies. Under the CEQA Guidelines, a conflict with any land use plan, policy, or C.39

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[129] DEIR, pg. 135.
[130] DEIR, pg. v.

regulation adopted for the purpose of avoiding or mitigating an environmental effect can constitute a significant impact.[131]

The project site is located within the boundaries of the Facchino District in the BBUV Plan Area.[132] The BBUV Plan states: "The planned capacity for the Facchino District is approximately 340,000 square feet of commercial uses and 820 dwelling units."[133] Implementation of the proposed Project would redevelop the Project site with a mix of uses, including 850 residential units.[134] It is anticipated that the residential units on the project site would result in 2,670 new residents on-site.[135] The Project's proposed 850 residential units exceeds the 820-unit planned capacity in the BBUV Plan – a plain inconsistency with the BBUV Plan. The DEIR must be revised to resolve this land use inconsistency.

C.39

The 30 residential units in excess of the Facchino District's planned capacity also implicates the CEQA Guidelines' requirements to analyze the Project's growth-inducing impacts. The CEQA Guidelines require that an EIR identify the likelihood that a proposed project could "foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment."[136] In the DEIR's analysis of growth-inducing impacts, the DEIR does not disclose the exceedance of the 820-unit planned capacity in the BBUV Plan: "the project would not induce substantial growth in the City as it is consistent with residential density and commercial growth envisioned for the site in the General Plan and BBUV Plan."[137] This discussion must be revised to account for the 820-unit planned capacity in the BBUV Plan. Since the DEIR fails to provide this analysis, it lacks substantial evidence to claim growth-inducing impacts would be less than significant.

Policy LU-3.2 of the BBUV Plan states: "Require ground-floor active uses in the Urban Residential land use designation in the Facchino District." But the DEIR does not propose any such uses for the parcels designated Urban Residential. The DEIR only proposes "803 multi-family residential units within the Urban Residential designation."[138] The DEIR must be revised to include description of how

C.40

[131] CEQA Guidelines, Appendix G, subd. XI (b).
[132] DEIR, Figure 2.2-4.
[133] Berryessa BART Urban Village Plan, pg. 24.
[134] DEIR, pg. 6.
[135] DEIR, pg. 195.
[136] CEQA Guidelines, § 15126.2[d].
[137] DEIR, pg. 255.
[138] DEIR, pg. 156.

the Project would contain ground-floor actives uses in order to demonstrate consistency with Policy LU-3.2. C.40

Policy LU-8.3 of the BBUV Plan states: “Focus the City’s affordable housing resources into the Berryessa BART Urban Village to further achievement of the Goal that 25% of the housing in the Village is affordable.” But only 22.2% of the housing proposed by the proposed Project is proposed as affordable housing. The Project must increase the percentage of affordable housing units to 25% in order to be consistent with Policy LU-83. C.41

The BBUV Plan contains several policies setting targets for electric vehicle infrastructure. Policy SU-4.1 provide: “All new residential development in each of the four Districts should have at least 80% of the total parking stalls provided as “Electric Vehicle (EV)- capable,” with at least 20% “Electric Vehicle Charging Infrastructure (EVCI)-ready” (above the City’s Energy Reach Code).” And Policy SU-4.2 provides: “All new commercial development in each of the four Districts should have at least 50% of the total parking stalls provided as “Electric Vehicle (EV)- capable,” with at least 20% “Electric Vehicle Charging Infrastructure (EVCI)-ready” (above the City’s Energy Reach Code).” But the Project fails to identify any electric vehicle charging infrastructure in the DEIR. Thus, the Project fails to demonstrate consistency with Policy SU-4.1 and Policy SU-4.2. The DEIR must be revised to identify the number of proposed EV-capable and EVCI-ready parking stalls. This number must be at least as great as required by Policy SU-4.1 and Policy SU-4.2. C.42

In sum, the Project has several inconsistencies with the BBUV Plan which have an environmental effect. These inconsistencies must be resolved in a revised DEIR that is recirculated for public review. C.43

IV. CONCLUSION

The DEIR is inadequate and must be withdrawn. We urge the City to prepare and circulate a revised DEIR which accurately sets for the existing environmental setting, discloses all of the Project’s potentially significant impacts, and requires all feasible mitigation measures to reduce the Project’s significant environmental and public health impacts.

We thank you for the opportunity to provide these comments on the DEIR.

Sincerely,

Aidan P. Marshall

Attachments
APM:acp

5435-005acp

EXHIBIT A

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

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September 28, 2022

Aidan P. Marshall
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601 Gateway Blvd #1000
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Subject: Comments on the Berryessa Road Mixed Use Development Project (SCH No. 2021070467)

Dear Mr. Marshall,

We have reviewed the August 2022 Draft Environmental Impact Report ("DEIR") for the Berryessa Road Mixed Use Development Project ("Project") located in the City of San Jose ("City"). The Project proposes to construct 850 residential units, 480,000-square-feet ('SF") of commercial space, a 0.9-acre park, and 1,200 parking spaces on the 13-acre site.

Our review concludes that the DEIR fails to adequately evaluate the Project's air quality 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 and greenhouse gas impacts that the project may have on the environment.

Air Quality

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. 47).[1] CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental

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

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

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

Incorrect Reductions to Area Coating Emission Factors

Review of the CalEEMod output files demonstrates that the "1655 Berryessa Mixed Use with VOC Mitigation" model includes two manual reductions to the default area coating emission factors (see excerpt below) (Appendix B, pp. 123).

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	15
tblAreaCoating	Area_EF_Residential_Exterior	150	15

As demonstrated above, the residential and nonresidential exterior area coating emission factors are each reduced from their default values of 150- to 15-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:

> "At least 90% of paints have to be super-compliant VOC = 15g/L exterior" (Appendix B, pp. 123).

Furthermore, the DEIR includes Mitigation Measure ("MM") AIR-1.4 which states:

> "Prior to the issuance of any demolition, grading, and/or building permits (whichever occurs first), the project applicant shall include a stipulation in the Declaration of Covenants, Conditions, and Restrictions requiring the use of low volatile organic compound or VOC (i.e., ROG) coatings, that are below current BAAQMD requirements (i.e., Regulation 8, Rule 3: Architectural Coatings), for at least 60 percent of all residential and nonresidential interior paints and 60 percent of exterior paints. This includes all architectural coatings applied during both construction and reapplications throughout the project's operational lifetime. At least 60 percent of coatings applied must meet a "super-compliant" VOC standard of less than 10 grams of VOC per liter of paint. For reapplication of coatings during the project's operational lifetime, the Declaration of Covenants, Conditions, and Restrictions shall contain a stipulation for low

[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.

VOC coatings to be used. Examples of "super-compliant" coatings are contained in the South Coast Air Quality Management District's website" (p. vii – viii).

However, these changes remain unsupported, as MM AIR-1.4 only requires the use of low VOC coatings for 60% of exterior paints. As such, the use of low VOC coatings for 90% of exterior paints is incorrect in the model and inconsistent with the information provided by the DEIR.

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.[3] Thus, by including unsubstantiated reductions to the default area coating emission factors, the model may underestimate the Project's operational ROG/VOC emissions and should not be relied upon to determine Project significance.

Unsubstantiated Reduction to Consumer Product Emission Factor

Review of the Project's CalEEMod output files demonstrates that the "1655 Berryessa Mixed Use" and "1655 Berryessa Mixed Use with VOC Mitigation" models include a manual reduction to the default consumer product emission factor (see excerpt below) (Appendix B, pp. 65, 124).

Table Name	Column Name	Default Value	New Value
tblConsumerProducts	ROG_EF	2.14E-05	1.712E-05

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[4] According to the "User Entered Comments & Non-Default Data" table, the justification provided for this change is:

> "Adjusted ROG for Santa Clara County 2027" (Appendix B, pp. 64, 123).

However, this justification is insufficient, as the AQ Assessment fails to provide an adequate source that demonstrates how the revised consumer product emission factor was calculated. Furthermore, the DEIR fails to mention or justify the revised consumer product emission factor whatsoever. 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." [5]

Here, as the DEIR and associated documents fail to provide substantial evidence to support the revised consumer product emission factor, we cannot verify the change.

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[3] "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.
[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. 1, 14.
[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. 13, 14.

This presents an issue, as consumer product emission factors are used by CalEEMod to calculate the Project's ROG/VOC emissions.[6] Thus, by including an unsubstantiated change to the default consumer product emission factors, the Project's area-source operational emissions may be underestimated and should not be relied upon to determine Project significance.

Underestimated Number of Hauling Trips Required for Grading

According to the DEIR:

> "Assuming 12 cubic yards per truck load, the project requires about 14,585 truckloads of soil export and import combined" (DEIR, pp. 31).

As such, the Project's modeling should have included approximately 29,170 one-way hauling trips.[7] However, review of the CalEEMod output files demonstrates that the "1655 Berryessa Mixed Use" and "1655 Berryessa Mixed Use with VOC Mitigation" models fail to include any hauling trips for the grading phase of construction (see excerpt below) (Appendix B, pp. 89, 148, 149).

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number
Demolition	6	0.00	0.00	0.00
Site Preparation	7	0.00	0.00	0.00
Grading	8	0.00	0.00	0.00
Trenching	2	0.00	0.00	0.00
Building Construction	9	0.00	0.00	0.00
Paving	6	0.00	0.00	0.00
Architectural Coating	1	0.00	0.00	0.00

As demonstrated in the excerpt above, the total number of one-way hauling trips during grading is underestimated by 29,170 trips.[8] This underestimation presents an issue, as CalEEMod uses the number of hauling trips to estimate the construction-related emissions associated with on-road vehicles.[9] By failing to include any hauling trips for grading, the models underestimate the Project's construction-related emissions and should not be relied upon to determine Project significance.

[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. 42.

[7] Calculated: (14,585 one-way material import trips) + (14,585 one-way material export trips) = 29,170 total one-way hauling trips.

[8] Calculated: (29,170 proposed grading trips) – (0 modeled grading trips) = 29,170 underestimate grading trips

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

Unsubstantiated Changes to Wastewater System Treatment Percentages

Review of the CalEEMod output files demonstrates that the “1655 Berryessa Mixed Use” and “1655 Berryessa Mixed Use with VOC Mitigation” models include several changes to the default wastewater treatment system percentage (see excerpt below) (Appendix B, pp. 83, 84, 143).

Table Name	Column Name	Default Value	New Value
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00

As demonstrated in the excerpt above, the model assumes that the Project’s wastewater would be treated 100% aerobically. As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified. [10] According to the “User Entered Comments & Non-Default Data” table, the justification provided for these changes is:

> “Wastewater treatment, 100% aerobic, no septic tanks of lagoons” (Appendix B, pp. 64, 123).

Furthermore, regarding wastewater, the DEIR states:

> “Wastewater treatment service for the project area is provided by the City of San José through the San José-Santa Clara Regional Wastewater Facility (RWF)” (p. 247).

However, review of the San Jose-Santa Clara Regional Wastewater Facilities treatment process reveals the use of anaerobic bacteria in the digesters phase of treatment.[11] As such, the assumption that the Project’s wastewater would be treated 100% aerobically is incorrect.

These unsubstantiated changes present an issue, as each type of wastewater treatment system is associated with different GHG emission factors, which are used by CalEEMod to calculate the Project’s total GHG emissions.[12] Thus, by including unsubstantiated changes to the default wastewater treatment

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

[11] “Treatment Process.” San Jose-Santa Clara Regional Wastewater Facility, *available at:* https://www.sanjoseca.gov/your-government/environment/water-utilities/regional-wastewater-facility/treatment-process

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

system percentages, the models may underestimate the Project's GHG emissions and should not be relied upon to determine Project significance.

Incorrect Application of Operational Energy-Related Mitigation Measure

Review of the CalEEMod output files demonstrates that the "1655 Berryessa Mixed Use" and "1655 Berryessa Mixed Use with VOC Mitigation" models include the following energy-related mitigation measure (see excerpt below) (Appendix B, pp. 111, 170):

> **5.1 Mitigation Measures Energy**
>
> Percent of Electricity Use Generated with Renewable Energy

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[13] According to the "User Entered Comments & Non-Default Data" table, the justification provided for this inclusion is:

> "SJCE goes 100% renewable in 2021" (Appendix B, pp. 64, 123).

However, this justification remains insufficient, as the above-mentioned energy-related mitigation measure refers to renewable energy generation *on-site*.[14] As such, the electricity obtained from the City's grid is not applicable and the inclusion of the energy-related operational mitigation measure in the models is incorrect. In order to correctly account for the 100% renewable energy provided by San Jose Clean Energy ("SJCE"), the model should have instead adjusted the energy intensity factors for the selected utility company.

By incorrectly including the above mentioned operational mitigation measure, the model assumes that the Project would generate renewable energy on site, thus potentially overestimating the reduction to the Project's operational emissions and should not be relied upon to determine Project significance.

Incorrect Application of Tier 4 Mitigation Measure

Review of the CalEEMod output files demonstrates that the "1655 Berryessa Mixed Use" and "1655 Berryessa Mixed Use with VOC Mitigation" models assume that the Project's off-road construction equipment fleet would meet Tier 4 Interim emissions standards (see excerpt below) (Appendix B, pp. 65, 124):

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

[14] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 58, 59.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
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tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[15] According to the "User Entered Comments and Non-Default Data" table, the justification provided for these changes is:

> "Tier 4 equipment and enhanced BMPs" (Appendix B, pp. 64, 123).

Furthermore, the DEIR includes Mitigation Measure ("MM") AIR-1.1 which states:

> "If use of Tier 4 equipment is not available, alternatively use equipment that meets U.S. EPA emission standards for Tier 2 or 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices that altogether achieve a 60 percent reduction in particulate matter exhaust in comparison to uncontrolled equipment" (p. vi).

As demonstrated above, if Tier 4 equipment is not available, MM AIR-1.1 allows the proposed Project to use equipment that meets U.S. EPA Tier 2 or 3 engines with CARB Level 3 particulate matter control. As such, the Project may not actually achieve Tier 4 mitigation. Until the DEIR and associated documents can provide substantial evidence that Tier 4 Interim equipment is readily available for use at the Project site, the model should not include Tier 4 Interim construction equipment. As such, the model's assumption that the entire off-road construction equipment fleet would meet Tier 4 Interim emissions standards is incorrect.

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 omitted the unsubstantiated changes to the consumer product emission factor, area coating emission factors, and wastewater systems treatment percentages; and excluded the

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

incorrect energy-related mitigation measure. Furthermore, we elected to include the incorrect Tier 4 Interim mitigation to demonstrate that the Project's construction emissions would still be potentially significant, despite the stricter emissions standards.[16]

Our updated analysis estimates that the ROG emissions associated with Project construction and operation exceed the applicable BAAQMD thresholds of 54-pounds per day ("lbs/day") and 10-tons per year ("tons/year"), as referenced by the DEIR (p. 44, Table 3.3-3; p. 52, Table 3.3-6) (see table below).

SWAPE Criteria Air Pollutant Emissions

Model	**Construction ROG (2026)** (lbs/day)	**Operational ROG** (lbs/day)	**Operational ROG** (tons/year)
DEIR	36.03	51.26	9.36
SWAPE	134.99	94.82	15.00
% Increase	275%	85%	60%
BAAQMD Threshold	**54**	**54**	**10**
Exceeds?	***Yes***	***Yes***	***Yes***

As demonstrated above, ROG emissions associated with Project construction and operation, as estimated by SWAPE, increase by approximately 275%, 94% and 60%, respectively, and exceed the applicable BAAQMD significance thresholds. Thus, our updated modeling demonstrates that the Project would result in a potentially significant air quality impact that was not previously identified or addressed by the DEIR. As a result, a revised EIR should be prepared to adequately assess and mitigate the potential air quality impacts that the Project may have on the environment.

Greenhouse Gas

Failure to Adequately Evaluate Greenhouse Gas Impacts

The DEIR relies upon the Project's consistency with the City's 2030 Greenhouse Gas Reduction Strategy ("GHGRS") in order to conclude that the Project would result in a less-than-significant greenhouse gas ("GHG") impact (p. 122-123). However, review of *Table A: General Plan Consistency* and *Table B: 2030 Greenhouse Gas Reduction Strategy Compliance* within the Compliance Checklist, provided as Appendix F to the DEIR, reveal that the Project is inconsistent with numerous measures, including but not limited to those listed below:

[16] See Attachment A for updated air modeling.

GHGRS Project Compliance Checklist[17]	
Table A: General Plan Consistency	
Implementation of Green Building Measures	
MS-2.2: Encourage maximized use of on-site generation of renewable energy for all new and existing buildings.	Here, the Compliance Checklist states: "The proposed project would be fully electric. The project could include solar hot water heating systems" (Appendix F, p. 5). However, this response is insufficient for three reasons. First, simply stating that the Project would be fully electric fails to demonstrate how the Project would encourage the use of on-site renewable energy for all new and existing buildings. Second, the Compliance Checklist states that the Project "could" include solar hot water heating systems but fails to require their implementation. Furthermore, the inclusion of solar hot water heating systems is not included as a mitigation measure or a binding condition of approval, making the Project Design Feature ("PDF") speculative and unenforceable. This is incorrect, as according to the AEP *CEQA Portal Topic Paper* on mitigation measures: "While not "mitigation", a good practice is to include those project design feature(s) that address environmental impacts in the mitigation monitoring and reporting program (MMRP). Often the MMRP is all that accompanies building and construction plans through the permit process. If the design features are not listed as important to addressing an environmental impact, it is easy for someone not involved in the original environmental process to approve a change to the project that could eliminate one or more of the design features without understanding the resulting environmental impact" (emphasis added).[18] As you can see in the excerpts above, PDFs are not mitigation measures and may be eliminated from the Project's design. Here, as the DEIR fails to require the Project to be fully electric or incorporate solar hot water heating systems, we cannot guarantee that these measures would be implemented, monitored, and enforced on the Project site.

[17] "GHGRS Project Compliance Checklist." City of San Jose Department of Planning, Building, and Code Enforcement, *available at*: https://www.sanjoseca.gov/Home/ShowDocument?id=63603.
[18] "CEQA Portal Topic Paper Mitigation Measures." AEP, February 2020, *available at:* https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf, p. 6.

	As a result, we are unable to verify the Project's consistency with the GHGRS, and the less-than-significant impact conclusion should not be relied upon.
MS-2.3: Encourage consideration of solar orientation, including building placement, landscaping, design and construction techniques for new construction to minimize energy consumption.	Here, the Compliance Checklist states: "The project would include landscaping, including trees throughout the site, providing shading. The project would be compliance with 2019 Title 24 standards for energy efficiency and the City's Code of Ordinances, Chapter 15.11, Water Efficient Landscape Standards for New and Rehabilitated Landscaping" (Appendix F, p. 5). However, this response is insufficient for two reasons. First, by simply stating that the Project would comply with "2019 Title 24 standards for energy efficiency," the "City's Code of Ordinances," and "Water Efficient Landscape Standards for New and Rehabilitated Landscaping," the Project commits to the bare *minimum* requirements. As such, the Compliance Checklist fails to demonstrate that the Project would encourage consideration of solar orientation or other techniques to minimize energy consumption. Furthermore, as previously discussed, PDFs are not mitigation measures and may be eliminated from the Project's design. Here, the DEIR fails to require landscaping as formal mitigation. As such, we cannot guarantee that this measure would be implemented, monitored, and enforced on the Project site. As a result, we are unable to verify the Project's consistency with the GHGRS, and the less-than-significant impact conclusion should not be relied upon.
***MS-2.11**: Require new development to incorporate green building practices, including those required by the Green Building Ordinance. Specifically, target reduced energy use through construction techniques (e.g., design of building envelopes and systems to maximize energy performance), through architectural design (e.g., design to maximize cross ventilation and interior daylight) and through site design techniques (e.g., orienting buildings on sites to maximize the effectiveness of passive solar design).*	Here, the Compliance Checklist states: "The proposed project would be in compliance with the City's Reach Code, the 2019 Title 24 standards for energy efficiency, and achieve a GreenPoint Rated score of 50 points or higher for the residential component and LEED Silver for the commercial component" (Appendix F, p. 5). However, this response is insufficient, as the Compliance Checklist fails to demonstrate how the Project would incorporate green building practices to minimize energy consumption. Specifically, the Compliance Checklist and DEIR should have discussed and considered a Project design that includes building envelopes and systems to maximize energy performance, the maximization of cross ventilation and interior daylight, and the orientation of buildings. Furthermore, the DEIR fails to provide any evidence of concrete actions designed to target reduced energy use.

	As a result, we are unable to verify the Project's consistency with the GHGRS, and the less-than-significant impact conclusion should not be relied upon.
Pedestrian, Bicycle & Transit Site Design Measures	
CD-2.1: Promote the Circulation Goals and Policies in the Envision San José 2040 General Plan. Create streets that promote pedestrian and bicycle transportation by following applicable goals and policies in the Circulation section of the Envision San José 2040 General Plan. a) Design the street network for its safe shared use by pedestrians, bicyclists, and vehicles. Include elements that increase driver awareness. b) Create a comfortable and safe pedestrian environment by implementing wider sidewalks, shade structures, attractive street furniture, street trees, reduced traffic speeds, pedestrian-oriented lighting, mid-block pedestrian crossings, pedestrian-activated crossing lights, bulb-outs and curb extensions at intersections, and on-street parking that buffers pedestrians from vehicles. c) Consider support for reduced parking requirements, alternative parking arrangements, and Transportation Demand Management strategies to reduce area dedicated to parking and increase area dedicated to employment, housing, parks, public art, or other amenities. Encourage de-coupled parking to ensure that the value and cost of parking are considered in real estate and business transactions.	Here, the Compliance Checklist states: "The project would replace the existing sidewalk along the project frontage on Berryessa Road with a new 12-foot sidewalk to enhance pedestrian safety. The project proposes to construct an internal street and sidewalk network that would enhance safety for vehicles and pedestrians. The project would implement Transportation Demand Management Measures that are consistent with the BBUV Parking and TDM Plan (which encourages reduced parking). TDM measures that could be implemented by the project include participation in a TDM program provided by an established Transportation Management Association; education, marketing, and outreach to employees and residents with information on available travel options; and unbundled parking. The project would include housing, employment, and park space." (Appendix F, p. 6). However, this response is insufficient, as the Compliance Checklist fails to mention elements that increase driver awareness, attractive street furniture, street trees, pedestrian-oriented lighting, mid-block pedestrian crossings, pedestrian-activated crossing lights, bulb-outs and curb extensions at intersections, de-coupled parking, or on-street parking that buffers pedestrians from vehicles. Thus, the Project fails to demonstrate consistency with all aspects of this measure. As a result, we are unable to verify the Project's consistency with the GHGRS, and the less-than-significant impact conclusion should not be relied upon.
CD-2.5: Integrate Green Building Goals and Policies of the Envision San José 2040 General Plan into site design to create healthful environments. Consider factors such as shaded parking areas, pedestrian connections, minimization of impervious surfaces, incorporation of stormwater treatment measures, appropriate building orientations, etc.	Here, the Compliance Checklist states: "The project would include landscaping to reduce impervious surfaces, enclosed parking, bioretention areas to treat stormwater" (Appendix F, p. 6). However, this response is insufficient. As previously discussed, PDFs are not mitigation measures and may be eliminated from the Project's design. Here, the DEIR fails to require minimization of impervious surfaces, enclosed parking, and bioretention as formal mitigation. As such, we cannot guarantee that this measure would be implemented, monitored, and enforced on the Project site.

	As a result, we are unable to verify the Project's consistency with the GHGRS, and the less-than-significant impact conclusion should not be relied upon.
Water Conservation and Urban Forestry Measures	
MS-3.1 Require water-efficient landscaping, which conforms to the State's Model Water Efficient Landscape Ordinance, for all new commercial, institutional, industrial and developer-installed residential development unless for recreation needs or other area functions.	Here, the Compliance Checklist states: "The project will use water-efficient landscaping that conforms to the State's Model Water Efficient Landscape Ordinance" (Appendix F, p. 8). However, this response is insufficient. As previously discussed, PDFs are not mitigation measures and may be eliminated from the Project's design. Here, the DEIR fails to require water-efficient landscaping as formal mitigation. As such, we cannot guarantee that this measure would be implemented, monitored, and enforced on the Project site. As a result, we are unable to verify the Project's consistency with the GHGRS, and the less-than-significant impact conclusion should not be relied upon.
MS-3.2: Promote the use of green building technology or techniques that can help reduce the depletion of the City's potable water supply, as building codes permit. For example, promote the use of captured rainwater, graywater, or recycled water as the preferred source for non-potable water needs such as irrigation and building cooling, consistent with Building Codes or other regulations.	Here, the Compliance Checklist states: "The project will use water-efficient landscaping that conforms to the State's Model Water Efficient Landscape Ordinance and adhere to the 2019 plumbing code efficiency standards." (Appendix F, p. 9). However, this response is insufficient. By simply stating that the Project would comply with the "State's Model Water Efficient Landscape Ordinance and adhere to the 2019 plumbing code efficiency standards," the Project commits to the bare *minimum* requirements. Furthermore, the Compliance Checklist fails to provide any evidence of concrete actions or measures would help reduce the depletion of the City's potable water supply, such as the use of captured rainwater, graywater, or recycled water as the preferred source for non-potable water needs. As such, the Compliance Checklist fails to demonstrate that the Project would satisfy this measure. As a result, we are unable to verify the Project's consistency with the GHGRS, and the less-than-significant impact conclusion should not be relied upon.
MS-21.3: Ensure that San José's Community Forest is comprised of species that have low water requirements and are well adapted to its Mediterranean climate. Select and plant diverse species to prevent monocultures that are vulnerable to pest invasions. Furthermore, consider the appropriate placement of tree species and their lifespan to ensure the perpetuation of the Community Forest.	Here, the Compliance Checklist states: "The project would include a wide range of water-efficient and drought tolerant trees, shrubs, and ground cover that is well adapted to San José's climate" (Appendix F, p. 9). However, this response is insufficient. As previously discussed, PDFs are not mitigation measures and may be eliminated from the Project's design. Here, the DEIR fails to require water-efficient and drought tolerant trees,

	shrubs, and ground cover as formal mitigation. As such, we cannot guarantee that these measures would be implemented, monitored, and enforced on the Project site. As a result, we are unable to verify the Project's consistency with the GHGRS, and the less-than-significant impact conclusion should not be relied upon.
MS-26.1: As a condition of new development, require the planting and maintenance of both street trees and trees on private property to achieve a level of tree coverage in compliance with and that implements City laws, policies or guidelines.	Here, the Compliance Checklist states: "The project will provide street trees and private landscaping to achieve a level of tree coverage in compliance with City laws, policies, and guidelines" (Appendix F, p. 9). However, this response is insufficient. Simply stating that the Project would provide street trees and private landscaping does not provide substantial evidence that these measures would be implemented, monitored, and enforced on the Project site. Furthermore, the DEIR fails to explicitly require the planting and maintenance of both street trees and trees on private property to achieve a level of tree coverage in compliance with all City policies in a formal mitigation measure. As a result, we are unable to verify the Project's consistency with the GHGRS, and the less-than-significant impact conclusion should not be relied upon.
Table B: 2030 Greenhouse Gas Reduction Strategy Compliance	
PART 2: RESIDENTIAL AND NON-RESIDENTIAL PROJECTS	
Zero Waste Goal 1. Provide space for organic waste (e.g., food scraps, yard waste) collection containers, and/or 2. Exceed the City's construction & demolition waste diversion requirement. Supports Strategies: GHGRS #5	Here, the Compliance Checklist states: "The project would include dedicated spaces for organic waste collection containers and exceed the City's construction and demolition waste diversion requirement" (Appendix F, p. 12). However, this response is insufficient. Simply stating that the Project would provide space for organic waste collection and exceed the City's construction demolition and waste diversion requirement fails to provide substantial evidence that these goals would be implemented, monitored, and enforced on the Project site. As a result, we are unable to verify the Project's consistency with the GHGRS, and the less-than-significant impact conclusion should not be relied upon.

As the above table indicates, the DEIR fails to provide sufficient information and analysis to determine Project consistency with all the measures required by the GHGRS. As a result, we cannot verify that the Project is consistent with the GHGRS, and the DEIR's less-than-significant GHG impact conclusion should not be relied upon. We recommend that a revised EIR include further information and analysis demonstrating the Project's consistency with the GHGRS.

Mitigation

Feasible Mitigation Measures Available to Reduce Emissions

Our analysis demonstrates that the Project would result in potentially significant air quality impacts that should be mitigated further. As such, in an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the proposed Project. Therefore, to reduce the Project's emissions, we recommend consideration of SCAG's 2020 *RTP/SCS* PEIR's Air Quality Project Level Mitigation Measures ("PMM-AQ-1") as described below: [19]

SCAG RTP/SCS 2020-2045
Air Quality Project Level Mitigation Measures – PMM-AQ-1: In accordance with provisions of sections 15091(a)(2) and 15126.4(a)(1)(B) of the *State CEQA Guidelines*, a Lead Agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to violating air quality standards. Such measures may include the following or other comparable measures identified by the Lead Agency:
a) Minimize land disturbance.
b) Suspend grading and earth moving when wind gusts exceed 25 miles per hour unless the soil is wet enough to prevent dust plumes.
c) Cover trucks when hauling dirt.
d) Stabilize the surface of dirt piles if not removed immediately.
e) Limit vehicular paths on unpaved surfaces and stabilize any temporary roads.
f) Minimize unnecessary vehicular and machinery activities.
g) Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway.
h) Revegetate disturbed land, including vehicular paths created during construction to avoid future off-road vehicular activities.
i) On Caltrans projects, Caltrans Standard Specifications 10-Dust Control, 17-Watering, and 18-Dust Palliative shall be incorporated into project specifications.
j) Require contractors to assemble a comprehensive inventory list (i.e., make, model, engine year, horsepower, emission rates) of all heavy-duty off-road (portable and mobile) equipment (50 horsepower and greater) that could be used an aggregate of 40 or more hours for the construction project. Prepare a plan for approval by the applicable air district demonstrating achievement of the applicable percent reduction for a CARB-approved fleet.
k) Ensure that all construction equipment is properly tuned and maintained.
l) Minimize idling time to 5 minutes—saves fuel and reduces emissions.

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

m) Provide an operational water truck on-site at all times. Use watering trucks to minimize dust; watering should be sufficient to confine dust plumes to the project work areas. Sweep paved streets at least once per day where there is evidence of dirt that has been carried on to the roadway.
n) Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.
o) Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service. Schedule operations affecting traffic for off-peak hours. Minimize obstruction of through-traffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites.
p) As appropriate require that portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off-road motor vehicles, obtain CARB Portable Equipment Registration with the state or a local district permit. Arrange appropriate consultations with the CARB or the District to determine registration and permitting requirements prior to equipment operation at the site.
r) Projects located within the South Coast Air Basin should consider applying for South Coast AQMD “SOON” funds which provides funds to applicable fleets for the purchase of commercially available low-emission heavy-duty engines to achieve near-term reduction of NOx emissions from in-use off-road diesel vehicles.
s) Projects located within AB 617 communities should review the applicable Community Emissions Reduction Plan (CERP) for additional mitigation that can be applied to individual projects.
t) Where applicable, projects should provide information about air quality related programs to schools, including the Environmental Justice Community Partnerships (EJCP), Clean Air Ranger Education (CARE), and Why Air Quality Matters programs.
u) Projects should work with local cities and counties to install adequate signage that prohibits truck idling in certain locations (e.g., near schools and sensitive receptors).
y) Projects that will introduce sensitive receptors within 500 feet of freeways and other sources should consider installing high efficiency of enhanced filtration units, such as Minimum Efficiency Reporting Value (MERV) 13 or better. Installation of enhanced filtration units can be verified during occupancy inspection prior to the issuance of an occupancy permit.
z) Develop an ongoing monitoring, inspection, and maintenance program for the MERV filters.
aa) Consult the SCAG Environmental Justice Toolbox for potential measures to address impacts to low-income and/or minority communities.
bb) The following criteria related to diesel emissions shall be implemented on by individual project sponsors as appropriate and feasible: - Diesel nonroad vehicles on site for more than 10 total days shall have either (1) engines that meet EPA on road emissions standards or (2) emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85% - Diesel generators on site for more than 10 total days shall be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%. - Nonroad diesel engines on site shall be Tier 2 or higher. - Diesel nonroad construction equipment on site for more than 10 total days shall have either (1) engines meeting EPA Tier 4 nonroad emissions standards or (2) emission control technology verified by EPA or CARB for use with nonroad engines to reduce PM emissions by a minimum of 85% for engines for 50 hp and greater and by a minimum of 20% for engines less than 50 hp. - Emission control technology shall be operated, maintained, and serviced as recommended by the emission control technology manufacturer. - Diesel vehicles, construction equipment, and generators on site shall be fueled with ultra-low sulfur diesel fuel (ULSD) or a biodiesel blend approved by the original engine manufacturer with sulfur content of 15 ppm or less. - The construction contractor shall maintain a list of all diesel vehicles, construction equipment, and generators to be used on site. The list shall include the following: i. Contractor and subcontractor name and address, plus contact person responsible for the vehicles or equipment.

ii. Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation.
iii. For the emission control technology installed: technology type, serial number, make, model, manufacturer, EPA/CARB verification number/level, and installation date and hour-meter reading on installation date.

- The contractor shall establish generator sites and truck-staging zones for vehicles waiting to load or unload material on site. Such zones shall be located where diesel emissions have the least impact on abutters, the general public, and especially sensitive receptors such as hospitals, schools, daycare facilities, elderly housing, and convalescent facilities.
- The contractor shall maintain a monthly report that, for each on road diesel vehicle, nonroad construction equipment, or generator onsite, includes:
    i. Hour-meter readings on arrival on-site, the first and last day of every month, and on off-site date.
    ii. Any problems with the equipment or emission controls.
    iii. Certified copies of fuel deliveries for the time period that identify:
        1. Source of supply
        2. Quantity of fuel
        3. Quantity of fuel, including sulfur content (percent by weight)

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

- Provide pedestrian network improvements, such as interconnected street network, narrower roadways and shorter block lengths, sidewalks, accessibility to transit and transit shelters, traffic calming measures, parks and public spaces, minimize pedestrian barriers.
- Provide traffic calming measures, such as:
    i. Marked crosswalks
    ii. Count-down signal timers
    iii. Curb extensions iv. Speed tables
    iv. Raised crosswalks
    v. Raised intersections
    vi. Median islands
    vii. Tight corner radii
    viii. Roundabouts or mini-circles
    ix. On-street parking
    x. Chicanes/chokers
- Create urban non-motorized zones
- Provide bike parking in non-residential and multi-unit residential projects
- Dedicate land for bike trails
- Limit parking supply through:
    i. Elimination (or reduction) of minimum parking requirements
    ii. Creation of maximum parking requirements
    iii. Provision of shared parking
- Require residential area parking permit.
- Provide ride-sharing programs
    i. Designate a certain percentage of parking spacing for ride sharing vehicles
    ii. Designating adequate passenger loading and unloading and waiting areas for ride-sharing vehicles
    iii. Providing a web site or messaging board for coordinating rides
    iv. Permanent transportation management association membership and finding requirement.

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

Disclaimer

SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Sincerely,

M Hagemann

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

Paul Rosenfeld

Paul E. Rosenfeld, Ph.D.

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

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

1655 Berryessa Mixed Use [With VOC Mitigation]

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	465.00	1000sqft	10.67	465,000.00	0
Enclosed Parking with Elevator	2,105.00	Space	0.00	842,000.00	0
City Park	0.90	Acre	0.90	39,204.00	0
High Turnover (Sit Down Restaurant)	15.00	1000sqft	0.34	15,000.00	0
Apartments Mid Rise	803.00	Dwelling Unit	21.13	709,205.00	2297
Condo/Townhouse	23.00	Dwelling Unit	1.44	23,000.00	66
Single Family Housing	24.00	Dwelling Unit	7.79	43,200.00	69

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2027
Utility Company	San Jose Clean Energy				
CO2 Intensity (lb/MWhr)	807.98	**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.

Trips and VMT - Hauling trips consistent with the DEIR's model. However, see SWAPE comment on "Underestimated Number of Hauling Trips Required for Grading."

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

Demolition - Consistent with the DEIR's model.

Grading - Consistent with the DEIR's model.

Architectural Coating - Consistent with the DEIR's model.

Vehicle Trips - Consistent with the DEIR's model.

Vehicle Emission Factors - Consistent with the DEIR's model.

Vehicle Emission Factors - Consistent with the DEIR's model.

Vehicle Emission Factors - Consistent with the DEIR's model.

Woodstoves - Consistent with the DEIR's model.

Consumer Products - See SWAPE comment on "Unsubstantiated Reduction to Consumer Product Emission Factor."

Area Coating - See SWAPE comment on "Incorrect Reductions to Area Coating Emission Factors."

Energy Use - Consistent with the DEIR's model.

Water And Wastewater - See SWAPE comment on "Unsubstantiated Changes to Wastewater System Treatment Percentages."

Construction Off-road Equipment Mitigation - Consistent with DEIR's model. However, see SWAPE comment on "Incorrect application of Tier 4 mitigation."

Mobile Land Use Mitigation -

Energy Mitigation - See SWAPE comment on "Incorrect Application of Operational Energy-Related Mitigation Measure."

Stationary Sources - Emergency Generators and Fire Pumps - Consistent with the DEIR's model.

Stationary Sources - Emergency Generators and Fire Pumps EF - Consistent with the DEIR's model.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	66.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	46.00
tblArchitecturalCoating	EF_Parking	150.00	66.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	66.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	46.00
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
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tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	T24NG	5,226.68	0.00

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

tblEnergyUse	T24NG	14,104.62	0.00
tblEnergyUse	T24NG	23,474.54	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	120.45	0.00
tblFireplaces	NumberGas	3.45	0.00
tblFireplaces	NumberGas	6.00	0.00
tblFireplaces	NumberNoFireplace	32.12	0.00
tblFireplaces	NumberNoFireplace	0.92	0.00
tblFireplaces	NumberNoFireplace	1.92	0.00
tblFireplaces	NumberWood	136.51	0.00
tblFireplaces	NumberWood	3.91	0.00
tblFireplaces	NumberWood	10.32	0.00
tblGrading	MaterialExported	0.00	165,000.00
tblGrading	MaterialImported	0.00	10,000.00
tblLandUse	LandUseSquareFeet	803,000.00	709,205.00
tblLandUse	LotAcreage	18.95	0.00
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	0.50
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.02
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,341.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00

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

tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	75.00	0.00
tblTripsAndVMT	HaulingTripNumber	21,875.00	0.00
tblTripsAndVMT	VendorTripLength	7.30	50.00
tblTripsAndVMT	VendorTripLength	7.30	50.00
tblTripsAndVMT	VendorTripLength	7.30	50.00
tblTripsAndVMT	VendorTripNumber	314.00	0.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblVehicleEF	HHD	0.02	0.22
tblVehicleEF	HHD	0.05	0.11
tblVehicleEF	HHD	6.31	5.12
tblVehicleEF	HHD	0.41	0.71
tblVehicleEF	HHD	6.0890e-003	7.8200e-004
tblVehicleEF	HHD	991.82	777.09
tblVehicleEF	HHD	1,327.03	1,519.26
tblVehicleEF	HHD	0.05	0.01
tblVehicleEF	HHD	0.16	0.13
tblVehicleEF	HHD	0.21	0.24
tblVehicleEF	HHD	4.0000e-006	7.0000e-006
tblVehicleEF	HHD	5.29	3.97
tblVehicleEF	HHD	2.62	1.63
tblVehicleEF	HHD	2.32	2.75
tblVehicleEF	HHD	2.3520e-003	1.9390e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00

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

tblVehicleEF	HHD	2.2500e-003	1.8490e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8950e-003	8.7840e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	2.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.1000e-005	2.9000e-005
tblVehicleEF	HHD	0.42	0.32
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.1000e-005	2.6100e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	9.2270e-003	6.7480e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	2.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.1000e-005	2.9000e-005
tblVehicleEF	HHD	0.49	0.57
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.07	0.12
tblVehicleEF	HHD	3.1000e-005	2.6100e-004
tblVehicleEF	HHD	3.0000e-006	0.00
tblVehicleEF	HHD	0.03	0.22
tblVehicleEF	HHD	0.05	0.11
tblVehicleEF	HHD	6.22	5.12
tblVehicleEF	HHD	0.41	0.71
tblVehicleEF	HHD	5.5970e-003	7.8200e-004
tblVehicleEF	HHD	980.16	777.09
tblVehicleEF	HHD	1,327.03	1,519.26
tblVehicleEF	HHD	0.05	0.01

tblVehicleEF	HHD	0.15	0.13
tblVehicleEF	HHD	0.21	0.24
tblVehicleEF	HHD	4.0000e-006	7.0000e-006
tblVehicleEF	HHD	5.04	3.97
tblVehicleEF	HHD	2.52	1.63
tblVehicleEF	HHD	2.32	2.75
tblVehicleEF	HHD	2.0660e-003	1.9390e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	1.9770e-003	1.8490e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8950e-003	8.7840e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	4.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.8000e-005	2.9000e-005
tblVehicleEF	HHD	0.45	0.32
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.0000e-005	2.6100e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	9.1180e-003	6.7480e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	4.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.8000e-005	2.9000e-005
tblVehicleEF	HHD	0.52	0.57
tblVehicleEF	HHD	2.0000e-006	0.00

tblVehicleEF	HHD	0.07	0.12
tblVehicleEF	HHD	3.0000e-005	2.6100e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	0.02	0.22
tblVehicleEF	HHD	0.05	0.11
tblVehicleEF	HHD	6.43	5.12
tblVehicleEF	HHD	0.41	0.71
tblVehicleEF	HHD	6.5340e-003	7.8200e-004
tblVehicleEF	HHD	1,007.92	777.09
tblVehicleEF	HHD	1,327.03	1,519.26
tblVehicleEF	HHD	0.05	0.01
tblVehicleEF	HHD	0.16	0.13
tblVehicleEF	HHD	0.21	0.24
tblVehicleEF	HHD	4.0000e-006	7.0000e-006
tblVehicleEF	HHD	5.62	3.97
tblVehicleEF	HHD	2.66	1.63
tblVehicleEF	HHD	2.32	2.75
tblVehicleEF	HHD	2.7480e-003	1.9390e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	2.6290e-003	1.8490e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8950e-003	8.7840e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	1.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.7000e-005	2.9000e-005

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

tblVehicleEF	HHD	0.39	0.32
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.4000e-005	2.6100e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	9.3770e-003	6.7480e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.7000e-005	2.9000e-005
tblVehicleEF	HHD	0.45	0.57
tblVehicleEF	HHD	0.07	0.12
tblVehicleEF	HHD	3.4000e-005	2.6100e-004
tblVehicleEF	HHD	3.0000e-006	0.00
tblVehicleEF	LDA	1.2360e-003	1.5380e-003
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.45	0.54
tblVehicleEF	LDA	1.86	2.42
tblVehicleEF	LDA	214.18	230.34
tblVehicleEF	LDA	45.42	59.41
tblVehicleEF	LDA	3.4320e-003	3.5100e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.14	0.20
tblVehicleEF	LDA	0.04	7.1090e-003
tblVehicleEF	LDA	1.1160e-003	1.0170e-003
tblVehicleEF	LDA	1.5010e-003	1.7230e-003
tblVehicleEF	LDA	0.02	2.4880e-003
tblVehicleEF	LDA	1.0270e-003	9.3500e-004
tblVehicleEF	LDA	1.3800e-003	1.5840e-003
tblVehicleEF	LDA	0.03	0.25

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

tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	4.3670e-003	5.6030e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.15	0.24
tblVehicleEF	LDA	2.1190e-003	2.2770e-003
tblVehicleEF	LDA	4.5000e-004	5.8700e-004
tblVehicleEF	LDA	0.03	0.25
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	6.3460e-003	8.1650e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.16	0.26
tblVehicleEF	LDA	1.3990e-003	1.5380e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.53	0.54
tblVehicleEF	LDA	1.47	2.42
tblVehicleEF	LDA	230.43	230.34
tblVehicleEF	LDA	44.72	59.41
tblVehicleEF	LDA	3.2160e-003	3.5100e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.12	0.20
tblVehicleEF	LDA	0.04	7.1090e-003
tblVehicleEF	LDA	1.1160e-003	1.0170e-003
tblVehicleEF	LDA	1.5010e-003	1.7230e-003
tblVehicleEF	LDA	0.02	2.4880e-003
tblVehicleEF	LDA	1.0270e-003	9.3500e-004
tblVehicleEF	LDA	1.3800e-003	1.5840e-003

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

tblVehicleEF	LDA	0.07	0.25
tblVehicleEF	LDA	0.08	0.07
tblVehicleEF	LDA	0.05	0.00
tblVehicleEF	LDA	4.8560e-003	5.6030e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.12	0.24
tblVehicleEF	LDA	2.2790e-003	2.2770e-003
tblVehicleEF	LDA	4.4300e-004	5.8700e-004
tblVehicleEF	LDA	0.07	0.25
tblVehicleEF	LDA	0.08	0.07
tblVehicleEF	LDA	0.05	0.00
tblVehicleEF	LDA	7.0600e-003	8.1650e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.13	0.26
tblVehicleEF	LDA	1.1850e-003	1.5380e-003
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.44	0.54
tblVehicleEF	LDA	2.17	2.42
tblVehicleEF	LDA	211.51	230.34
tblVehicleEF	LDA	45.99	59.41
tblVehicleEF	LDA	3.6350e-003	3.5100e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.15	0.20
tblVehicleEF	LDA	0.04	7.1090e-003
tblVehicleEF	LDA	1.1160e-003	1.0170e-003
tblVehicleEF	LDA	1.5010e-003	1.7230e-003
tblVehicleEF	LDA	0.02	2.4880e-003
tblVehicleEF	LDA	1.0270e-003	9.3500e-004

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

tblVehicleEF	LDA	1.3800e-003	1.5840e-003
tblVehicleEF	LDA	0.01	0.25
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.01	0.00
tblVehicleEF	LDA	4.2440e-003	5.6030e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.17	0.24
tblVehicleEF	LDA	2.0920e-003	2.2770e-003
tblVehicleEF	LDA	4.5500e-004	5.8700e-004
tblVehicleEF	LDA	0.01	0.25
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.01	0.00
tblVehicleEF	LDA	6.1660e-003	8.1650e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.18	0.26
tblVehicleEF	LDT1	2.3950e-003	4.4930e-003
tblVehicleEF	LDT1	0.04	0.09
tblVehicleEF	LDT1	0.65	1.12
tblVehicleEF	LDT1	2.00	4.20
tblVehicleEF	LDT1	258.06	311.08
tblVehicleEF	LDT1	55.33	80.98
tblVehicleEF	LDT1	4.5300e-003	7.3650e-003
tblVehicleEF	LDT1	0.02	0.04
tblVehicleEF	LDT1	0.05	0.09
tblVehicleEF	LDT1	0.17	0.32
tblVehicleEF	LDT1	0.04	9.1980e-003
tblVehicleEF	LDT1	1.3260e-003	1.5760e-003
tblVehicleEF	LDT1	1.7710e-003	2.4760e-003
tblVehicleEF	LDT1	0.02	3.2190e-003

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

tblVehicleEF	LDT1	1.2200e-003	1.4490e-003
tblVehicleEF	LDT1	1.6290e-003	2.2770e-003
tblVehicleEF	LDT1	0.06	0.51
tblVehicleEF	LDT1	0.12	0.14
tblVehicleEF	LDT1	0.05	0.00
tblVehicleEF	LDT1	9.7520e-003	0.02
tblVehicleEF	LDT1	0.07	0.39
tblVehicleEF	LDT1	0.20	0.42
tblVehicleEF	LDT1	2.5540e-003	3.0750e-003
tblVehicleEF	LDT1	5.4800e-004	8.0100e-004
tblVehicleEF	LDT1	0.06	0.51
tblVehicleEF	LDT1	0.12	0.14
tblVehicleEF	LDT1	0.05	0.00
tblVehicleEF	LDT1	0.01	0.03
tblVehicleEF	LDT1	0.07	0.39
tblVehicleEF	LDT1	0.22	0.46
tblVehicleEF	LDT1	2.6850e-003	4.4930e-003
tblVehicleEF	LDT1	0.04	0.09
tblVehicleEF	LDT1	0.76	1.12
tblVehicleEF	LDT1	1.58	4.20
tblVehicleEF	LDT1	274.84	311.08
tblVehicleEF	LDT1	54.55	80.98
tblVehicleEF	LDT1	4.2030e-003	7.3650e-003
tblVehicleEF	LDT1	0.02	0.04
tblVehicleEF	LDT1	0.04	0.09
tblVehicleEF	LDT1	0.16	0.32
tblVehicleEF	LDT1	0.04	9.1980e-003
tblVehicleEF	LDT1	1.3260e-003	1.5760e-003
tblVehicleEF	LDT1	1.7710e-003	2.4760e-003

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

tblVehicleEF	LDT1	0.02	3.2190e-003
tblVehicleEF	LDT1	1.2200e-003	1.4490e-003
tblVehicleEF	LDT1	1.6290e-003	2.2770e-003
tblVehicleEF	LDT1	0.13	0.51
tblVehicleEF	LDT1	0.13	0.14
tblVehicleEF	LDT1	0.10	0.00
tblVehicleEF	LDT1	0.01	0.02
tblVehicleEF	LDT1	0.06	0.39
tblVehicleEF	LDT1	0.17	0.42
tblVehicleEF	LDT1	2.7200e-003	3.0750e-003
tblVehicleEF	LDT1	5.4000e-004	8.0100e-004
tblVehicleEF	LDT1	0.13	0.51
tblVehicleEF	LDT1	0.13	0.14
tblVehicleEF	LDT1	0.10	0.00
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.06	0.39
tblVehicleEF	LDT1	0.18	0.46
tblVehicleEF	LDT1	2.3060e-003	4.4930e-003
tblVehicleEF	LDT1	0.05	0.09
tblVehicleEF	LDT1	0.64	1.12
tblVehicleEF	LDT1	2.34	4.20
tblVehicleEF	LDT1	255.31	311.08
tblVehicleEF	LDT1	55.96	80.98
tblVehicleEF	LDT1	4.8250e-003	7.3650e-003
tblVehicleEF	LDT1	0.02	0.04
tblVehicleEF	LDT1	0.05	0.09
tblVehicleEF	LDT1	0.19	0.32
tblVehicleEF	LDT1	0.04	9.1980e-003
tblVehicleEF	LDT1	1.3260e-003	1.5760e-003

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

tblVehicleEF	LDT1	1.7710e-003	2.4760e-003
tblVehicleEF	LDT1	0.02	3.2190e-003
tblVehicleEF	LDT1	1.2200e-003	1.4490e-003
tblVehicleEF	LDT1	1.6290e-003	2.2770e-003
tblVehicleEF	LDT1	0.03	0.51
tblVehicleEF	LDT1	0.12	0.14
tblVehicleEF	LDT1	0.03	0.00
tblVehicleEF	LDT1	9.4930e-003	0.02
tblVehicleEF	LDT1	0.08	0.39
tblVehicleEF	LDT1	0.23	0.42
tblVehicleEF	LDT1	2.5260e-003	3.0750e-003
tblVehicleEF	LDT1	5.5400e-004	8.0100e-004
tblVehicleEF	LDT1	0.03	0.51
tblVehicleEF	LDT1	0.12	0.14
tblVehicleEF	LDT1	0.03	0.00
tblVehicleEF	LDT1	0.01	0.03
tblVehicleEF	LDT1	0.08	0.39
tblVehicleEF	LDT1	0.25	0.46
tblVehicleEF	LDT2	2.2120e-003	2.2390e-003
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.62	0.71
tblVehicleEF	LDT2	2.44	3.08
tblVehicleEF	LDT2	271.88	320.53
tblVehicleEF	LDT2	58.84	81.54
tblVehicleEF	LDT2	4.6700e-003	5.0850e-003
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.04	0.05
tblVehicleEF	LDT2	0.20	0.28
tblVehicleEF	LDT2	0.04	8.8520e-003

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

tblVehicleEF	LDT2	1.1980e-003	1.1830e-003
tblVehicleEF	LDT2	1.5540e-003	1.9260e-003
tblVehicleEF	LDT2	0.02	3.0980e-003
tblVehicleEF	LDT2	1.1030e-003	1.0890e-003
tblVehicleEF	LDT2	1.4290e-003	1.7710e-003
tblVehicleEF	LDT2	0.05	0.27
tblVehicleEF	LDT2	0.10	0.07
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	8.6200e-003	8.4950e-003
tblVehicleEF	LDT2	0.06	0.20
tblVehicleEF	LDT2	0.23	0.31
tblVehicleEF	LDT2	2.6900e-003	3.1680e-003
tblVehicleEF	LDT2	5.8200e-004	8.0600e-004
tblVehicleEF	LDT2	0.05	0.27
tblVehicleEF	LDT2	0.10	0.07
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.20
tblVehicleEF	LDT2	0.25	0.34
tblVehicleEF	LDT2	2.4920e-003	2.2390e-003
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.73	0.71
tblVehicleEF	LDT2	1.92	3.08
tblVehicleEF	LDT2	287.92	320.53
tblVehicleEF	LDT2	57.89	81.54
tblVehicleEF	LDT2	4.3620e-003	5.0850e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.04	0.05
tblVehicleEF	LDT2	0.18	0.28

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

tblVehicleEF	LDT2	0.04	8.8520e-003
tblVehicleEF	LDT2	1.1980e-003	1.1830e-003
tblVehicleEF	LDT2	1.5540e-003	1.9260e-003
tblVehicleEF	LDT2	0.02	3.0980e-003
tblVehicleEF	LDT2	1.1030e-003	1.0890e-003
tblVehicleEF	LDT2	1.4290e-003	1.7710e-003
tblVehicleEF	LDT2	0.12	0.27
tblVehicleEF	LDT2	0.11	0.07
tblVehicleEF	LDT2	0.10	0.00
tblVehicleEF	LDT2	9.5610e-003	8.4950e-003
tblVehicleEF	LDT2	0.05	0.20
tblVehicleEF	LDT2	0.19	0.31
tblVehicleEF	LDT2	2.8480e-003	3.1680e-003
tblVehicleEF	LDT2	5.7300e-004	8.0600e-004
tblVehicleEF	LDT2	0.12	0.27
tblVehicleEF	LDT2	0.11	0.07
tblVehicleEF	LDT2	0.10	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.05	0.20
tblVehicleEF	LDT2	0.20	0.34
tblVehicleEF	LDT2	2.1260e-003	2.2390e-003
tblVehicleEF	LDT2	0.06	0.07
tblVehicleEF	LDT2	0.61	0.71
tblVehicleEF	LDT2	2.86	3.08
tblVehicleEF	LDT2	269.25	320.53
tblVehicleEF	LDT2	59.60	81.54
tblVehicleEF	LDT2	4.9520e-003	5.0850e-003
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.05	0.05

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

tblVehicleEF	LDT2	0.22	0.28
tblVehicleEF	LDT2	0.04	8.8520e-003
tblVehicleEF	LDT2	1.1980e-003	1.1830e-003
tblVehicleEF	LDT2	1.5540e-003	1.9260e-003
tblVehicleEF	LDT2	0.02	3.0980e-003
tblVehicleEF	LDT2	1.1030e-003	1.0890e-003
tblVehicleEF	LDT2	1.4290e-003	1.7710e-003
tblVehicleEF	LDT2	0.03	0.27
tblVehicleEF	LDT2	0.11	0.07
tblVehicleEF	LDT2	0.03	0.00
tblVehicleEF	LDT2	8.3810e-003	8.4950e-003
tblVehicleEF	LDT2	0.07	0.20
tblVehicleEF	LDT2	0.25	0.31
tblVehicleEF	LDT2	2.6630e-003	3.1680e-003
tblVehicleEF	LDT2	5.9000e-004	8.0600e-004
tblVehicleEF	LDT2	0.03	0.27
tblVehicleEF	LDT2	0.11	0.07
tblVehicleEF	LDT2	0.03	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.20
tblVehicleEF	LDT2	0.28	0.34
tblVehicleEF	LHD1	4.5230e-003	4.8530e-003
tblVehicleEF	LHD1	6.3000e-003	5.7620e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.18	0.19
tblVehicleEF	LHD1	0.57	0.71
tblVehicleEF	LHD1	0.96	2.15
tblVehicleEF	LHD1	8.56	8.33
tblVehicleEF	LHD1	734.83	729.06

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

tblVehicleEF	LHD1	10.77	17.05
tblVehicleEF	LHD1	7.3900e-004	6.2200e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.44	0.46
tblVehicleEF	LHD1	0.26	0.38
tblVehicleEF	LHD1	8.8400e-004	6.8500e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.8520e-003	9.4090e-003
tblVehicleEF	LHD1	8.1460e-003	0.01
tblVehicleEF	LHD1	2.2600e-004	1.7400e-004
tblVehicleEF	LHD1	8.4600e-004	6.5600e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4630e-003	2.3520e-003
tblVehicleEF	LHD1	7.7480e-003	0.01
tblVehicleEF	LHD1	2.0700e-004	1.6000e-004
tblVehicleEF	LHD1	1.6310e-003	0.11
tblVehicleEF	LHD1	0.06	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	8.6800e-004	0.00
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.18	0.16
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD1	8.3000e-005	8.1000e-005
tblVehicleEF	LHD1	7.1690e-003	7.1170e-003
tblVehicleEF	LHD1	1.0700e-004	1.6900e-004
tblVehicleEF	LHD1	1.6310e-003	0.11
tblVehicleEF	LHD1	0.06	0.03

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

tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	8.6800e-004	0.00
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.18	0.16
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD1	4.5360e-003	4.8530e-003
tblVehicleEF	LHD1	6.4100e-003	5.7620e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.18	0.19
tblVehicleEF	LHD1	0.58	0.71
tblVehicleEF	LHD1	0.90	2.15
tblVehicleEF	LHD1	8.56	8.33
tblVehicleEF	LHD1	734.84	729.06
tblVehicleEF	LHD1	10.66	17.05
tblVehicleEF	LHD1	7.4200e-004	6.2200e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.42	0.46
tblVehicleEF	LHD1	0.24	0.38
tblVehicleEF	LHD1	8.8400e-004	6.8500e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.8520e-003	9.4090e-003
tblVehicleEF	LHD1	8.1460e-003	0.01
tblVehicleEF	LHD1	2.2600e-004	1.7400e-004
tblVehicleEF	LHD1	8.4600e-004	6.5600e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4630e-003	2.3520e-003
tblVehicleEF	LHD1	7.7480e-003	0.01

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

tblVehicleEF	LHD1	2.0700e-004	1.6000e-004
tblVehicleEF	LHD1	3.6370e-003	0.11
tblVehicleEF	LHD1	0.07	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7590e-003	0.00
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.18	0.16
tblVehicleEF	LHD1	0.05	0.10
tblVehicleEF	LHD1	8.3000e-005	8.1000e-005
tblVehicleEF	LHD1	7.1690e-003	7.1170e-003
tblVehicleEF	LHD1	1.0500e-004	1.6900e-004
tblVehicleEF	LHD1	3.6370e-003	0.11
tblVehicleEF	LHD1	0.07	0.03
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.7590e-003	0.00
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.18	0.16
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD1	4.5120e-003	4.8530e-003
tblVehicleEF	LHD1	6.2120e-003	5.7620e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.18	0.19
tblVehicleEF	LHD1	0.57	0.71
tblVehicleEF	LHD1	1.03	2.15
tblVehicleEF	LHD1	8.56	8.33
tblVehicleEF	LHD1	734.81	729.06
tblVehicleEF	LHD1	10.89	17.05
tblVehicleEF	LHD1	7.3700e-004	6.2200e-004
tblVehicleEF	LHD1	0.04	0.04

tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.45	0.46
tblVehicleEF	LHD1	0.28	0.38
tblVehicleEF	LHD1	8.8400e-004	6.8500e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.8520e-003	9.4090e-003
tblVehicleEF	LHD1	8.1460e-003	0.01
tblVehicleEF	LHD1	2.2600e-004	1.7400e-004
tblVehicleEF	LHD1	8.4600e-004	6.5600e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4630e-003	2.3520e-003
tblVehicleEF	LHD1	7.7480e-003	0.01
tblVehicleEF	LHD1	2.0700e-004	1.6000e-004
tblVehicleEF	LHD1	8.3300e-004	0.11
tblVehicleEF	LHD1	0.07	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	4.6300e-004	0.00
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.20	0.16
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD1	8.3000e-005	8.1000e-005
tblVehicleEF	LHD1	7.1690e-003	7.1170e-003
tblVehicleEF	LHD1	1.0800e-004	1.6900e-004
tblVehicleEF	LHD1	8.3300e-004	0.11
tblVehicleEF	LHD1	0.07	0.03
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	4.6300e-004	0.00
tblVehicleEF	LHD1	0.09	0.08

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

tblVehicleEF	LHD1	0.20	0.16
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD2	2.7350e-003	2.7890e-003
tblVehicleEF	LHD2	5.8140e-003	5.4840e-003
tblVehicleEF	LHD2	6.0230e-003	0.01
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.52	0.46
tblVehicleEF	LHD2	0.53	1.16
tblVehicleEF	LHD2	13.44	13.54
tblVehicleEF	LHD2	713.12	776.37
tblVehicleEF	LHD2	6.94	9.14
tblVehicleEF	LHD2	1.7040e-003	1.6800e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.54	0.66
tblVehicleEF	LHD2	0.15	0.21
tblVehicleEF	LHD2	1.4770e-003	1.4220e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.1400e-004	7.4000e-005
tblVehicleEF	LHD2	1.4140e-003	1.3600e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7030e-003	2.6620e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0400e-004	6.8000e-005
tblVehicleEF	LHD2	7.8300e-004	0.06
tblVehicleEF	LHD2	0.03	0.01

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

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.3200e-004	0.00
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	1.2800e-004	1.3000e-004
tblVehicleEF	LHD2	6.8810e-003	7.4740e-003
tblVehicleEF	LHD2	6.9000e-005	9.0000e-005
tblVehicleEF	LHD2	7.8300e-004	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.3200e-004	0.00
tblVehicleEF	LHD2	0.12	0.11
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	2.7430e-003	2.7890e-003
tblVehicleEF	LHD2	5.8580e-003	5.4840e-003
tblVehicleEF	LHD2	5.6970e-003	0.01
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.53	0.46
tblVehicleEF	LHD2	0.49	1.16
tblVehicleEF	LHD2	13.44	13.54
tblVehicleEF	LHD2	713.12	776.37
tblVehicleEF	LHD2	6.88	9.14
tblVehicleEF	LHD2	1.7060e-003	1.6800e-003
tblVehicleEF	LHD2	0.06	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.52	0.66

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

tblVehicleEF	LHD2	0.14	0.21
tblVehicleEF	LHD2	1.4770e-003	1.4220e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.1400e-004	7.4000e-005
tblVehicleEF	LHD2	1.4140e-003	1.3600e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7030e-003	2.6620e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0400e-004	6.8000e-005
tblVehicleEF	LHD2	1.7440e-003	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.7600e-004	0.00
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	1.2800e-004	1.3000e-004
tblVehicleEF	LHD2	6.8810e-003	7.4740e-003
tblVehicleEF	LHD2	6.8000e-005	9.0000e-005
tblVehicleEF	LHD2	1.7440e-003	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	8.7600e-004	0.00
tblVehicleEF	LHD2	0.12	0.11
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	2.7290e-003	2.7890e-003

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

tblVehicleEF	LHD2	5.7780e-003	5.4840e-003
tblVehicleEF	LHD2	6.3030e-003	0.01
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.52	0.46
tblVehicleEF	LHD2	0.56	1.16
tblVehicleEF	LHD2	13.44	13.54
tblVehicleEF	LHD2	713.11	776.37
tblVehicleEF	LHD2	7.00	9.14
tblVehicleEF	LHD2	1.7030e-003	1.6800e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.55	0.66
tblVehicleEF	LHD2	0.15	0.21
tblVehicleEF	LHD2	1.4770e-003	1.4220e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.1400e-004	7.4000e-005
tblVehicleEF	LHD2	1.4140e-003	1.3600e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7030e-003	2.6620e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0400e-004	6.8000e-005
tblVehicleEF	LHD2	4.0700e-004	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	2.3300e-004	0.00
tblVehicleEF	LHD2	0.10	0.10

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

tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	1.2800e-004	1.3000e-004
tblVehicleEF	LHD2	6.8810e-003	7.4740e-003
tblVehicleEF	LHD2	6.9000e-005	9.0000e-005
tblVehicleEF	LHD2	4.0700e-004	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	2.3300e-004	0.00
tblVehicleEF	LHD2	0.12	0.11
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	MCY	0.32	0.15
tblVehicleEF	MCY	0.25	0.17
tblVehicleEF	MCY	17.99	11.71
tblVehicleEF	MCY	9.14	7.90
tblVehicleEF	MCY	209.89	186.47
tblVehicleEF	MCY	59.90	45.31
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	7.0870e-003
tblVehicleEF	MCY	1.14	0.54
tblVehicleEF	MCY	0.27	0.12
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0840e-003	1.9590e-003
tblVehicleEF	MCY	2.9100e-003	3.4510e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9450e-003	1.8300e-003
tblVehicleEF	MCY	2.7280e-003	3.2360e-003
tblVehicleEF	MCY	0.90	3.85

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

tblVehicleEF	MCY	0.65	3.56
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.15	0.96
tblVehicleEF	MCY	0.49	3.78
tblVehicleEF	MCY	1.90	1.23
tblVehicleEF	MCY	2.0770e-003	1.8430e-003
tblVehicleEF	MCY	5.9300e-004	4.4800e-004
tblVehicleEF	MCY	0.90	0.08
tblVehicleEF	MCY	0.65	3.56
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.69	1.17
tblVehicleEF	MCY	0.49	3.78
tblVehicleEF	MCY	2.07	1.34
tblVehicleEF	MCY	0.31	0.15
tblVehicleEF	MCY	0.21	0.17
tblVehicleEF	MCY	17.40	11.71
tblVehicleEF	MCY	7.92	7.90
tblVehicleEF	MCY	208.72	186.47
tblVehicleEF	MCY	56.94	45.31
tblVehicleEF	MCY	0.06	0.04
tblVehicleEF	MCY	0.01	7.0870e-003
tblVehicleEF	MCY	1.01	0.54
tblVehicleEF	MCY	0.25	0.12
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0840e-003	1.9590e-003
tblVehicleEF	MCY	2.9100e-003	3.4510e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9450e-003	1.8300e-003
tblVehicleEF	MCY	2.7280e-003	3.2360e-003

tblVehicleEF	MCY	2.30	3.85
tblVehicleEF	MCY	0.88	3.56
tblVehicleEF	MCY	1.29	0.00
tblVehicleEF	MCY	2.09	0.96
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	1.59	1.23
tblVehicleEF	MCY	2.0650e-003	1.8430e-003
tblVehicleEF	MCY	5.6300e-004	4.4800e-004
tblVehicleEF	MCY	2.30	0.08
tblVehicleEF	MCY	0.88	3.56
tblVehicleEF	MCY	1.29	0.00
tblVehicleEF	MCY	2.61	1.17
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	1.74	1.34
tblVehicleEF	MCY	0.33	0.15
tblVehicleEF	MCY	0.29	0.17
tblVehicleEF	MCY	19.31	11.71
tblVehicleEF	MCY	10.49	7.90
tblVehicleEF	MCY	212.26	186.47
tblVehicleEF	MCY	63.05	45.31
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	7.0870e-003
tblVehicleEF	MCY	1.22	0.54
tblVehicleEF	MCY	0.29	0.12
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0840e-003	1.9590e-003
tblVehicleEF	MCY	2.9100e-003	3.4510e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9450e-003	1.8300e-003

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

tblVehicleEF	MCY	2.7280e-003	3.2360e-003
tblVehicleEF	MCY	0.39	3.85
tblVehicleEF	MCY	0.76	3.56
tblVehicleEF	MCY	0.19	0.00
tblVehicleEF	MCY	2.23	0.96
tblVehicleEF	MCY	0.60	3.78
tblVehicleEF	MCY	2.20	1.23
tblVehicleEF	MCY	2.1000e-003	1.8430e-003
tblVehicleEF	MCY	6.2400e-004	4.4800e-004
tblVehicleEF	MCY	0.39	0.08
tblVehicleEF	MCY	0.76	3.56
tblVehicleEF	MCY	0.19	0.00
tblVehicleEF	MCY	2.78	1.17
tblVehicleEF	MCY	0.60	3.78
tblVehicleEF	MCY	2.40	1.34
tblVehicleEF	MDV	2.3750e-003	2.6750e-003
tblVehicleEF	MDV	0.05	0.08
tblVehicleEF	MDV	0.63	0.76
tblVehicleEF	MDV	2.55	3.20
tblVehicleEF	MDV	327.97	384.38
tblVehicleEF	MDV	69.67	97.04
tblVehicleEF	MDV	6.1060e-003	6.4690e-003
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.05	0.07
tblVehicleEF	MDV	0.22	0.32
tblVehicleEF	MDV	0.04	8.9330e-003
tblVehicleEF	MDV	1.2330e-003	1.1780e-003
tblVehicleEF	MDV	1.5830e-003	1.8910e-003
tblVehicleEF	MDV	0.02	3.1260e-003

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

tblVehicleEF	MDV	1.1370e-003	1.0850e-003
tblVehicleEF	MDV	1.4560e-003	1.7380e-003
tblVehicleEF	MDV	0.06	0.31
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	9.5210e-003	0.01
tblVehicleEF	MDV	0.06	0.24
tblVehicleEF	MDV	0.26	0.37
tblVehicleEF	MDV	3.2410e-003	3.7980e-003
tblVehicleEF	MDV	6.8900e-004	9.5900e-004
tblVehicleEF	MDV	0.06	0.31
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	0.01	0.02
tblVehicleEF	MDV	0.06	0.24
tblVehicleEF	MDV	0.28	0.41
tblVehicleEF	MDV	2.6770e-003	2.6750e-003
tblVehicleEF	MDV	0.05	0.08
tblVehicleEF	MDV	0.74	0.76
tblVehicleEF	MDV	2.01	3.20
tblVehicleEF	MDV	343.91	384.38
tblVehicleEF	MDV	68.66	97.04
tblVehicleEF	MDV	5.7810e-003	6.4690e-003
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.04	0.07
tblVehicleEF	MDV	0.20	0.32
tblVehicleEF	MDV	0.04	8.9330e-003
tblVehicleEF	MDV	1.2330e-003	1.1780e-003
tblVehicleEF	MDV	1.5830e-003	1.8910e-003

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

tblVehicleEF	MDV	0.02	3.1260e-003
tblVehicleEF	MDV	1.1370e-003	1.0850e-003
tblVehicleEF	MDV	1.4560e-003	1.7380e-003
tblVehicleEF	MDV	0.14	0.31
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.12	0.00
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.05	0.24
tblVehicleEF	MDV	0.21	0.37
tblVehicleEF	MDV	3.3990e-003	3.7980e-003
tblVehicleEF	MDV	6.7900e-004	9.5900e-004
tblVehicleEF	MDV	0.14	0.31
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.12	0.00
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.05	0.24
tblVehicleEF	MDV	0.23	0.41
tblVehicleEF	MDV	2.2830e-003	2.6750e-003
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.62	0.76
tblVehicleEF	MDV	2.99	3.20
tblVehicleEF	MDV	325.36	384.38
tblVehicleEF	MDV	70.47	97.04
tblVehicleEF	MDV	6.4040e-003	6.4690e-003
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.05	0.07
tblVehicleEF	MDV	0.24	0.32
tblVehicleEF	MDV	0.04	8.9330e-003
tblVehicleEF	MDV	1.2330e-003	1.1780e-003

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

tblVehicleEF	MDV	1.5830e-003	1.8910e-003
tblVehicleEF	MDV	0.02	3.1260e-003
tblVehicleEF	MDV	1.1370e-003	1.0850e-003
tblVehicleEF	MDV	1.4560e-003	1.7380e-003
tblVehicleEF	MDV	0.03	0.31
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.03	0.00
tblVehicleEF	MDV	9.2720e-003	0.01
tblVehicleEF	MDV	0.07	0.24
tblVehicleEF	MDV	0.29	0.37
tblVehicleEF	MDV	3.2150e-003	3.7980e-003
tblVehicleEF	MDV	6.9700e-004	9.5900e-004
tblVehicleEF	MDV	0.03	0.31
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.03	0.00
tblVehicleEF	MDV	0.01	0.02
tblVehicleEF	MDV	0.07	0.24
tblVehicleEF	MDV	0.32	0.41
tblVehicleEF	MH	6.9300e-003	8.8150e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.58	0.77
tblVehicleEF	MH	1.80	2.17
tblVehicleEF	MH	1,418.06	1,669.13
tblVehicleEF	MH	16.70	21.21
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.17	1.40
tblVehicleEF	MH	0.24	0.30
tblVehicleEF	MH	0.13	0.04

tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.3200e-004	2.6700e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2900e-003	3.3210e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.1400e-004	2.4600e-004
tblVehicleEF	MH	0.47	26.64
tblVehicleEF	MH	0.04	6.73
tblVehicleEF	MH	0.18	0.00
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	9.6720e-003	0.16
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.6500e-004	2.1000e-004
tblVehicleEF	MH	0.47	26.64
tblVehicleEF	MH	0.04	6.73
tblVehicleEF	MH	0.18	0.00
tblVehicleEF	MH	0.06	0.08
tblVehicleEF	MH	9.6720e-003	0.16
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MH	7.1210e-003	8.8150e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.60	0.77
tblVehicleEF	MH	1.64	2.17
tblVehicleEF	MH	1,418.10	1,669.13
tblVehicleEF	MH	16.43	21.21
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	0.03	0.03

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

tblVehicleEF	MH	1.11	1.40
tblVehicleEF	MH	0.22	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.3200e-004	2.6700e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2900e-003	3.3210e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.1400e-004	2.4600e-004
tblVehicleEF	MH	1.05	26.64
tblVehicleEF	MH	0.04	6.73
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	9.4280e-003	0.16
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.6300e-004	2.1000e-004
tblVehicleEF	MH	1.05	26.64
tblVehicleEF	MH	0.04	6.73
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.06	0.08
tblVehicleEF	MH	9.4280e-003	0.16
tblVehicleEF	MH	0.08	0.11
tblVehicleEF	MH	6.7830e-003	8.8150e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.56	0.77
tblVehicleEF	MH	1.94	2.17
tblVehicleEF	MH	1,418.04	1,669.13

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

tblVehicleEF	MH	16.94	21.21
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.20	1.40
tblVehicleEF	MH	0.25	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.3200e-004	2.6700e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2900e-003	3.3210e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.1400e-004	2.4600e-004
tblVehicleEF	MH	0.25	26.64
tblVehicleEF	MH	0.05	6.73
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	0.01	0.16
tblVehicleEF	MH	0.09	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.6800e-004	2.1000e-004
tblVehicleEF	MH	0.25	26.64
tblVehicleEF	MH	0.05	6.73
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.06	0.08
tblVehicleEF	MH	0.01	0.16
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MHD	3.6950e-003	0.01
tblVehicleEF	MHD	1.2530e-003	9.5450e-003

tblVehicleEF	MHD	8.5300e-003	7.5570e-003
tblVehicleEF	MHD	0.40	0.66
tblVehicleEF	MHD	0.18	0.22
tblVehicleEF	MHD	0.94	0.88
tblVehicleEF	MHD	68.38	154.32
tblVehicleEF	MHD	1,034.78	1,175.45
tblVehicleEF	MHD	8.72	7.64
tblVehicleEF	MHD	9.8750e-003	0.02
tblVehicleEF	MHD	0.13	0.15
tblVehicleEF	MHD	7.4170e-003	5.5230e-003
tblVehicleEF	MHD	0.37	0.81
tblVehicleEF	MHD	1.44	0.81
tblVehicleEF	MHD	1.70	1.37
tblVehicleEF	MHD	2.4000e-004	1.1860e-003
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	7.0420e-003	8.3150e-003
tblVehicleEF	MHD	1.1100e-004	9.3000e-005
tblVehicleEF	MHD	2.3000e-004	1.1340e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.7300e-003	7.9470e-003
tblVehicleEF	MHD	1.0200e-004	8.5000e-005
tblVehicleEF	MHD	3.1800e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.7500e-004	0.00
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	6.4900e-004	1.4270e-003

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

tblVehicleEF	MHD	9.8700e-003	0.01
tblVehicleEF	MHD	8.6000e-005	7.6000e-005
tblVehicleEF	MHD	3.1800e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	1.7500e-004	0.00
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	3.4830e-003	0.01
tblVehicleEF	MHD	1.2830e-003	9.5450e-003
tblVehicleEF	MHD	8.0480e-003	7.5570e-003
tblVehicleEF	MHD	0.33	0.66
tblVehicleEF	MHD	0.18	0.22
tblVehicleEF	MHD	0.86	0.88
tblVehicleEF	MHD	68.21	154.32
tblVehicleEF	MHD	1,034.78	1,175.45
tblVehicleEF	MHD	8.59	7.64
tblVehicleEF	MHD	9.8080e-003	0.02
tblVehicleEF	MHD	0.13	0.15
tblVehicleEF	MHD	7.1120e-003	5.5230e-003
tblVehicleEF	MHD	0.36	0.81
tblVehicleEF	MHD	1.38	0.81
tblVehicleEF	MHD	1.69	1.37
tblVehicleEF	MHD	2.0600e-004	1.1860e-003
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	7.0420e-003	8.3150e-003
tblVehicleEF	MHD	1.1100e-004	9.3000e-005
tblVehicleEF	MHD	1.9700e-004	1.1340e-003

tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.7300e-003	7.9470e-003
tblVehicleEF	MHD	1.0200e-004	8.5000e-005
tblVehicleEF	MHD	7.2000e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.6600e-004	0.00
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	6.4700e-004	1.4270e-003
tblVehicleEF	MHD	9.8700e-003	0.01
tblVehicleEF	MHD	8.5000e-005	7.6000e-005
tblVehicleEF	MHD	7.2000e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	3.6600e-004	0.00
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	3.9020e-003	0.01
tblVehicleEF	MHD	1.2290e-003	9.5450e-003
tblVehicleEF	MHD	8.9220e-003	7.5570e-003
tblVehicleEF	MHD	0.46	0.66
tblVehicleEF	MHD	0.18	0.22
tblVehicleEF	MHD	1.01	0.88
tblVehicleEF	MHD	68.72	154.32
tblVehicleEF	MHD	1,034.77	1,175.45
tblVehicleEF	MHD	8.84	7.64

tblVehicleEF	MHD	9.9720e-003	0.02
tblVehicleEF	MHD	0.13	0.15
tblVehicleEF	MHD	7.7050e-003	5.5230e-003
tblVehicleEF	MHD	0.39	0.81
tblVehicleEF	MHD	1.46	0.81
tblVehicleEF	MHD	1.70	1.37
tblVehicleEF	MHD	2.8800e-004	1.1860e-003
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	7.0420e-003	8.3150e-003
tblVehicleEF	MHD	1.1100e-004	9.3000e-005
tblVehicleEF	MHD	2.7600e-004	1.1340e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.7300e-003	7.9470e-003
tblVehicleEF	MHD	1.0200e-004	8.5000e-005
tblVehicleEF	MHD	1.6200e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	9.2000e-005	0.00
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	6.5200e-004	1.4270e-003
tblVehicleEF	MHD	9.8700e-003	0.01
tblVehicleEF	MHD	8.8000e-005	7.6000e-005
tblVehicleEF	MHD	1.6200e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.03	0.04
tblVehicleEF	MHD	9.2000e-005	0.00
tblVehicleEF	MHD	0.02	0.04

tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	OBUS	7.0730e-003	7.5660e-003
tblVehicleEF	OBUS	2.7540e-003	0.01
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.62	0.54
tblVehicleEF	OBUS	0.33	0.37
tblVehicleEF	OBUS	1.69	1.70
tblVehicleEF	OBUS	96.38	89.08
tblVehicleEF	OBUS	1,261.24	1,320.54
tblVehicleEF	OBUS	14.17	13.66
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.13	0.16
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.41	0.36
tblVehicleEF	OBUS	1.44	0.90
tblVehicleEF	OBUS	1.12	1.00
tblVehicleEF	OBUS	1.3500e-004	3.7200e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.6000e-003	0.01
tblVehicleEF	OBUS	1.5100e-004	1.2700e-004
tblVehicleEF	OBUS	1.3000e-004	3.5600e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.2580e-003	0.01
tblVehicleEF	OBUS	1.3900e-004	1.1700e-004
tblVehicleEF	OBUS	1.0730e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8500e-004	0.00

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

tblVehicleEF	OBUS	0.02	0.04
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	9.1500e-004	8.4100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.4000e-004	1.3500e-004
tblVehicleEF	OBUS	1.0730e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8500e-004	0.00
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.09	0.09
tblVehicleEF	OBUS	7.1720e-003	7.5660e-003
tblVehicleEF	OBUS	2.8370e-003	0.01
tblVehicleEF	OBUS	0.01	0.02
tblVehicleEF	OBUS	0.62	0.54
tblVehicleEF	OBUS	0.33	0.37
tblVehicleEF	OBUS	1.54	1.70
tblVehicleEF	OBUS	95.21	89.08
tblVehicleEF	OBUS	1,261.26	1,320.54
tblVehicleEF	OBUS	13.92	13.66
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.13	0.16
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.39	0.36
tblVehicleEF	OBUS	1.38	0.90
tblVehicleEF	OBUS	1.11	1.00
tblVehicleEF	OBUS	1.2000e-004	3.7200e-004

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

tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.6000e-003	0.01
tblVehicleEF	OBUS	1.5100e-004	1.2700e-004
tblVehicleEF	OBUS	1.1500e-004	3.5600e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.2580e-003	0.01
tblVehicleEF	OBUS	1.3900e-004	1.1700e-004
tblVehicleEF	OBUS	2.3400e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	9.7700e-004	0.00
tblVehicleEF	OBUS	0.02	0.04
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	9.0400e-004	8.4100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.3800e-004	1.3500e-004
tblVehicleEF	OBUS	2.3400e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	9.7700e-004	0.00
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.08	0.09
tblVehicleEF	OBUS	6.9500e-003	7.5660e-003
tblVehicleEF	OBUS	2.6900e-003	0.01
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.63	0.54
tblVehicleEF	OBUS	0.32	0.37

tblVehicleEF	OBUS	1.82	1.70
tblVehicleEF	OBUS	98.01	89.08
tblVehicleEF	OBUS	1,261.23	1,320.54
tblVehicleEF	OBUS	14.40	13.66
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.13	0.16
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.44	0.36
tblVehicleEF	OBUS	1.47	0.90
tblVehicleEF	OBUS	1.13	1.00
tblVehicleEF	OBUS	1.5600e-004	3.7200e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.6000e-003	0.01
tblVehicleEF	OBUS	1.5100e-004	1.2700e-004
tblVehicleEF	OBUS	1.4900e-004	3.5600e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.2580e-003	0.01
tblVehicleEF	OBUS	1.3900e-004	1.1700e-004
tblVehicleEF	OBUS	5.9400e-004	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	2.8100e-004	0.00
tblVehicleEF	OBUS	0.02	0.04
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.09	0.08
tblVehicleEF	OBUS	9.3100e-004	8.4100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.4200e-004	1.3500e-004
tblVehicleEF	OBUS	5.9400e-004	0.07

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

tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	2.8100e-004	0.00
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.09	0.09
tblVehicleEF	SBUS	0.06	0.08
tblVehicleEF	SBUS	5.1390e-003	0.09
tblVehicleEF	SBUS	5.5510e-003	5.0470e-003
tblVehicleEF	SBUS	2.58	1.76
tblVehicleEF	SBUS	0.42	0.81
tblVehicleEF	SBUS	0.77	0.68
tblVehicleEF	SBUS	343.48	187.75
tblVehicleEF	SBUS	1,012.23	995.30
tblVehicleEF	SBUS	4.55	3.88
tblVehicleEF	SBUS	0.05	0.02
tblVehicleEF	SBUS	0.13	0.12
tblVehicleEF	SBUS	5.5840e-003	4.6260e-003
tblVehicleEF	SBUS	3.12	1.26
tblVehicleEF	SBUS	3.92	2.08
tblVehicleEF	SBUS	1.00	0.51
tblVehicleEF	SBUS	2.7970e-003	1.0210e-003
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	5.7000e-005	4.3000e-005
tblVehicleEF	SBUS	2.6760e-003	9.7600e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6950e-003	2.6290e-003

tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	5.3000e-005	4.0000e-005
tblVehicleEF	SBUS	6.7700e-004	0.03
tblVehicleEF	SBUS	6.5220e-003	8.5010e-003
tblVehicleEF	SBUS	0.29	0.19
tblVehicleEF	SBUS	3.1500e-004	0.00
tblVehicleEF	SBUS	0.07	0.05
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.2730e-003	1.7010e-003
tblVehicleEF	SBUS	9.6760e-003	9.2440e-003
tblVehicleEF	SBUS	4.5000e-005	3.8000e-005
tblVehicleEF	SBUS	6.7700e-004	0.03
tblVehicleEF	SBUS	6.5220e-003	8.5010e-003
tblVehicleEF	SBUS	0.41	0.31
tblVehicleEF	SBUS	3.1500e-004	0.00
tblVehicleEF	SBUS	0.09	0.15
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.06	0.08
tblVehicleEF	SBUS	5.2150e-003	0.09
tblVehicleEF	SBUS	4.6670e-003	5.0470e-003
tblVehicleEF	SBUS	2.55	1.76
tblVehicleEF	SBUS	0.43	0.81
tblVehicleEF	SBUS	0.57	0.68
tblVehicleEF	SBUS	350.78	187.75
tblVehicleEF	SBUS	1,012.25	995.30
tblVehicleEF	SBUS	4.21	3.88
tblVehicleEF	SBUS	0.05	0.02

tblVehicleEF	SBUS	0.13	0.12
tblVehicleEF	SBUS	5.3140e-003	4.6260e-003
tblVehicleEF	SBUS	3.18	1.26
tblVehicleEF	SBUS	3.76	2.08
tblVehicleEF	SBUS	1.00	0.51
tblVehicleEF	SBUS	2.3670e-003	1.0210e-003
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	5.7000e-005	4.3000e-005
tblVehicleEF	SBUS	2.2640e-003	9.7600e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6950e-003	2.6290e-003
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	5.3000e-005	4.0000e-005
tblVehicleEF	SBUS	1.4710e-003	0.03
tblVehicleEF	SBUS	6.6920e-003	8.5010e-003
tblVehicleEF	SBUS	0.29	0.19
tblVehicleEF	SBUS	6.3300e-004	0.00
tblVehicleEF	SBUS	0.07	0.05
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.3420e-003	1.7010e-003
tblVehicleEF	SBUS	9.6760e-003	9.2440e-003
tblVehicleEF	SBUS	4.2000e-005	3.8000e-005
tblVehicleEF	SBUS	1.4710e-003	0.03
tblVehicleEF	SBUS	6.6920e-003	8.5010e-003
tblVehicleEF	SBUS	0.41	0.31
tblVehicleEF	SBUS	6.3300e-004	0.00

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

tblVehicleEF	SBUS	0.09	0.15
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.06	0.08
tblVehicleEF	SBUS	5.0770e-003	0.09
tblVehicleEF	SBUS	6.3440e-003	5.0470e-003
tblVehicleEF	SBUS	2.63	1.76
tblVehicleEF	SBUS	0.42	0.81
tblVehicleEF	SBUS	0.98	0.68
tblVehicleEF	SBUS	333.40	187.75
tblVehicleEF	SBUS	1,012.22	995.30
tblVehicleEF	SBUS	4.89	3.88
tblVehicleEF	SBUS	0.04	0.02
tblVehicleEF	SBUS	0.13	0.12
tblVehicleEF	SBUS	5.8330e-003	4.6260e-003
tblVehicleEF	SBUS	3.04	1.26
tblVehicleEF	SBUS	3.99	2.08
tblVehicleEF	SBUS	1.01	0.51
tblVehicleEF	SBUS	3.3910e-003	1.0210e-003
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	5.7000e-005	4.3000e-005
tblVehicleEF	SBUS	3.2450e-003	9.7600e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6950e-003	2.6290e-003
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	5.3000e-005	4.0000e-005
tblVehicleEF	SBUS	3.7800e-004	0.03

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

tblVehicleEF	SBUS	6.5940e-003	8.5010e-003
tblVehicleEF	SBUS	0.29	0.19
tblVehicleEF	SBUS	1.8400e-004	0.00
tblVehicleEF	SBUS	0.07	0.05
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	SBUS	3.1770e-003	1.7010e-003
tblVehicleEF	SBUS	9.6760e-003	9.2440e-003
tblVehicleEF	SBUS	4.8000e-005	3.8000e-005
tblVehicleEF	SBUS	3.7800e-004	0.03
tblVehicleEF	SBUS	6.5940e-003	8.5010e-003
tblVehicleEF	SBUS	0.41	0.31
tblVehicleEF	SBUS	1.8400e-004	0.00
tblVehicleEF	SBUS	0.09	0.15
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	UBUS	1.74	0.53
tblVehicleEF	UBUS	1.9120e-003	3.7050e-003
tblVehicleEF	UBUS	13.20	6.31
tblVehicleEF	UBUS	0.14	0.48
tblVehicleEF	UBUS	1,654.13	1,063.59
tblVehicleEF	UBUS	1.40	3.13
tblVehicleEF	UBUS	0.28	0.16
tblVehicleEF	UBUS	1.1770e-003	5.9640e-003
tblVehicleEF	UBUS	0.71	0.29
tblVehicleEF	UBUS	0.01	0.04
tblVehicleEF	UBUS	0.07	0.13
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	5.1700e-003	5.5380e-003

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

tblVehicleEF	UBUS	1.5000e-005	1.2000e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.9450e-003	5.2950e-003
tblVehicleEF	UBUS	1.4000e-005	1.1000e-005
tblVehicleEF	UBUS	3.2000e-005	0.02
tblVehicleEF	UBUS	3.3900e-004	4.7600e-003
tblVehicleEF	UBUS	1.6000e-005	0.00
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	6.9000e-005	0.01
tblVehicleEF	UBUS	8.0430e-003	0.01
tblVehicleEF	UBUS	0.01	8.5740e-003
tblVehicleEF	UBUS	1.4000e-005	3.1000e-005
tblVehicleEF	UBUS	3.2000e-005	0.02
tblVehicleEF	UBUS	3.3900e-004	4.7600e-003
tblVehicleEF	UBUS	1.6000e-005	0.00
tblVehicleEF	UBUS	1.78	0.60
tblVehicleEF	UBUS	6.9000e-005	0.01
tblVehicleEF	UBUS	8.8060e-003	0.01
tblVehicleEF	UBUS	1.74	0.53
tblVehicleEF	UBUS	1.6960e-003	3.7050e-003
tblVehicleEF	UBUS	13.20	6.31
tblVehicleEF	UBUS	0.11	0.48
tblVehicleEF	UBUS	1,654.13	1,063.59
tblVehicleEF	UBUS	1.35	3.13
tblVehicleEF	UBUS	0.28	0.16
tblVehicleEF	UBUS	1.1350e-003	5.9640e-003
tblVehicleEF	UBUS	0.71	0.29
tblVehicleEF	UBUS	0.01	0.04

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

tblVehicleEF	UBUS	0.07	0.13
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	5.1700e-003	5.5380e-003
tblVehicleEF	UBUS	1.5000e-005	1.2000e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.9450e-003	5.2950e-003
tblVehicleEF	UBUS	1.4000e-005	1.1000e-005
tblVehicleEF	UBUS	7.8000e-005	0.02
tblVehicleEF	UBUS	4.2200e-004	4.7600e-003
tblVehicleEF	UBUS	4.2000e-005	0.00
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	6.2000e-005	0.01
tblVehicleEF	UBUS	7.1170e-003	0.01
tblVehicleEF	UBUS	0.01	8.5740e-003
tblVehicleEF	UBUS	1.3000e-005	3.1000e-005
tblVehicleEF	UBUS	7.8000e-005	0.02
tblVehicleEF	UBUS	4.2200e-004	4.7600e-003
tblVehicleEF	UBUS	4.2000e-005	0.00
tblVehicleEF	UBUS	1.78	0.60
tblVehicleEF	UBUS	6.2000e-005	0.01
tblVehicleEF	UBUS	7.7920e-003	0.01
tblVehicleEF	UBUS	1.74	0.53
tblVehicleEF	UBUS	2.0920e-003	3.7050e-003
tblVehicleEF	UBUS	13.20	6.31
tblVehicleEF	UBUS	0.16	0.48
tblVehicleEF	UBUS	1,654.13	1,063.59
tblVehicleEF	UBUS	1.44	3.13
tblVehicleEF	UBUS	0.28	0.16

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

tblVehicleEF	UBUS	1.2190e-003	5.9640e-003
tblVehicleEF	UBUS	0.71	0.29
tblVehicleEF	UBUS	0.01	0.04
tblVehicleEF	UBUS	0.07	0.13
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	5.1700e-003	5.5380e-003
tblVehicleEF	UBUS	1.5000e-005	1.2000e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.9450e-003	5.2950e-003
tblVehicleEF	UBUS	1.4000e-005	1.1000e-005
tblVehicleEF	UBUS	1.7000e-005	0.02
tblVehicleEF	UBUS	3.6700e-004	4.7600e-003
tblVehicleEF	UBUS	8.0000e-006	0.00
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	8.6000e-005	0.01
tblVehicleEF	UBUS	8.8250e-003	0.01
tblVehicleEF	UBUS	0.01	8.5740e-003
tblVehicleEF	UBUS	1.4000e-005	3.1000e-005
tblVehicleEF	UBUS	1.7000e-005	0.02
tblVehicleEF	UBUS	3.6700e-004	4.7600e-003
tblVehicleEF	UBUS	8.0000e-006	0.00
tblVehicleEF	UBUS	1.78	0.60
tblVehicleEF	UBUS	8.6000e-005	0.01
tblVehicleEF	UBUS	9.6620e-003	0.01
tblVehicleTrips	ST_TR	4.91	4.86
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	8.14	4.86
tblVehicleTrips	ST_TR	122.40	91.56

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

tblVehicleTrips	ST_TR	8.57	7.38
tblVehicleTrips	ST_TR	9.54	7.02
tblVehicleTrips	SU_TR	4.09	4.05
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	6.28	4.05
tblVehicleTrips	SU_TR	142.64	106.70
tblVehicleTrips	SU_TR	1.42	1.22
tblVehicleTrips	SU_TR	8.55	6.30
tblVehicleTrips	WD_TR	5.44	5.39
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	7.32	5.39
tblVehicleTrips	WD_TR	112.18	83.92
tblVehicleTrips	WD_TR	34.80	29.98
tblVehicleTrips	WD_TR	9.44	6.95
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3258	2.6897	2.8867	6.3100e-003	0.8497	0.1180	0.9676	0.3423	0.1091	0.4513	0.0000	559.1882	559.1882	0.1302	4.0600e-003	563.6546
2024	0.5392	1.9912	5.1990	0.0130	1.1730	0.0859	1.2589	0.3120	0.0807	0.3926	0.0000	1,168.1826	1,168.1826	0.0952	0.0232	1,177.4760
2025	0.5034	1.8340	4.9765	0.0126	1.1685	0.0741	1.2426	0.3108	0.0696	0.3804	0.0000	1,135.3207	1,135.3207	0.0923	0.0217	1,144.0904
2026	4.0598	1.5073	3.8396	9.4600e-003	0.8450	0.0632	0.9083	0.2247	0.0593	0.2840	0.0000	851.2206	851.2206	0.0805	0.0148	857.6519
Maximum	**4.0598**	**2.6897**	**5.1990**	**0.0130**	**1.1730**	**0.1180**	**1.2589**	**0.3423**	**0.1091**	**0.4513**	**0.0000**	**1,168.1826**	**1,168.1826**	**0.1302**	**0.0232**	**1,177.4760**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.1390	1.6405	3.4699	6.3100e-003	0.8497	9.4300e-003	0.8591	0.3423	9.3500e-003	0.3516	0.0000	559.1877	559.1877	0.1302	4.0600e-003	563.6541
2024	0.4163	1.6596	5.4226	0.0130	1.1730	0.0166	1.1896	0.3120	0.0162	0.3281	0.0000	1,168.1822	1,168.1822	0.0952	0.0232	1,177.4756
2025	0.3946	1.6307	5.2100	0.0126	1.1685	0.0163	1.1848	0.3108	0.0159	0.3267	0.0000	1,135.3204	1,135.3204	0.0923	0.0217	1,144.0901
2026	3.9669	1.3201	4.0734	9.4600e-003	0.8450	0.0122	0.8573	0.2247	0.0120	0.2367	0.0000	851.2203	851.2203	0.0805	0.0148	857.6516
Maximum	**3.9669**	**1.6596**	**5.4226**	**0.0130**	**1.1730**	**0.0166**	**1.1896**	**0.3423**	**0.0162**	**0.3516**	**0.0000**	**1,168.1822**	**1,168.1822**	**0.1302**	**0.0232**	**1,177.4756**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**9.42**	**22.08**	**-7.54**	**0.00**	**0.00**	**84.01**	**6.55**	**0.00**	**83.25**	**17.59**	**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	**4-3-2023**	**7-2-2023**	0.8270	0.4512
2	**7-3-2023**	**10-2-2023**	1.2838	0.7174
3	**10-3-2023**	**1-2-2024**	0.9253	0.6326
4	**1-3-2024**	**4-2-2024**	0.6402	0.5275
5	**4-3-2024**	**7-2-2024**	0.6264	0.5136
6	**7-3-2024**	**10-2-2024**	0.6335	0.5195
7	**10-3-2024**	**1-2-2025**	0.6465	0.5333
8	**1-3-2025**	**4-2-2025**	0.5873	0.5104

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

9	**4-3-2025**	**7-2-2025**	0.5809	0.5032
10	**7-3-2025**	**10-2-2025**	0.5876	0.5090
11	**10-3-2025**	**1-2-2026**	0.6004	0.5218
12	**1-3-2026**	**4-2-2026**	0.5779	0.5011
13	**4-3-2026**	**7-2-2026**	0.5722	0.4945
14	**7-3-2026**	**9-30-2026**	1.7551	1.6773
		Highest	1.7551	1.6773

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.9630	0.0729	6.3291	3.4000e-004		0.0351	0.0351		0.0351	0.0351	0.0000	10.3557	10.3557	9.9900e-003	0.0000	10.6055
Energy	0.0574	0.5217	0.4382	3.1300e-003		0.0397	0.0397		0.0397	0.0397	0.0000	6,597.2088	6,597.2088	0.2571	0.0403	6,615.6348
Mobile	8.9270	5.0333	50.9121	0.1104	10.9233	0.0731	10.9963	2.7223	0.0681	2.7904	0.0000	10,191.5903	10,191.5903	0.5941	0.4819	10,350.0522
Stationary	0.0550	0.0270	0.1403	2.6000e-004		1.0800e-003	1.0800e-003		1.0800e-003	1.0800e-003	0.0000	25.5325	25.5325	3.5800e-003	0.0000	25.6219
Waste						0.0000	0.0000		0.0000	0.0000	1,138.6819	0.0000	1,138.6819	67.2942	0.0000	2,821.0361
Water						0.0000	0.0000		0.0000	0.0000	37.5255	295.3551	332.8807	3.8663	0.0925	457.0938
Total	**15.0024**	**5.6548**	**57.8197**	**0.1141**	**10.9233**	**0.1489**	**11.0721**	**2.7223**	**0.1439**	**2.8662**	**1,176.2074**	**17,120.0424**	**18,296.2498**	**72.0252**	**0.6146**	**20,280.0444**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.9630	0.0729	6.3291	3.4000e-004		0.0351	0.0351		0.0351	0.0351	0.0000	10.3557	10.3557	9.9900e-003	0.0000	10.6055
Energy	0.0574	0.5217	0.4382	3.1300e-003		0.0397	0.0397		0.0397	0.0397	0.0000	6,597.2088	6,597.2088	0.2571	0.0403	6,615.6348
Mobile	8.9270	5.0333	50.9121	0.1104	10.9233	0.0731	10.9963	2.7223	0.0681	2.7904	0.0000	10,191.5903	10,191.5903	0.5941	0.4819	10,350.0522
Stationary	0.0550	0.0270	0.1403	2.6000e-004		1.0800e-003	1.0800e-003		1.0800e-003	1.0800e-003	0.0000	25.5325	25.5325	3.5800e-003	0.0000	25.6219
Waste						0.0000	0.0000		0.0000	0.0000	1,138.6819	0.0000	1,138.6819	67.2942	0.0000	2,821.0361
Water						0.0000	0.0000		0.0000	0.0000	37.5255	295.3551	332.8807	3.8663	0.0925	457.0938
Total	**15.0024**	**5.6548**	**57.8197**	**0.1141**	**10.9233**	**0.1489**	**11.0721**	**2.7223**	**0.1439**	**2.8662**	**1,176.2074**	**17,120.0424**	**18,296.2498**	**72.0252**	**0.6146**	**20,280.0444**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/3/2023	6/9/2023	5	50	
2	Site Preparation	Site Preparation	6/10/2023	7/21/2023	5	30	

3	Grading	Grading	7/22/2023	11/3/2023	5	75	
4	Trenching	Trenching	7/22/2023	11/3/2023	5	75	
5	Building Construction	Building Construction	11/4/2023	9/4/2026	5	740	
6	Paving	Paving	9/5/2026	11/20/2026	5	55	
7	Architectural Coating	Architectural Coating	9/5/2026	11/20/2026	5	55	

Acres of Grading (Site Preparation Phase): 45

Acres of Grading (Grading Phase): 225

Acres of Paving: 0

Residential Indoor: 1,570,195; Residential Outdoor: 523,398; Non-Residential Indoor: 720,000; Non-Residential Outdoor: 240,000; Striped Parking Area: 50,520 (Architectural Coating – sqft)

<u>OffRoad Equipment</u>

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	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
Trenching	Excavators	1	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	50.00	20.00	LD_Mix	HHDT	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	50.00	20.00	LD_Mix	HHDT	HHDT
Grading	8	20.00	0.00	0.00	10.80	50.00	20.00	LD_Mix	HHDT	HHDT
Trenching	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,129.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	226.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 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					8.1300e-003	0.0000	8.1300e-003	1.2300e-003	0.0000	1.2300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0567	0.5371	0.4911	9.7000e-004		0.0249	0.0249		0.0232	0.0232	0.0000	84.9802	84.9802	0.0238	0.0000	85.5752
Total	**0.0567**	**0.5371**	**0.4911**	**9.7000e-004**	**8.1300e-003**	**0.0249**	**0.0331**	**1.2300e-003**	**0.0232**	**0.0244**	**0.0000**	**84.9802**	**84.9802**	**0.0238**	**0.0000**	**85.5752**

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	9.4000e-004	6.5000e-004	8.3700e-003	2.0000e-005	2.9700e-003	1.0000e-005	2.9900e-003	7.9000e-004	1.0000e-005	8.0000e-004	0.0000	2.2642	2.2642	7.0000e-005	6.0000e-005	2.2846
Total	**9.4000e-004**	**6.5000e-004**	**8.3700e-003**	**2.0000e-005**	**2.9700e-003**	**1.0000e-005**	**2.9900e-003**	**7.9000e-004**	**1.0000e-005**	**8.0000e-004**	**0.0000**	**2.2642**	**2.2642**	**7.0000e-005**	**6.0000e-005**	**2.2846**

3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.1300e-003	0.0000	8.1300e-003	1.2300e-003	0.0000	1.2300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0146	0.3389	0.6169	9.7000e-004		1.5400e-003	1.5400e-003		1.5400e-003	1.5400e-003	0.0000	84.9801	84.9801	0.0238	0.0000	85.5751
Total	**0.0146**	**0.3389**	**0.6169**	**9.7000e-004**	**8.1300e-003**	**1.5400e-003**	**9.6700e-003**	**1.2300e-003**	**1.5400e-003**	**2.7700e-003**	**0.0000**	**84.9801**	**84.9801**	**0.0238**	**0.0000**	**85.5751**

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	9.4000e-004	6.5000e-004	8.3700e-003	2.0000e-005	2.9700e-003	1.0000e-005	2.9900e-003	7.9000e-004	1.0000e-005	8.0000e-004	0.0000	2.2642	2.2642	7.0000e-005	6.0000e-005	2.2846
Total	**9.4000e-004**	**6.5000e-004**	**8.3700e-003**	**2.0000e-005**	**2.9700e-003**	**1.0000e-005**	**2.9900e-003**	**7.9000e-004**	**1.0000e-005**	**8.0000e-004**	**0.0000**	**2.2642**	**2.2642**	**7.0000e-005**	**6.0000e-005**	**2.2846**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3048	0.0000	0.3048	0.1530	0.0000	0.1530	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0399	0.4129	0.2737	5.7000e-004		0.0190	0.0190		0.0175	0.0175	0.0000	50.1760	50.1760	0.0162	0.0000	50.5817
Total	**0.0399**	**0.4129**	**0.2737**	**5.7000e-004**	**0.3048**	**0.0190**	**0.3237**	**0.1530**	**0.0175**	**0.1705**	**0.0000**	**50.1760**	**50.1760**	**0.0162**	**0.0000**	**50.5817**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	4.7000e-004	6.0300e-003	2.0000e-005	2.1400e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.6302	1.6302	5.0000e-005	5.0000e-005	1.6449
Total	**6.7000e-004**	**4.7000e-004**	**6.0300e-003**	**2.0000e-005**	**2.1400e-003**	**1.0000e-005**	**2.1500e-003**	**5.7000e-004**	**1.0000e-005**	**5.8000e-004**	**0.0000**	**1.6302**	**1.6302**	**5.0000e-005**	**5.0000e-005**	**1.6449**

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3048	0.0000	0.3048	0.1530	0.0000	0.1530	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0105	0.1824	0.3444	5.7000e-004		9.3000e-004	9.3000e-004		9.3000e-004	9.3000e-004	0.0000	50.1760	50.1760	0.0162	0.0000	50.5817
Total	**0.0105**	**0.1824**	**0.3444**	**5.7000e-004**	**0.3048**	**9.3000e-004**	**0.3057**	**0.1530**	**9.3000e-004**	**0.1540**	**0.0000**	**50.1760**	**50.1760**	**0.0162**	**0.0000**	**50.5817**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	4.7000e-004	6.0300e-003	2.0000e-005	2.1400e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.6302	1.6302	5.0000e-005	5.0000e-005	1.6449
Total	**6.7000e-004**	**4.7000e-004**	**6.0300e-003**	**2.0000e-005**	**2.1400e-003**	**1.0000e-005**	**2.1500e-003**	**5.7000e-004**	**1.0000e-005**	**5.8000e-004**	**0.0000**	**1.6302**	**1.6302**	**5.0000e-005**	**5.0000e-005**	**1.6449**

3.4 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					0.3451	0.0000	0.3451	0.1370	0.0000	0.1370	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1246	1.2943	1.0519	2.3300e-003		0.0534	0.0534		0.0491	0.0491	0.0000	204.5070	204.5070	0.0661	0.0000	206.1606
Total	**0.1246**	**1.2943**	**1.0519**	**2.3300e-003**	**0.3451**	**0.0534**	**0.3986**	**0.1370**	**0.0491**	**0.1862**	**0.0000**	**204.5070**	**204.5070**	**0.0661**	**0.0000**	**206.1606**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8700e-003	1.3100e-003	0.0167	5.0000e-005	5.9500e-003	3.0000e-005	5.9800e-003	1.5800e-003	3.0000e-005	1.6100e-003	0.0000	4.5284	4.5284	1.3000e-004	1.3000e-004	4.5693
Total	**1.8700e-003**	**1.3100e-003**	**0.0167**	**5.0000e-005**	**5.9500e-003**	**3.0000e-005**	**5.9800e-003**	**1.5800e-003**	**3.0000e-005**	**1.6100e-003**	**0.0000**	**4.5284**	**4.5284**	**1.3000e-004**	**1.3000e-004**	**4.5693**

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3451	0.0000	0.3451	0.1370	0.0000	0.1370	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0379	0.7227	1.3771	2.3300e-003		3.8100e-003	3.8100e-003		3.8100e-003	3.8100e-003	0.0000	204.5068	204.5068	0.0661	0.0000	206.1603
Total	**0.0379**	**0.7227**	**1.3771**	**2.3300e-003**	**0.3451**	**3.8100e-003**	**0.3489**	**0.1370**	**3.8100e-003**	**0.1408**	**0.0000**	**204.5068**	**204.5068**	**0.0661**	**0.0000**	**206.1603**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8700e-003	1.3100e-003	0.0167	5.0000e-005	5.9500e-003	3.0000e-005	5.9800e-003	1.5800e-003	3.0000e-005	1.6100e-003	0.0000	4.5284	4.5284	1.3000e-004	1.3000e-004	4.5693
Total	**1.8700e-003**	**1.3100e-003**	**0.0167**	**5.0000e-005**	**5.9500e-003**	**3.0000e-005**	**5.9800e-003**	**1.5800e-003**	**3.0000e-005**	**1.6100e-003**	**0.0000**	**4.5284**	**4.5284**	**1.3000e-004**	**1.3000e-004**	**4.5693**

3.5 Trenching - 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	0.0128	0.1157	0.2058	3.1000e-004		5.6900e-003	5.6900e-003		5.2300e-003	5.2300e-003	0.0000	27.2728	27.2728	8.8200e-003	0.0000	27.4933
Total	**0.0128**	**0.1157**	**0.2058**	**3.1000e-004**		**5.6900e-003**	**5.6900e-003**		**5.2300e-003**	**5.2300e-003**	**0.0000**	**27.2728**	**27.2728**	**8.8200e-003**	**0.0000**	**27.4933**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.3000e-004	4.1900e-003	1.0000e-005	1.4900e-003	1.0000e-005	1.4900e-003	4.0000e-004	1.0000e-005	4.0000e-004	0.0000	1.1321	1.1321	3.0000e-005	3.0000e-005	1.1423
Total	**4.7000e-004**	**3.3000e-004**	**4.1900e-003**	**1.0000e-005**	**1.4900e-003**	**1.0000e-005**	**1.4900e-003**	**4.0000e-004**	**1.0000e-005**	**4.0000e-004**	**0.0000**	**1.1321**	**1.1321**	**3.0000e-005**	**3.0000e-005**	**1.1423**

3.5 Trenching - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.9900e-003	0.1362	0.2348	3.1000e-004		5.1000e-004	5.1000e-004		5.1000e-004	5.1000e-004	0.0000	27.2727	27.2727	8.8200e-003	0.0000	27.4933
Total	**4.9900e-003**	**0.1362**	**0.2348**	**3.1000e-004**		**5.1000e-004**	**5.1000e-004**		**5.1000e-004**	**5.1000e-004**	**0.0000**	**27.2727**	**27.2727**	**8.8200e-003**	**0.0000**	**27.4933**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.3000e-004	4.1900e-003	1.0000e-005	1.4900e-003	1.0000e-005	1.4900e-003	4.0000e-004	1.0000e-005	4.0000e-004	0.0000	1.1321	1.1321	3.0000e-005	3.0000e-005	1.1423
Total	**4.7000e-004**	**3.3000e-004**	**4.1900e-003**	**1.0000e-005**	**1.4900e-003**	**1.0000e-005**	**1.4900e-003**	**4.0000e-004**	**1.0000e-005**	**4.0000e-004**	**0.0000**	**1.1321**	**1.1321**	**3.0000e-005**	**3.0000e-005**	**1.1423**

3.6 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	0.0315	0.2877	0.3249	5.4000e-004		0.0140	0.0140		0.0132	0.0132	0.0000	46.3610	46.3610	0.0110	0.0000	46.6367
Total	**0.0315**	**0.2877**	**0.3249**	**5.4000e-004**		**0.0140**	**0.0140**		**0.0132**	**0.0132**	**0.0000**	**46.3610**	**46.3610**	**0.0110**	**0.0000**	**46.6367**

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	0.0564	0.0393	0.5040	1.4900e-003	0.1791	8.9000e-004	0.1800	0.0476	8.2000e-004	0.0484	0.0000	136.3362	136.3362	3.9300e-003	3.8000e-003	137.5659
Total	**0.0564**	**0.0393**	**0.5040**	**1.4900e-003**	**0.1791**	**8.9000e-004**	**0.1800**	**0.0476**	**8.2000e-004**	**0.0484**	**0.0000**	**136.3362**	**136.3362**	**3.9300e-003**	**3.8000e-003**	**137.5659**

3.6 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0107	0.2182	0.3575	5.4000e-004		1.6900e-003	1.6900e-003		1.6900e-003	1.6900e-003	0.0000	46.3609	46.3609	0.0110	0.0000	46.6366
Total	**0.0107**	**0.2182**	**0.3575**	**5.4000e-004**		**1.6900e-003**	**1.6900e-003**		**1.6900e-003**	**1.6900e-003**	**0.0000**	**46.3609**	**46.3609**	**0.0110**	**0.0000**	**46.6366**

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	0.0564	0.0393	0.5040	1.4900e-003	0.1791	8.9000e-004	0.1800	0.0476	8.2000e-004	0.0484	0.0000	136.3362	136.3362	3.9300e-003	3.8000e-003	137.5659
Total	**0.0564**	**0.0393**	**0.5040**	**1.4900e-003**	**0.1791**	**8.9000e-004**	**0.1800**	**0.0476**	**8.2000e-004**	**0.0484**	**0.0000**	**136.3362**	**136.3362**	**3.9300e-003**	**3.8000e-003**	**137.5659**

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

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	0.3464	0.2301	3.0812	9.4300e-003	1.1730	5.5200e-003	1.1785	0.3120	5.0800e-003	0.3171	0.0000	864.4603	864.4603	0.0234	0.0232	871.9581
Total	**0.3464**	**0.2301**	**3.0812**	**9.4300e-003**	**1.1730**	**5.5200e-003**	**1.1785**	**0.3120**	**5.0800e-003**	**0.3171**	**0.0000**	**864.4603**	**864.4603**	**0.0234**	**0.0232**	**871.9581**

3.6 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0699	1.4295	2.3415	3.5300e-003		0.0111	0.0111		0.0111	0.0111	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total	**0.0699**	**1.4295**	**2.3415**	**3.5300e-003**		**0.0111**	**0.0111**		**0.0111**	**0.0111**	**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

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	0.3464	0.2301	3.0812	9.4300e-003	1.1730	5.5200e-003	1.1785	0.3120	5.0800e-003	0.3171	0.0000	864.4603	864.4603	0.0234	0.0232	871.9581
Total	**0.3464**	**0.2301**	**3.0812**	**9.4300e-003**	**1.1730**	**5.5200e-003**	**1.1785**	**0.3120**	**5.0800e-003**	**0.3171**	**0.0000**	**864.4603**	**864.4603**	**0.0234**	**0.0232**	**871.9581**

3.6 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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	0.3250	0.2067	2.8775	9.0800e-003	1.1685	5.2600e-003	1.1738	0.3108	4.8400e-003	0.3156	0.0000	832.6658	832.6658	0.0212	0.0217	839.6569
Total	**0.3250**	**0.2067**	**2.8775**	**9.0800e-003**	**1.1685**	**5.2600e-003**	**1.1738**	**0.3108**	**4.8400e-003**	**0.3156**	**0.0000**	**832.6658**	**832.6658**	**0.0212**	**0.0217**	**839.6569**

3.6 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0696	1.4240	2.3325	3.5200e-003		0.0110	0.0110		0.0110	0.0110	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.0696**	**1.4240**	**2.3325**	**3.5200e-003**		**0.0110**	**0.0110**		**0.0110**	**0.0110**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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	0.3250	0.2067	2.8775	9.0800e-003	1.1685	5.2600e-003	1.1738	0.3108	4.8400e-003	0.3156	0.0000	832.6658	832.6658	0.0212	0.0217	839.6569
Total	**0.3250**	**0.2067**	**2.8775**	**9.0800e-003**	**1.1685**	**5.2600e-003**	**1.1738**	**0.3108**	**4.8400e-003**	**0.3156**	**0.0000**	**832.6658**	**832.6658**	**0.0212**	**0.0217**	**839.6569**

3.6 Building Construction - 2026

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	0.1210	1.1036	1.4235	2.3900e-003		0.0467	0.0467		0.0439	0.0439	0.0000	205.2487	205.2487	0.0483	0.0000	206.4549
Total	**0.1210**	**1.1036**	**1.4235**	**2.3900e-003**		**0.0467**	**0.0467**		**0.0439**	**0.0439**	**0.0000**	**205.2487**	**205.2487**	**0.0483**	**0.0000**	**206.4549**

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	0.2087	0.1278	1.8432	5.9700e-003	0.7925	3.3900e-003	0.7959	0.2108	3.1200e-003	0.2139	0.0000	547.5765	547.5765	0.0132	0.0139	552.0502
Total	**0.2087**	**0.1278**	**1.8432**	**5.9700e-003**	**0.7925**	**3.3900e-003**	**0.7959**	**0.2108**	**3.1200e-003**	**0.2139**	**0.0000**	**547.5765**	**547.5765**	**0.0132**	**0.0139**	**552.0502**

3.6 Building Construction - 2026

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	0.0472	0.9657	1.5818	2.3900e-003		7.4900e-003	7.4900e-003		7.4900e-003	7.4900e-003	0.0000	205.2485	205.2485	0.0483	0.0000	206.4547
Total	**0.0472**	**0.9657**	**1.5818**	**2.3900e-003**		**7.4900e-003**	**7.4900e-003**		**7.4900e-003**	**7.4900e-003**	**0.0000**	**205.2485**	**205.2485**	**0.0483**	**0.0000**	**206.4547**

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	0.2087	0.1278	1.8432	5.9700e-003	0.7925	3.3900e-003	0.7959	0.2108	3.1200e-003	0.2139	0.0000	547.5765	547.5765	0.0132	0.0139	552.0502
Total	**0.2087**	**0.1278**	**1.8432**	**5.9700e-003**	**0.7925**	**3.3900e-003**	**0.7959**	**0.2108**	**3.1200e-003**	**0.2139**	**0.0000**	**547.5765**	**547.5765**	**0.0132**	**0.0139**	**552.0502**

3.7 Paving - 2026

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	0.0252	0.2360	0.4009	6.3000e-004		0.0115	0.0115		0.0106	0.0106	0.0000	55.0530	55.0530	0.0178	0.0000	55.4981
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0252**	**0.2360**	**0.4009**	**6.3000e-004**		**0.0115**	**0.0115**		**0.0106**	**0.0106**	**0.0000**	**55.0530**	**55.0530**	**0.0178**	**0.0000**	**55.4981**

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	5.3000e-004	7.6100e-003	2.0000e-005	3.2700e-003	1.0000e-005	3.2900e-003	8.7000e-004	1.0000e-005	8.8000e-004	0.0000	2.2606	2.2606	5.0000e-005	6.0000e-005	2.2791
Total	**8.6000e-004**	**5.3000e-004**	**7.6100e-003**	**2.0000e-005**	**3.2700e-003**	**1.0000e-005**	**3.2900e-003**	**8.7000e-004**	**1.0000e-005**	**8.8000e-004**	**0.0000**	**2.2606**	**2.2606**	**5.0000e-005**	**6.0000e-005**	**2.2791**

3.7 Paving - 2026

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	9.1900e-003	0.1890	0.4756	6.3000e-004		1.0300e-003	1.0300e-003		1.0300e-003	1.0300e-003	0.0000	55.0529	55.0529	0.0178	0.0000	55.4980
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.1900e-003**	**0.1890**	**0.4756**	**6.3000e-004**		**1.0300e-003**	**1.0300e-003**		**1.0300e-003**	**1.0300e-003**	**0.0000**	**55.0529**	**55.0529**	**0.0178**	**0.0000**	**55.4980**

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	5.3000e-004	7.6100e-003	2.0000e-005	3.2700e-003	1.0000e-005	3.2900e-003	8.7000e-004	1.0000e-005	8.8000e-004	0.0000	2.2606	2.2606	5.0000e-005	6.0000e-005	2.2791
Total	**8.6000e-004**	**5.3000e-004**	**7.6100e-003**	**2.0000e-005**	**3.2700e-003**	**1.0000e-005**	**3.2900e-003**	**8.7000e-004**	**1.0000e-005**	**8.8000e-004**	**0.0000**	**2.2606**	**2.2606**	**5.0000e-005**	**6.0000e-005**	**2.2791**

3.8 Architectural Coating - 2026

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	3.6864					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7000e-003	0.0315	0.0498	8.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	7.0215	7.0215	3.8000e-004	0.0000	7.0310
Total	**3.6911**	**0.0315**	**0.0498**	**8.0000e-005**		**1.4200e-003**	**1.4200e-003**		**1.4200e-003**	**1.4200e-003**	**0.0000**	**7.0215**	**7.0215**	**3.8000e-004**	**0.0000**	**7.0310**

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	0.0130	7.9500e-003	0.1147	3.7000e-004	0.0493	2.1000e-004	0.0495	0.0131	1.9000e-004	0.0133	0.0000	34.0603	34.0603	8.2000e-004	8.7000e-004	34.3386
Total	**0.0130**	**7.9500e-003**	**0.1147**	**3.7000e-004**	**0.0493**	**2.1000e-004**	**0.0495**	**0.0131**	**1.9000e-004**	**0.0133**	**0.0000**	**34.0603**	**34.0603**	**8.2000e-004**	**8.7000e-004**	**34.3386**

3.8 Architectural Coating - 2026

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	3.6864					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-003	0.0292	0.0504	8.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	7.0214	7.0214	3.8000e-004	0.0000	7.0310
Total	**3.6879**	**0.0292**	**0.0504**	**8.0000e-005**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**	**0.0000**	**7.0214**	**7.0214**	**3.8000e-004**	**0.0000**	**7.0310**

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	0.0130	7.9500e-003	0.1147	3.7000e-004	0.0493	2.1000e-004	0.0495	0.0131	1.9000e-004	0.0133	0.0000	34.0603	34.0603	8.2000e-004	8.7000e-004	34.3386
Total	**0.0130**	**7.9500e-003**	**0.1147**	**3.7000e-004**	**0.0493**	**2.1000e-004**	**0.0495**	**0.0131**	**1.9000e-004**	**0.0133**	**0.0000**	**34.0603**	**34.0603**	**8.2000e-004**	**8.7000e-004**	**34.3386**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.9270	5.0333	50.9121	0.1104	10.9233	0.0731	10.9963	2.7223	0.0681	2.7904	0.0000	10,191.5903	10,191.5903	0.5941	0.4819	10,350.0522
Unmitigated	8.9270	5.0333	50.9121	0.1104	10.9233	0.0731	10.9963	2.7223	0.0681	2.7904	0.0000	10,191.5903	10,191.5903	0.5941	0.4819	10,350.0522

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	4,328.17	3,902.58	3252.15	9,500,926	9,500,926
City Park	0.00	0.00	0.00		
Condo/Townhouse	123.97	111.78	93.15	272,131	272,131
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	1,258.80	1,373.40	1600.50	1,536,174	1,536,174
Medical Office Building	13,940.70	3,431.70	567.30	20,607,744	20,607,744
Single Family Housing	166.80	168.48	151.20	380,650	380,650
Total	19,818.44	8,987.94	5,664.30	32,297,624	32,297,624

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
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
City Park	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
Condo/Townhouse	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
Enclosed Parking with Elevator	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
High Turnover (Sit Down Restaurant)	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
Medical Office Building	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
Single Family Housing	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	6,029.3085	6,029.3085	0.2463	0.0299	6,044.3598
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6,029.3085	6,029.3085	0.2463	0.0299	6,044.3598
NaturalGas Mitigated	0.0574	0.5217	0.4382	3.1300e-003		0.0397	0.0397		0.0397	0.0397	0.0000	567.9003	567.9003	0.0109	0.0104	571.2751
NaturalGas Unmitigated	0.0574	0.5217	0.4382	3.1300e-003		0.0397	0.0397		0.0397	0.0397	0.0000	567.9003	567.9003	0.0109	0.0104	571.2751

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					
Apartments Mid Rise	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
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	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
Enclosed Parking with Elevator	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
High Turnover (Sit Down Restaurant)	3.10905e +006	0.0168	0.1524	0.1280	9.1000e-004		0.0116	0.0116		0.0116	0.0116	0.0000	165.9108	165.9108	3.1800e-003	3.0400e-003	166.8967
Medical Office Building	7.533e +006	0.0406	0.3693	0.3102	2.2200e-003		0.0281	0.0281		0.0281	0.0281	0.0000	401.9896	401.9896	7.7000e-003	7.3700e-003	404.3784
Single Family Housing	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
Total		**0.0574**	**0.5217**	**0.4382**	**3.1300e-003**		**0.0396**	**0.0396**		**0.0396**	**0.0396**	**0.0000**	**567.9003**	**567.9003**	**0.0109**	**0.0104**	**571.2751**

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					
Apartments Mid Rise	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
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	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
Enclosed Parking with Elevator	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
High Turnover (Sit Down Restaurant)	3.10905e +006	0.0168	0.1524	0.1280	9.1000e-004		0.0116	0.0116		0.0116	0.0116	0.0000	165.9108	165.9108	3.1800e-003	3.0400e-003	166.8967
Medical Office Building	7.533e +006	0.0406	0.3693	0.3102	2.2200e-003		0.0281	0.0281		0.0281	0.0281	0.0000	401.9896	401.9896	7.7000e-003	7.3700e-003	404.3784
Single Family Housing	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
Total		**0.0574**	**0.5217**	**0.4382**	**3.1300e-003**		**0.0396**	**0.0396**		**0.0396**	**0.0396**	**0.0000**	**567.9003**	**567.9003**	**0.0109**	**0.0104**	**571.2751**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	3.10474e +006	1,137.868 4	0.0465	5.6300e-003	1,140.709 0
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	111515	40.8695	1.6700e-003	2.0000e-004	40.9715
Enclosed Parking with Elevator	4.58048e +006	1,678.716 4	0.0686	8.3100e-003	1,682.907 1
High Turnover (Sit Down Restaurant)	482550	176.8515	7.2200e-003	8.8000e-004	177.2930
Medical Office Building	7.98405e +006	2,926.102 9	0.1195	0.0145	2,933.407 5
Single Family Housing	187997	68.8998	2.8100e-003	3.4000e-004	69.0718
Total		**6,029.308 5**	**0.2462**	**0.0299**	**6,044.359 8**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	3.10474e+006	1,137.8684	0.0465	5.6300e-003	1,140.7090
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	111515	40.8695	1.6700e-003	2.0000e-004	40.9715
Enclosed Parking with Elevator	4.58048e+006	1,678.7164	0.0686	8.3100e-003	1,682.9071
High Turnover (Sit Down Restaurant)	482550	176.8515	7.2200e-003	8.8000e-004	177.2930
Medical Office Building	7.98405e+006	2,926.1029	0.1195	0.0145	2,933.4075
Single Family Housing	187997	68.8998	2.8100e-003	3.4000e-004	69.0718
Total		**6,029.3085**	**0.2462**	**0.0299**	**6,044.3598**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.9630	0.0729	6.3291	3.4000e-004		0.0351	0.0351		0.0351	0.0351	0.0000	10.3557	10.3557	9.9900e-003	0.0000	10.6055
Unmitigated	5.9630	0.0729	6.3291	3.4000e-004		0.0351	0.0351		0.0351	0.0351	0.0000	10.3557	10.3557	9.9900e-003	0.0000	10.6055

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.8137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.9578					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1915	0.0729	6.3291	3.4000e-004		0.0351	0.0351		0.0351	0.0351	0.0000	10.3557	10.3557	9.9900e-003	0.0000	10.6055
Total	**5.9630**	**0.0729**	**6.3291**	**3.4000e-004**		**0.0351**	**0.0351**		**0.0351**	**0.0351**	**0.0000**	**10.3557**	**10.3557**	**9.9900e-003**	**0.0000**	**10.6055**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.8137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.9578					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.1915	0.0729	6.3291	3.4000e-004		0.0351	0.0351		0.0351	0.0351	0.0000	10.3557	10.3557	9.9900e-003	0.0000	10.6055
Total	**5.9630**	**0.0729**	**6.3291**	**3.4000e-004**		**0.0351**	**0.0351**		**0.0351**	**0.0351**	**0.0000**	**10.3557**	**10.3557**	**9.9900e-003**	**0.0000**	**10.6055**

7.0 Water Detail

7.1 Mitigation Measures Water

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	332.8807	3.8663	0.0925	457.0938
Unmitigated	332.8807	3.8663	0.0925	457.0938

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	52.3187 / 32.9835	162.6602	1.7108	0.0410	217.6407
City Park	0 / 1.07233	1.3755	6.0000e-005	1.0000e-005	1.3790
Condo/Townhouse	1.49854 / 0.944733	4.6590	0.0490	1.1700e-003	6.2338
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	4.55301 / 0.290617	10.8463	0.1487	3.5500e-003	15.6227
Medical Office Building	58.3484 / 11.114	148.4781	1.9066	0.0455	209.7129
Single Family Housing	1.5637 / 0.985809	4.8616	0.0511	1.2200e-003	6.5048
Total		**332.8807**	**3.8663**	**0.0925**	**457.0938**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	52.3187 / 32.9835	162.6602	1.7108	0.0410	217.6407
City Park	0 / 1.07233	1.3755	6.0000e-005	1.0000e-005	1.3790
Condo/Townhouse	1.49854 / 0.944733	4.6590	0.0490	1.1700e-003	6.2338
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	4.55301 / 0.290617	10.8463	0.1487	3.5500e-003	15.6227
Medical Office Building	58.3484 / 11.114	148.4781	1.9066	0.0455	209.7129
Single Family Housing	1.5637 / 0.985809	4.8616	0.0511	1.2200e-003	6.5048
Total		**332.8807**	**3.8663**	**0.0925**	**457.0938**

8.0 Waste Detail

8.1 Mitigation Measures Waste

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

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1,138.6819	67.2942	0.0000	2,821.0361
Unmitigated	1,138.6819	67.2942	0.0000	2,821.0361

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	369.38	74.9808	4.4312	0.0000	185.7618
City Park	0.08	0.0162	9.6000e-004	0.0000	0.0402
Condo/Townhouse	10.58	2.1476	0.1269	0.0000	5.3207
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	178.5	36.2339	2.1414	0.0000	89.7679
Medical Office Building	5022	1,019.4206	60.2460	0.0000	2,525.5714
Single Family Housing	28.98	5.8827	0.3477	0.0000	14.5741
Total		**1,138.6819**	**67.2942**	**0.0000**	**2,821.0361**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	369.38	74.9808	4.4312	0.0000	185.7618
City Park	0.08	0.0162	9.6000e-004	0.0000	0.0402
Condo/Townhouse	10.58	2.1476	0.1269	0.0000	5.3207
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	178.5	36.2339	2.1414	0.0000	89.7679
Medical Office Building	5022	1,019.4206	60.2460	0.0000	2,525.5714
Single Family Housing	28.98	5.8827	0.3477	0.0000	14.5741
Total		**1,138.6819**	**67.2942**	**0.0000**	**2,821.0361**

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

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

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	50	1341	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (750 - 9999 HP)	0.0550	0.0270	0.1403	2.6000e-004		1.0800e-003	1.0800e-003		1.0800e-003	1.0800e-003	0.0000	25.5325	25.5325	3.5800e-003	0.0000	25.6219
Total	**0.0550**	**0.0270**	**0.1403**	**2.6000e-004**		**1.0800e-003**	**1.0800e-003**		**1.0800e-003**	**1.0800e-003**	**0.0000**	**25.5325**	**25.5325**	**3.5800e-003**	**0.0000**	**25.6219**

11.0 Vegetation

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

1655 Berryessa Mixed Use [With VOC Mitigation]

Santa Clara County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	465.00	1000sqft	10.67	465,000.00	0
Enclosed Parking with Elevator	2,105.00	Space	0.00	842,000.00	0
City Park	0.90	Acre	0.90	39,204.00	0
High Turnover (Sit Down Restaurant)	15.00	1000sqft	0.34	15,000.00	0
Apartments Mid Rise	803.00	Dwelling Unit	21.13	709,205.00	2297
Condo/Townhouse	23.00	Dwelling Unit	1.44	23,000.00	66
Single Family Housing	24.00	Dwelling Unit	7.79	43,200.00	69

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2027
Utility Company	San Jose Clean Energy				
CO2 Intensity (lb/MWhr)	807.98	**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.

Trips and VMT - Hauling trips consistent with the DEIR's model. However, see SWAPE comment on "Underestimated Number of Hauling Trips Required for Grading."

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

Demolition - Consistent with the DEIR's model.

Grading - Consistent with the DEIR's model.

Architectural Coating - Consistent with the DEIR's model.

Vehicle Trips - Consistent with the DEIR's model.

Vehicle Emission Factors - Consistent with the DEIR's model.

Vehicle Emission Factors - Consistent with the DEIR's model.

Vehicle Emission Factors - Consistent with the DEIR's model.

Woodstoves - Consistent with the DEIR's model.

Consumer Products - See SWAPE comment on "Unsubstantiated Reduction to Consumer Product Emission Factor."

Area Coating - See SWAPE comment on "Incorrect Reductions to Area Coating Emission Factors."

Energy Use - Consistent with the DEIR's model.

Water And Wastewater - See SWAPE comment on "Unsubstantiated Changes to Wastewater System Treatment Percentages."

Construction Off-road Equipment Mitigation - Consistent with DEIR's model. However, see SWAPE comment on "Incorrect application of Tier 4 mitigation."

Mobile Land Use Mitigation -

Energy Mitigation - See SWAPE comment on "Incorrect Application of Operational Energy-Related Mitigation Measure."

Stationary Sources - Emergency Generators and Fire Pumps - Consistent with the DEIR's model.

Stationary Sources - Emergency Generators and Fire Pumps EF - Consistent with the DEIR's model.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	66.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	46.00
tblArchitecturalCoating	EF_Parking	150.00	66.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	66.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	46.00
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
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tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	T24NG	5,226.68	0.00

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

tblEnergyUse	T24NG	14,104.62	0.00
tblEnergyUse	T24NG	23,474.54	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	120.45	0.00
tblFireplaces	NumberGas	3.45	0.00
tblFireplaces	NumberGas	6.00	0.00
tblFireplaces	NumberNoFireplace	32.12	0.00
tblFireplaces	NumberNoFireplace	0.92	0.00
tblFireplaces	NumberNoFireplace	1.92	0.00
tblFireplaces	NumberWood	136.51	0.00
tblFireplaces	NumberWood	3.91	0.00
tblFireplaces	NumberWood	10.32	0.00
tblGrading	MaterialExported	0.00	165,000.00
tblGrading	MaterialImported	0.00	10,000.00
tblLandUse	LandUseSquareFeet	803,000.00	709,205.00
tblLandUse	LotAcreage	18.95	0.00
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	0.50
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.02
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,341.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00

tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	75.00	0.00
tblTripsAndVMT	HaulingTripNumber	21,875.00	0.00
tblTripsAndVMT	VendorTripLength	7.30	50.00
tblTripsAndVMT	VendorTripLength	7.30	50.00
tblTripsAndVMT	VendorTripLength	7.30	50.00
tblTripsAndVMT	VendorTripNumber	314.00	0.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblVehicleEF	HHD	0.02	0.22
tblVehicleEF	HHD	0.05	0.11
tblVehicleEF	HHD	6.31	5.12
tblVehicleEF	HHD	0.41	0.71
tblVehicleEF	HHD	6.0890e-003	7.8200e-004
tblVehicleEF	HHD	991.82	777.09
tblVehicleEF	HHD	1,327.03	1,519.26
tblVehicleEF	HHD	0.05	0.01
tblVehicleEF	HHD	0.16	0.13
tblVehicleEF	HHD	0.21	0.24
tblVehicleEF	HHD	4.0000e-006	7.0000e-006
tblVehicleEF	HHD	5.29	3.97
tblVehicleEF	HHD	2.62	1.63
tblVehicleEF	HHD	2.32	2.75
tblVehicleEF	HHD	2.3520e-003	1.9390e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00

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

tblVehicleEF	HHD	2.2500e-003	1.8490e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8950e-003	8.7840e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	2.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.1000e-005	2.9000e-005
tblVehicleEF	HHD	0.42	0.32
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.1000e-005	2.6100e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	9.2270e-003	6.7480e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	2.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.1000e-005	2.9000e-005
tblVehicleEF	HHD	0.49	0.57
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.07	0.12
tblVehicleEF	HHD	3.1000e-005	2.6100e-004
tblVehicleEF	HHD	3.0000e-006	0.00
tblVehicleEF	HHD	0.03	0.22
tblVehicleEF	HHD	0.05	0.11
tblVehicleEF	HHD	6.22	5.12
tblVehicleEF	HHD	0.41	0.71
tblVehicleEF	HHD	5.5970e-003	7.8200e-004
tblVehicleEF	HHD	980.16	777.09
tblVehicleEF	HHD	1,327.03	1,519.26
tblVehicleEF	HHD	0.05	0.01

tblVehicleEF	HHD	0.15	0.13
tblVehicleEF	HHD	0.21	0.24
tblVehicleEF	HHD	4.0000e-006	7.0000e-006
tblVehicleEF	HHD	5.04	3.97
tblVehicleEF	HHD	2.52	1.63
tblVehicleEF	HHD	2.32	2.75
tblVehicleEF	HHD	2.0660e-003	1.9390e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	1.9770e-003	1.8490e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8950e-003	8.7840e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	4.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.8000e-005	2.9000e-005
tblVehicleEF	HHD	0.45	0.32
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.0000e-005	2.6100e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	9.1180e-003	6.7480e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	4.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.8000e-005	2.9000e-005
tblVehicleEF	HHD	0.52	0.57
tblVehicleEF	HHD	2.0000e-006	0.00

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

tblVehicleEF	HHD	0.07	0.12
tblVehicleEF	HHD	3.0000e-005	2.6100e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	0.02	0.22
tblVehicleEF	HHD	0.05	0.11
tblVehicleEF	HHD	6.43	5.12
tblVehicleEF	HHD	0.41	0.71
tblVehicleEF	HHD	6.5340e-003	7.8200e-004
tblVehicleEF	HHD	1,007.92	777.09
tblVehicleEF	HHD	1,327.03	1,519.26
tblVehicleEF	HHD	0.05	0.01
tblVehicleEF	HHD	0.16	0.13
tblVehicleEF	HHD	0.21	0.24
tblVehicleEF	HHD	4.0000e-006	7.0000e-006
tblVehicleEF	HHD	5.62	3.97
tblVehicleEF	HHD	2.66	1.63
tblVehicleEF	HHD	2.32	2.75
tblVehicleEF	HHD	2.7480e-003	1.9390e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	2.6290e-003	1.8490e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8950e-003	8.7840e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	1.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.7000e-005	2.9000e-005

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

tblVehicleEF	HHD	0.39	0.32
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.4000e-005	2.6100e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	9.3770e-003	6.7480e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.7000e-005	2.9000e-005
tblVehicleEF	HHD	0.45	0.57
tblVehicleEF	HHD	0.07	0.12
tblVehicleEF	HHD	3.4000e-005	2.6100e-004
tblVehicleEF	HHD	3.0000e-006	0.00
tblVehicleEF	LDA	1.2360e-003	1.5380e-003
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.45	0.54
tblVehicleEF	LDA	1.86	2.42
tblVehicleEF	LDA	214.18	230.34
tblVehicleEF	LDA	45.42	59.41
tblVehicleEF	LDA	3.4320e-003	3.5100e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.14	0.20
tblVehicleEF	LDA	0.04	7.1090e-003
tblVehicleEF	LDA	1.1160e-003	1.0170e-003
tblVehicleEF	LDA	1.5010e-003	1.7230e-003
tblVehicleEF	LDA	0.02	2.4880e-003
tblVehicleEF	LDA	1.0270e-003	9.3500e-004
tblVehicleEF	LDA	1.3800e-003	1.5840e-003
tblVehicleEF	LDA	0.03	0.25

tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	4.3670e-003	5.6030e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.15	0.24
tblVehicleEF	LDA	2.1190e-003	2.2770e-003
tblVehicleEF	LDA	4.5000e-004	5.8700e-004
tblVehicleEF	LDA	0.03	0.25
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	6.3460e-003	8.1650e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.16	0.26
tblVehicleEF	LDA	1.3990e-003	1.5380e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.53	0.54
tblVehicleEF	LDA	1.47	2.42
tblVehicleEF	LDA	230.43	230.34
tblVehicleEF	LDA	44.72	59.41
tblVehicleEF	LDA	3.2160e-003	3.5100e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.12	0.20
tblVehicleEF	LDA	0.04	7.1090e-003
tblVehicleEF	LDA	1.1160e-003	1.0170e-003
tblVehicleEF	LDA	1.5010e-003	1.7230e-003
tblVehicleEF	LDA	0.02	2.4880e-003
tblVehicleEF	LDA	1.0270e-003	9.3500e-004
tblVehicleEF	LDA	1.3800e-003	1.5840e-003

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

tblVehicleEF	LDA	0.07	0.25
tblVehicleEF	LDA	0.08	0.07
tblVehicleEF	LDA	0.05	0.00
tblVehicleEF	LDA	4.8560e-003	5.6030e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.12	0.24
tblVehicleEF	LDA	2.2790e-003	2.2770e-003
tblVehicleEF	LDA	4.4300e-004	5.8700e-004
tblVehicleEF	LDA	0.07	0.25
tblVehicleEF	LDA	0.08	0.07
tblVehicleEF	LDA	0.05	0.00
tblVehicleEF	LDA	7.0600e-003	8.1650e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.13	0.26
tblVehicleEF	LDA	1.1850e-003	1.5380e-003
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.44	0.54
tblVehicleEF	LDA	2.17	2.42
tblVehicleEF	LDA	211.51	230.34
tblVehicleEF	LDA	45.99	59.41
tblVehicleEF	LDA	3.6350e-003	3.5100e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.15	0.20
tblVehicleEF	LDA	0.04	7.1090e-003
tblVehicleEF	LDA	1.1160e-003	1.0170e-003
tblVehicleEF	LDA	1.5010e-003	1.7230e-003
tblVehicleEF	LDA	0.02	2.4880e-003
tblVehicleEF	LDA	1.0270e-003	9.3500e-004

tblVehicleEF	LDA	1.3800e-003	1.5840e-003
tblVehicleEF	LDA	0.01	0.25
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.01	0.00
tblVehicleEF	LDA	4.2440e-003	5.6030e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.17	0.24
tblVehicleEF	LDA	2.0920e-003	2.2770e-003
tblVehicleEF	LDA	4.5500e-004	5.8700e-004
tblVehicleEF	LDA	0.01	0.25
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.01	0.00
tblVehicleEF	LDA	6.1660e-003	8.1650e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.18	0.26
tblVehicleEF	LDT1	2.3950e-003	4.4930e-003
tblVehicleEF	LDT1	0.04	0.09
tblVehicleEF	LDT1	0.65	1.12
tblVehicleEF	LDT1	2.00	4.20
tblVehicleEF	LDT1	258.06	311.08
tblVehicleEF	LDT1	55.33	80.98
tblVehicleEF	LDT1	4.5300e-003	7.3650e-003
tblVehicleEF	LDT1	0.02	0.04
tblVehicleEF	LDT1	0.05	0.09
tblVehicleEF	LDT1	0.17	0.32
tblVehicleEF	LDT1	0.04	9.1980e-003
tblVehicleEF	LDT1	1.3260e-003	1.5760e-003
tblVehicleEF	LDT1	1.7710e-003	2.4760e-003
tblVehicleEF	LDT1	0.02	3.2190e-003

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

tblVehicleEF	LDT1	1.2200e-003	1.4490e-003
tblVehicleEF	LDT1	1.6290e-003	2.2770e-003
tblVehicleEF	LDT1	0.06	0.51
tblVehicleEF	LDT1	0.12	0.14
tblVehicleEF	LDT1	0.05	0.00
tblVehicleEF	LDT1	9.7520e-003	0.02
tblVehicleEF	LDT1	0.07	0.39
tblVehicleEF	LDT1	0.20	0.42
tblVehicleEF	LDT1	2.5540e-003	3.0750e-003
tblVehicleEF	LDT1	5.4800e-004	8.0100e-004
tblVehicleEF	LDT1	0.06	0.51
tblVehicleEF	LDT1	0.12	0.14
tblVehicleEF	LDT1	0.05	0.00
tblVehicleEF	LDT1	0.01	0.03
tblVehicleEF	LDT1	0.07	0.39
tblVehicleEF	LDT1	0.22	0.46
tblVehicleEF	LDT1	2.6850e-003	4.4930e-003
tblVehicleEF	LDT1	0.04	0.09
tblVehicleEF	LDT1	0.76	1.12
tblVehicleEF	LDT1	1.58	4.20
tblVehicleEF	LDT1	274.84	311.08
tblVehicleEF	LDT1	54.55	80.98
tblVehicleEF	LDT1	4.2030e-003	7.3650e-003
tblVehicleEF	LDT1	0.02	0.04
tblVehicleEF	LDT1	0.04	0.09
tblVehicleEF	LDT1	0.16	0.32
tblVehicleEF	LDT1	0.04	9.1980e-003
tblVehicleEF	LDT1	1.3260e-003	1.5760e-003
tblVehicleEF	LDT1	1.7710e-003	2.4760e-003

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

tblVehicleEF	LDT1	0.02	3.2190e-003
tblVehicleEF	LDT1	1.2200e-003	1.4490e-003
tblVehicleEF	LDT1	1.6290e-003	2.2770e-003
tblVehicleEF	LDT1	0.13	0.51
tblVehicleEF	LDT1	0.13	0.14
tblVehicleEF	LDT1	0.10	0.00
tblVehicleEF	LDT1	0.01	0.02
tblVehicleEF	LDT1	0.06	0.39
tblVehicleEF	LDT1	0.17	0.42
tblVehicleEF	LDT1	2.7200e-003	3.0750e-003
tblVehicleEF	LDT1	5.4000e-004	8.0100e-004
tblVehicleEF	LDT1	0.13	0.51
tblVehicleEF	LDT1	0.13	0.14
tblVehicleEF	LDT1	0.10	0.00
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.06	0.39
tblVehicleEF	LDT1	0.18	0.46
tblVehicleEF	LDT1	2.3060e-003	4.4930e-003
tblVehicleEF	LDT1	0.05	0.09
tblVehicleEF	LDT1	0.64	1.12
tblVehicleEF	LDT1	2.34	4.20
tblVehicleEF	LDT1	255.31	311.08
tblVehicleEF	LDT1	55.96	80.98
tblVehicleEF	LDT1	4.8250e-003	7.3650e-003
tblVehicleEF	LDT1	0.02	0.04
tblVehicleEF	LDT1	0.05	0.09
tblVehicleEF	LDT1	0.19	0.32
tblVehicleEF	LDT1	0.04	9.1980e-003
tblVehicleEF	LDT1	1.3260e-003	1.5760e-003

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

tblVehicleEF	LDT1	1.7710e-003	2.4760e-003
tblVehicleEF	LDT1	0.02	3.2190e-003
tblVehicleEF	LDT1	1.2200e-003	1.4490e-003
tblVehicleEF	LDT1	1.6290e-003	2.2770e-003
tblVehicleEF	LDT1	0.03	0.51
tblVehicleEF	LDT1	0.12	0.14
tblVehicleEF	LDT1	0.03	0.00
tblVehicleEF	LDT1	9.4930e-003	0.02
tblVehicleEF	LDT1	0.08	0.39
tblVehicleEF	LDT1	0.23	0.42
tblVehicleEF	LDT1	2.5260e-003	3.0750e-003
tblVehicleEF	LDT1	5.5400e-004	8.0100e-004
tblVehicleEF	LDT1	0.03	0.51
tblVehicleEF	LDT1	0.12	0.14
tblVehicleEF	LDT1	0.03	0.00
tblVehicleEF	LDT1	0.01	0.03
tblVehicleEF	LDT1	0.08	0.39
tblVehicleEF	LDT1	0.25	0.46
tblVehicleEF	LDT2	2.2120e-003	2.2390e-003
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.62	0.71
tblVehicleEF	LDT2	2.44	3.08
tblVehicleEF	LDT2	271.88	320.53
tblVehicleEF	LDT2	58.84	81.54
tblVehicleEF	LDT2	4.6700e-003	5.0850e-003
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.04	0.05
tblVehicleEF	LDT2	0.20	0.28
tblVehicleEF	LDT2	0.04	8.8520e-003

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

tblVehicleEF	LDT2	1.1980e-003	1.1830e-003
tblVehicleEF	LDT2	1.5540e-003	1.9260e-003
tblVehicleEF	LDT2	0.02	3.0980e-003
tblVehicleEF	LDT2	1.1030e-003	1.0890e-003
tblVehicleEF	LDT2	1.4290e-003	1.7710e-003
tblVehicleEF	LDT2	0.05	0.27
tblVehicleEF	LDT2	0.10	0.07
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	8.6200e-003	8.4950e-003
tblVehicleEF	LDT2	0.06	0.20
tblVehicleEF	LDT2	0.23	0.31
tblVehicleEF	LDT2	2.6900e-003	3.1680e-003
tblVehicleEF	LDT2	5.8200e-004	8.0600e-004
tblVehicleEF	LDT2	0.05	0.27
tblVehicleEF	LDT2	0.10	0.07
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.20
tblVehicleEF	LDT2	0.25	0.34
tblVehicleEF	LDT2	2.4920e-003	2.2390e-003
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.73	0.71
tblVehicleEF	LDT2	1.92	3.08
tblVehicleEF	LDT2	287.92	320.53
tblVehicleEF	LDT2	57.89	81.54
tblVehicleEF	LDT2	4.3620e-003	5.0850e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.04	0.05
tblVehicleEF	LDT2	0.18	0.28

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

tblVehicleEF	LDT2	0.04	8.8520e-003
tblVehicleEF	LDT2	1.1980e-003	1.1830e-003
tblVehicleEF	LDT2	1.5540e-003	1.9260e-003
tblVehicleEF	LDT2	0.02	3.0980e-003
tblVehicleEF	LDT2	1.1030e-003	1.0890e-003
tblVehicleEF	LDT2	1.4290e-003	1.7710e-003
tblVehicleEF	LDT2	0.12	0.27
tblVehicleEF	LDT2	0.11	0.07
tblVehicleEF	LDT2	0.10	0.00
tblVehicleEF	LDT2	9.5610e-003	8.4950e-003
tblVehicleEF	LDT2	0.05	0.20
tblVehicleEF	LDT2	0.19	0.31
tblVehicleEF	LDT2	2.8480e-003	3.1680e-003
tblVehicleEF	LDT2	5.7300e-004	8.0600e-004
tblVehicleEF	LDT2	0.12	0.27
tblVehicleEF	LDT2	0.11	0.07
tblVehicleEF	LDT2	0.10	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.05	0.20
tblVehicleEF	LDT2	0.20	0.34
tblVehicleEF	LDT2	2.1260e-003	2.2390e-003
tblVehicleEF	LDT2	0.06	0.07
tblVehicleEF	LDT2	0.61	0.71
tblVehicleEF	LDT2	2.86	3.08
tblVehicleEF	LDT2	269.25	320.53
tblVehicleEF	LDT2	59.60	81.54
tblVehicleEF	LDT2	4.9520e-003	5.0850e-003
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.05	0.05

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

tblVehicleEF	LDT2	0.22	0.28
tblVehicleEF	LDT2	0.04	8.8520e-003
tblVehicleEF	LDT2	1.1980e-003	1.1830e-003
tblVehicleEF	LDT2	1.5540e-003	1.9260e-003
tblVehicleEF	LDT2	0.02	3.0980e-003
tblVehicleEF	LDT2	1.1030e-003	1.0890e-003
tblVehicleEF	LDT2	1.4290e-003	1.7710e-003
tblVehicleEF	LDT2	0.03	0.27
tblVehicleEF	LDT2	0.11	0.07
tblVehicleEF	LDT2	0.03	0.00
tblVehicleEF	LDT2	8.3810e-003	8.4950e-003
tblVehicleEF	LDT2	0.07	0.20
tblVehicleEF	LDT2	0.25	0.31
tblVehicleEF	LDT2	2.6630e-003	3.1680e-003
tblVehicleEF	LDT2	5.9000e-004	8.0600e-004
tblVehicleEF	LDT2	0.03	0.27
tblVehicleEF	LDT2	0.11	0.07
tblVehicleEF	LDT2	0.03	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.20
tblVehicleEF	LDT2	0.28	0.34
tblVehicleEF	LHD1	4.5230e-003	4.8530e-003
tblVehicleEF	LHD1	6.3000e-003	5.7620e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.18	0.19
tblVehicleEF	LHD1	0.57	0.71
tblVehicleEF	LHD1	0.96	2.15
tblVehicleEF	LHD1	8.56	8.33
tblVehicleEF	LHD1	734.83	729.06

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

tblVehicleEF	LHD1	10.77	17.05
tblVehicleEF	LHD1	7.3900e-004	6.2200e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.44	0.46
tblVehicleEF	LHD1	0.26	0.38
tblVehicleEF	LHD1	8.8400e-004	6.8500e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.8520e-003	9.4090e-003
tblVehicleEF	LHD1	8.1460e-003	0.01
tblVehicleEF	LHD1	2.2600e-004	1.7400e-004
tblVehicleEF	LHD1	8.4600e-004	6.5600e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4630e-003	2.3520e-003
tblVehicleEF	LHD1	7.7480e-003	0.01
tblVehicleEF	LHD1	2.0700e-004	1.6000e-004
tblVehicleEF	LHD1	1.6310e-003	0.11
tblVehicleEF	LHD1	0.06	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	8.6800e-004	0.00
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.18	0.16
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD1	8.3000e-005	8.1000e-005
tblVehicleEF	LHD1	7.1690e-003	7.1170e-003
tblVehicleEF	LHD1	1.0700e-004	1.6900e-004
tblVehicleEF	LHD1	1.6310e-003	0.11
tblVehicleEF	LHD1	0.06	0.03

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

tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	8.6800e-004	0.00
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.18	0.16
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD1	4.5360e-003	4.8530e-003
tblVehicleEF	LHD1	6.4100e-003	5.7620e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.18	0.19
tblVehicleEF	LHD1	0.58	0.71
tblVehicleEF	LHD1	0.90	2.15
tblVehicleEF	LHD1	8.56	8.33
tblVehicleEF	LHD1	734.84	729.06
tblVehicleEF	LHD1	10.66	17.05
tblVehicleEF	LHD1	7.4200e-004	6.2200e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.42	0.46
tblVehicleEF	LHD1	0.24	0.38
tblVehicleEF	LHD1	8.8400e-004	6.8500e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.8520e-003	9.4090e-003
tblVehicleEF	LHD1	8.1460e-003	0.01
tblVehicleEF	LHD1	2.2600e-004	1.7400e-004
tblVehicleEF	LHD1	8.4600e-004	6.5600e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4630e-003	2.3520e-003
tblVehicleEF	LHD1	7.7480e-003	0.01

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

tblVehicleEF	LHD1	2.0700e-004	1.6000e-004
tblVehicleEF	LHD1	3.6370e-003	0.11
tblVehicleEF	LHD1	0.07	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7590e-003	0.00
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.18	0.16
tblVehicleEF	LHD1	0.05	0.10
tblVehicleEF	LHD1	8.3000e-005	8.1000e-005
tblVehicleEF	LHD1	7.1690e-003	7.1170e-003
tblVehicleEF	LHD1	1.0500e-004	1.6900e-004
tblVehicleEF	LHD1	3.6370e-003	0.11
tblVehicleEF	LHD1	0.07	0.03
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.7590e-003	0.00
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.18	0.16
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD1	4.5120e-003	4.8530e-003
tblVehicleEF	LHD1	6.2120e-003	5.7620e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.18	0.19
tblVehicleEF	LHD1	0.57	0.71
tblVehicleEF	LHD1	1.03	2.15
tblVehicleEF	LHD1	8.56	8.33
tblVehicleEF	LHD1	734.81	729.06
tblVehicleEF	LHD1	10.89	17.05
tblVehicleEF	LHD1	7.3700e-004	6.2200e-004
tblVehicleEF	LHD1	0.04	0.04

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

tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.45	0.46
tblVehicleEF	LHD1	0.28	0.38
tblVehicleEF	LHD1	8.8400e-004	6.8500e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.8520e-003	9.4090e-003
tblVehicleEF	LHD1	8.1460e-003	0.01
tblVehicleEF	LHD1	2.2600e-004	1.7400e-004
tblVehicleEF	LHD1	8.4600e-004	6.5600e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4630e-003	2.3520e-003
tblVehicleEF	LHD1	7.7480e-003	0.01
tblVehicleEF	LHD1	2.0700e-004	1.6000e-004
tblVehicleEF	LHD1	8.3300e-004	0.11
tblVehicleEF	LHD1	0.07	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	4.6300e-004	0.00
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.20	0.16
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD1	8.3000e-005	8.1000e-005
tblVehicleEF	LHD1	7.1690e-003	7.1170e-003
tblVehicleEF	LHD1	1.0800e-004	1.6900e-004
tblVehicleEF	LHD1	8.3300e-004	0.11
tblVehicleEF	LHD1	0.07	0.03
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	4.6300e-004	0.00
tblVehicleEF	LHD1	0.09	0.08

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

tblVehicleEF	LHD1	0.20	0.16
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD2	2.7350e-003	2.7890e-003
tblVehicleEF	LHD2	5.8140e-003	5.4840e-003
tblVehicleEF	LHD2	6.0230e-003	0.01
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.52	0.46
tblVehicleEF	LHD2	0.53	1.16
tblVehicleEF	LHD2	13.44	13.54
tblVehicleEF	LHD2	713.12	776.37
tblVehicleEF	LHD2	6.94	9.14
tblVehicleEF	LHD2	1.7040e-003	1.6800e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.54	0.66
tblVehicleEF	LHD2	0.15	0.21
tblVehicleEF	LHD2	1.4770e-003	1.4220e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.1400e-004	7.4000e-005
tblVehicleEF	LHD2	1.4140e-003	1.3600e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7030e-003	2.6620e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0400e-004	6.8000e-005
tblVehicleEF	LHD2	7.8300e-004	0.06
tblVehicleEF	LHD2	0.03	0.01

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

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.3200e-004	0.00
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	1.2800e-004	1.3000e-004
tblVehicleEF	LHD2	6.8810e-003	7.4740e-003
tblVehicleEF	LHD2	6.9000e-005	9.0000e-005
tblVehicleEF	LHD2	7.8300e-004	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.3200e-004	0.00
tblVehicleEF	LHD2	0.12	0.11
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	2.7430e-003	2.7890e-003
tblVehicleEF	LHD2	5.8580e-003	5.4840e-003
tblVehicleEF	LHD2	5.6970e-003	0.01
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.53	0.46
tblVehicleEF	LHD2	0.49	1.16
tblVehicleEF	LHD2	13.44	13.54
tblVehicleEF	LHD2	713.12	776.37
tblVehicleEF	LHD2	6.88	9.14
tblVehicleEF	LHD2	1.7060e-003	1.6800e-003
tblVehicleEF	LHD2	0.06	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.52	0.66

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

tblVehicleEF	LHD2	0.14	0.21
tblVehicleEF	LHD2	1.4770e-003	1.4220e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.1400e-004	7.4000e-005
tblVehicleEF	LHD2	1.4140e-003	1.3600e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7030e-003	2.6620e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0400e-004	6.8000e-005
tblVehicleEF	LHD2	1.7440e-003	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.7600e-004	0.00
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	1.2800e-004	1.3000e-004
tblVehicleEF	LHD2	6.8810e-003	7.4740e-003
tblVehicleEF	LHD2	6.8000e-005	9.0000e-005
tblVehicleEF	LHD2	1.7440e-003	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	8.7600e-004	0.00
tblVehicleEF	LHD2	0.12	0.11
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	2.7290e-003	2.7890e-003

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

tblVehicleEF	LHD2	5.7780e-003	5.4840e-003
tblVehicleEF	LHD2	6.3030e-003	0.01
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.52	0.46
tblVehicleEF	LHD2	0.56	1.16
tblVehicleEF	LHD2	13.44	13.54
tblVehicleEF	LHD2	713.11	776.37
tblVehicleEF	LHD2	7.00	9.14
tblVehicleEF	LHD2	1.7030e-003	1.6800e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.55	0.66
tblVehicleEF	LHD2	0.15	0.21
tblVehicleEF	LHD2	1.4770e-003	1.4220e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.1400e-004	7.4000e-005
tblVehicleEF	LHD2	1.4140e-003	1.3600e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7030e-003	2.6620e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0400e-004	6.8000e-005
tblVehicleEF	LHD2	4.0700e-004	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	2.3300e-004	0.00
tblVehicleEF	LHD2	0.10	0.10

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

tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	1.2800e-004	1.3000e-004
tblVehicleEF	LHD2	6.8810e-003	7.4740e-003
tblVehicleEF	LHD2	6.9000e-005	9.0000e-005
tblVehicleEF	LHD2	4.0700e-004	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	2.3300e-004	0.00
tblVehicleEF	LHD2	0.12	0.11
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	MCY	0.32	0.15
tblVehicleEF	MCY	0.25	0.17
tblVehicleEF	MCY	17.99	11.71
tblVehicleEF	MCY	9.14	7.90
tblVehicleEF	MCY	209.89	186.47
tblVehicleEF	MCY	59.90	45.31
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	7.0870e-003
tblVehicleEF	MCY	1.14	0.54
tblVehicleEF	MCY	0.27	0.12
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0840e-003	1.9590e-003
tblVehicleEF	MCY	2.9100e-003	3.4510e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9450e-003	1.8300e-003
tblVehicleEF	MCY	2.7280e-003	3.2360e-003
tblVehicleEF	MCY	0.90	3.85

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

tblVehicleEF	MCY	0.65	3.56
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.15	0.96
tblVehicleEF	MCY	0.49	3.78
tblVehicleEF	MCY	1.90	1.23
tblVehicleEF	MCY	2.0770e-003	1.8430e-003
tblVehicleEF	MCY	5.9300e-004	4.4800e-004
tblVehicleEF	MCY	0.90	0.08
tblVehicleEF	MCY	0.65	3.56
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.69	1.17
tblVehicleEF	MCY	0.49	3.78
tblVehicleEF	MCY	2.07	1.34
tblVehicleEF	MCY	0.31	0.15
tblVehicleEF	MCY	0.21	0.17
tblVehicleEF	MCY	17.40	11.71
tblVehicleEF	MCY	7.92	7.90
tblVehicleEF	MCY	208.72	186.47
tblVehicleEF	MCY	56.94	45.31
tblVehicleEF	MCY	0.06	0.04
tblVehicleEF	MCY	0.01	7.0870e-003
tblVehicleEF	MCY	1.01	0.54
tblVehicleEF	MCY	0.25	0.12
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0840e-003	1.9590e-003
tblVehicleEF	MCY	2.9100e-003	3.4510e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9450e-003	1.8300e-003
tblVehicleEF	MCY	2.7280e-003	3.2360e-003

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

tblVehicleEF	MCY	2.30	3.85
tblVehicleEF	MCY	0.88	3.56
tblVehicleEF	MCY	1.29	0.00
tblVehicleEF	MCY	2.09	0.96
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	1.59	1.23
tblVehicleEF	MCY	2.0650e-003	1.8430e-003
tblVehicleEF	MCY	5.6300e-004	4.4800e-004
tblVehicleEF	MCY	2.30	0.08
tblVehicleEF	MCY	0.88	3.56
tblVehicleEF	MCY	1.29	0.00
tblVehicleEF	MCY	2.61	1.17
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	1.74	1.34
tblVehicleEF	MCY	0.33	0.15
tblVehicleEF	MCY	0.29	0.17
tblVehicleEF	MCY	19.31	11.71
tblVehicleEF	MCY	10.49	7.90
tblVehicleEF	MCY	212.26	186.47
tblVehicleEF	MCY	63.05	45.31
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	7.0870e-003
tblVehicleEF	MCY	1.22	0.54
tblVehicleEF	MCY	0.29	0.12
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0840e-003	1.9590e-003
tblVehicleEF	MCY	2.9100e-003	3.4510e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9450e-003	1.8300e-003

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

tblVehicleEF	MCY	2.7280e-003	3.2360e-003
tblVehicleEF	MCY	0.39	3.85
tblVehicleEF	MCY	0.76	3.56
tblVehicleEF	MCY	0.19	0.00
tblVehicleEF	MCY	2.23	0.96
tblVehicleEF	MCY	0.60	3.78
tblVehicleEF	MCY	2.20	1.23
tblVehicleEF	MCY	2.1000e-003	1.8430e-003
tblVehicleEF	MCY	6.2400e-004	4.4800e-004
tblVehicleEF	MCY	0.39	0.08
tblVehicleEF	MCY	0.76	3.56
tblVehicleEF	MCY	0.19	0.00
tblVehicleEF	MCY	2.78	1.17
tblVehicleEF	MCY	0.60	3.78
tblVehicleEF	MCY	2.40	1.34
tblVehicleEF	MDV	2.3750e-003	2.6750e-003
tblVehicleEF	MDV	0.05	0.08
tblVehicleEF	MDV	0.63	0.76
tblVehicleEF	MDV	2.55	3.20
tblVehicleEF	MDV	327.97	384.38
tblVehicleEF	MDV	69.67	97.04
tblVehicleEF	MDV	6.1060e-003	6.4690e-003
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.05	0.07
tblVehicleEF	MDV	0.22	0.32
tblVehicleEF	MDV	0.04	8.9330e-003
tblVehicleEF	MDV	1.2330e-003	1.1780e-003
tblVehicleEF	MDV	1.5830e-003	1.8910e-003
tblVehicleEF	MDV	0.02	3.1260e-003

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

tblVehicleEF	MDV	1.1370e-003	1.0850e-003
tblVehicleEF	MDV	1.4560e-003	1.7380e-003
tblVehicleEF	MDV	0.06	0.31
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	9.5210e-003	0.01
tblVehicleEF	MDV	0.06	0.24
tblVehicleEF	MDV	0.26	0.37
tblVehicleEF	MDV	3.2410e-003	3.7980e-003
tblVehicleEF	MDV	6.8900e-004	9.5900e-004
tblVehicleEF	MDV	0.06	0.31
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	0.01	0.02
tblVehicleEF	MDV	0.06	0.24
tblVehicleEF	MDV	0.28	0.41
tblVehicleEF	MDV	2.6770e-003	2.6750e-003
tblVehicleEF	MDV	0.05	0.08
tblVehicleEF	MDV	0.74	0.76
tblVehicleEF	MDV	2.01	3.20
tblVehicleEF	MDV	343.91	384.38
tblVehicleEF	MDV	68.66	97.04
tblVehicleEF	MDV	5.7810e-003	6.4690e-003
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.04	0.07
tblVehicleEF	MDV	0.20	0.32
tblVehicleEF	MDV	0.04	8.9330e-003
tblVehicleEF	MDV	1.2330e-003	1.1780e-003
tblVehicleEF	MDV	1.5830e-003	1.8910e-003

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

tblVehicleEF	MDV	0.02	3.1260e-003
tblVehicleEF	MDV	1.1370e-003	1.0850e-003
tblVehicleEF	MDV	1.4560e-003	1.7380e-003
tblVehicleEF	MDV	0.14	0.31
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.12	0.00
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.05	0.24
tblVehicleEF	MDV	0.21	0.37
tblVehicleEF	MDV	3.3990e-003	3.7980e-003
tblVehicleEF	MDV	6.7900e-004	9.5900e-004
tblVehicleEF	MDV	0.14	0.31
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.12	0.00
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.05	0.24
tblVehicleEF	MDV	0.23	0.41
tblVehicleEF	MDV	2.2830e-003	2.6750e-003
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.62	0.76
tblVehicleEF	MDV	2.99	3.20
tblVehicleEF	MDV	325.36	384.38
tblVehicleEF	MDV	70.47	97.04
tblVehicleEF	MDV	6.4040e-003	6.4690e-003
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.05	0.07
tblVehicleEF	MDV	0.24	0.32
tblVehicleEF	MDV	0.04	8.9330e-003
tblVehicleEF	MDV	1.2330e-003	1.1780e-003

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

tblVehicleEF	MDV	1.5830e-003	1.8910e-003
tblVehicleEF	MDV	0.02	3.1260e-003
tblVehicleEF	MDV	1.1370e-003	1.0850e-003
tblVehicleEF	MDV	1.4560e-003	1.7380e-003
tblVehicleEF	MDV	0.03	0.31
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.03	0.00
tblVehicleEF	MDV	9.2720e-003	0.01
tblVehicleEF	MDV	0.07	0.24
tblVehicleEF	MDV	0.29	0.37
tblVehicleEF	MDV	3.2150e-003	3.7980e-003
tblVehicleEF	MDV	6.9700e-004	9.5900e-004
tblVehicleEF	MDV	0.03	0.31
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.03	0.00
tblVehicleEF	MDV	0.01	0.02
tblVehicleEF	MDV	0.07	0.24
tblVehicleEF	MDV	0.32	0.41
tblVehicleEF	MH	6.9300e-003	8.8150e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.58	0.77
tblVehicleEF	MH	1.80	2.17
tblVehicleEF	MH	1,418.06	1,669.13
tblVehicleEF	MH	16.70	21.21
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.17	1.40
tblVehicleEF	MH	0.24	0.30
tblVehicleEF	MH	0.13	0.04

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

tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.3200e-004	2.6700e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2900e-003	3.3210e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.1400e-004	2.4600e-004
tblVehicleEF	MH	0.47	26.64
tblVehicleEF	MH	0.04	6.73
tblVehicleEF	MH	0.18	0.00
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	9.6720e-003	0.16
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.6500e-004	2.1000e-004
tblVehicleEF	MH	0.47	26.64
tblVehicleEF	MH	0.04	6.73
tblVehicleEF	MH	0.18	0.00
tblVehicleEF	MH	0.06	0.08
tblVehicleEF	MH	9.6720e-003	0.16
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MH	7.1210e-003	8.8150e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.60	0.77
tblVehicleEF	MH	1.64	2.17
tblVehicleEF	MH	1,418.10	1,669.13
tblVehicleEF	MH	16.43	21.21
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	0.03	0.03

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

tblVehicleEF	MH	1.11	1.40
tblVehicleEF	MH	0.22	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.3200e-004	2.6700e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2900e-003	3.3210e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.1400e-004	2.4600e-004
tblVehicleEF	MH	1.05	26.64
tblVehicleEF	MH	0.04	6.73
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	9.4280e-003	0.16
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.6300e-004	2.1000e-004
tblVehicleEF	MH	1.05	26.64
tblVehicleEF	MH	0.04	6.73
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.06	0.08
tblVehicleEF	MH	9.4280e-003	0.16
tblVehicleEF	MH	0.08	0.11
tblVehicleEF	MH	6.7830e-003	8.8150e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.56	0.77
tblVehicleEF	MH	1.94	2.17
tblVehicleEF	MH	1,418.04	1,669.13

tblVehicleEF	MH	16.94	21.21
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.20	1.40
tblVehicleEF	MH	0.25	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.3200e-004	2.6700e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2900e-003	3.3210e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.1400e-004	2.4600e-004
tblVehicleEF	MH	0.25	26.64
tblVehicleEF	MH	0.05	6.73
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	0.01	0.16
tblVehicleEF	MH	0.09	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.6800e-004	2.1000e-004
tblVehicleEF	MH	0.25	26.64
tblVehicleEF	MH	0.05	6.73
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.06	0.08
tblVehicleEF	MH	0.01	0.16
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MHD	3.6950e-003	0.01
tblVehicleEF	MHD	1.2530e-003	9.5450e-003

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

tblVehicleEF	MHD	8.5300e-003	7.5570e-003
tblVehicleEF	MHD	0.40	0.66
tblVehicleEF	MHD	0.18	0.22
tblVehicleEF	MHD	0.94	0.88
tblVehicleEF	MHD	68.38	154.32
tblVehicleEF	MHD	1,034.78	1,175.45
tblVehicleEF	MHD	8.72	7.64
tblVehicleEF	MHD	9.8750e-003	0.02
tblVehicleEF	MHD	0.13	0.15
tblVehicleEF	MHD	7.4170e-003	5.5230e-003
tblVehicleEF	MHD	0.37	0.81
tblVehicleEF	MHD	1.44	0.81
tblVehicleEF	MHD	1.70	1.37
tblVehicleEF	MHD	2.4000e-004	1.1860e-003
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	7.0420e-003	8.3150e-003
tblVehicleEF	MHD	1.1100e-004	9.3000e-005
tblVehicleEF	MHD	2.3000e-004	1.1340e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.7300e-003	7.9470e-003
tblVehicleEF	MHD	1.0200e-004	8.5000e-005
tblVehicleEF	MHD	3.1800e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.7500e-004	0.00
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	6.4900e-004	1.4270e-003

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

tblVehicleEF	MHD	9.8700e-003	0.01
tblVehicleEF	MHD	8.6000e-005	7.6000e-005
tblVehicleEF	MHD	3.1800e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	1.7500e-004	0.00
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	3.4830e-003	0.01
tblVehicleEF	MHD	1.2830e-003	9.5450e-003
tblVehicleEF	MHD	8.0480e-003	7.5570e-003
tblVehicleEF	MHD	0.33	0.66
tblVehicleEF	MHD	0.18	0.22
tblVehicleEF	MHD	0.86	0.88
tblVehicleEF	MHD	68.21	154.32
tblVehicleEF	MHD	1,034.78	1,175.45
tblVehicleEF	MHD	8.59	7.64
tblVehicleEF	MHD	9.8080e-003	0.02
tblVehicleEF	MHD	0.13	0.15
tblVehicleEF	MHD	7.1120e-003	5.5230e-003
tblVehicleEF	MHD	0.36	0.81
tblVehicleEF	MHD	1.38	0.81
tblVehicleEF	MHD	1.69	1.37
tblVehicleEF	MHD	2.0600e-004	1.1860e-003
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	7.0420e-003	8.3150e-003
tblVehicleEF	MHD	1.1100e-004	9.3000e-005
tblVehicleEF	MHD	1.9700e-004	1.1340e-003

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

tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.7300e-003	7.9470e-003
tblVehicleEF	MHD	1.0200e-004	8.5000e-005
tblVehicleEF	MHD	7.2000e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.6600e-004	0.00
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	6.4700e-004	1.4270e-003
tblVehicleEF	MHD	9.8700e-003	0.01
tblVehicleEF	MHD	8.5000e-005	7.6000e-005
tblVehicleEF	MHD	7.2000e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	3.6600e-004	0.00
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	3.9020e-003	0.01
tblVehicleEF	MHD	1.2290e-003	9.5450e-003
tblVehicleEF	MHD	8.9220e-003	7.5570e-003
tblVehicleEF	MHD	0.46	0.66
tblVehicleEF	MHD	0.18	0.22
tblVehicleEF	MHD	1.01	0.88
tblVehicleEF	MHD	68.72	154.32
tblVehicleEF	MHD	1,034.77	1,175.45
tblVehicleEF	MHD	8.84	7.64

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

tblVehicleEF	MHD	9.9720e-003	0.02
tblVehicleEF	MHD	0.13	0.15
tblVehicleEF	MHD	7.7050e-003	5.5230e-003
tblVehicleEF	MHD	0.39	0.81
tblVehicleEF	MHD	1.46	0.81
tblVehicleEF	MHD	1.70	1.37
tblVehicleEF	MHD	2.8800e-004	1.1860e-003
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	7.0420e-003	8.3150e-003
tblVehicleEF	MHD	1.1100e-004	9.3000e-005
tblVehicleEF	MHD	2.7600e-004	1.1340e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.7300e-003	7.9470e-003
tblVehicleEF	MHD	1.0200e-004	8.5000e-005
tblVehicleEF	MHD	1.6200e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	9.2000e-005	0.00
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	6.5200e-004	1.4270e-003
tblVehicleEF	MHD	9.8700e-003	0.01
tblVehicleEF	MHD	8.8000e-005	7.6000e-005
tblVehicleEF	MHD	1.6200e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.03	0.04
tblVehicleEF	MHD	9.2000e-005	0.00
tblVehicleEF	MHD	0.02	0.04

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

tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	OBUS	7.0730e-003	7.5660e-003
tblVehicleEF	OBUS	2.7540e-003	0.01
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.62	0.54
tblVehicleEF	OBUS	0.33	0.37
tblVehicleEF	OBUS	1.69	1.70
tblVehicleEF	OBUS	96.38	89.08
tblVehicleEF	OBUS	1,261.24	1,320.54
tblVehicleEF	OBUS	14.17	13.66
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.13	0.16
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.41	0.36
tblVehicleEF	OBUS	1.44	0.90
tblVehicleEF	OBUS	1.12	1.00
tblVehicleEF	OBUS	1.3500e-004	3.7200e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.6000e-003	0.01
tblVehicleEF	OBUS	1.5100e-004	1.2700e-004
tblVehicleEF	OBUS	1.3000e-004	3.5600e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.2580e-003	0.01
tblVehicleEF	OBUS	1.3900e-004	1.1700e-004
tblVehicleEF	OBUS	1.0730e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8500e-004	0.00

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

tblVehicleEF	OBUS	0.02	0.04
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	9.1500e-004	8.4100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.4000e-004	1.3500e-004
tblVehicleEF	OBUS	1.0730e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8500e-004	0.00
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.09	0.09
tblVehicleEF	OBUS	7.1720e-003	7.5660e-003
tblVehicleEF	OBUS	2.8370e-003	0.01
tblVehicleEF	OBUS	0.01	0.02
tblVehicleEF	OBUS	0.62	0.54
tblVehicleEF	OBUS	0.33	0.37
tblVehicleEF	OBUS	1.54	1.70
tblVehicleEF	OBUS	95.21	89.08
tblVehicleEF	OBUS	1,261.26	1,320.54
tblVehicleEF	OBUS	13.92	13.66
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.13	0.16
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.39	0.36
tblVehicleEF	OBUS	1.38	0.90
tblVehicleEF	OBUS	1.11	1.00
tblVehicleEF	OBUS	1.2000e-004	3.7200e-004

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

tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.6000e-003	0.01
tblVehicleEF	OBUS	1.5100e-004	1.2700e-004
tblVehicleEF	OBUS	1.1500e-004	3.5600e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.2580e-003	0.01
tblVehicleEF	OBUS	1.3900e-004	1.1700e-004
tblVehicleEF	OBUS	2.3400e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	9.7700e-004	0.00
tblVehicleEF	OBUS	0.02	0.04
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	9.0400e-004	8.4100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.3800e-004	1.3500e-004
tblVehicleEF	OBUS	2.3400e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	9.7700e-004	0.00
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.08	0.09
tblVehicleEF	OBUS	6.9500e-003	7.5660e-003
tblVehicleEF	OBUS	2.6900e-003	0.01
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.63	0.54
tblVehicleEF	OBUS	0.32	0.37

tblVehicleEF	OBUS	1.82	1.70
tblVehicleEF	OBUS	98.01	89.08
tblVehicleEF	OBUS	1,261.23	1,320.54
tblVehicleEF	OBUS	14.40	13.66
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.13	0.16
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.44	0.36
tblVehicleEF	OBUS	1.47	0.90
tblVehicleEF	OBUS	1.13	1.00
tblVehicleEF	OBUS	1.5600e-004	3.7200e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.6000e-003	0.01
tblVehicleEF	OBUS	1.5100e-004	1.2700e-004
tblVehicleEF	OBUS	1.4900e-004	3.5600e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.2580e-003	0.01
tblVehicleEF	OBUS	1.3900e-004	1.1700e-004
tblVehicleEF	OBUS	5.9400e-004	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	2.8100e-004	0.00
tblVehicleEF	OBUS	0.02	0.04
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.09	0.08
tblVehicleEF	OBUS	9.3100e-004	8.4100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.4200e-004	1.3500e-004
tblVehicleEF	OBUS	5.9400e-004	0.07

tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	2.8100e-004	0.00
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.09	0.09
tblVehicleEF	SBUS	0.06	0.08
tblVehicleEF	SBUS	5.1390e-003	0.09
tblVehicleEF	SBUS	5.5510e-003	5.0470e-003
tblVehicleEF	SBUS	2.58	1.76
tblVehicleEF	SBUS	0.42	0.81
tblVehicleEF	SBUS	0.77	0.68
tblVehicleEF	SBUS	343.48	187.75
tblVehicleEF	SBUS	1,012.23	995.30
tblVehicleEF	SBUS	4.55	3.88
tblVehicleEF	SBUS	0.05	0.02
tblVehicleEF	SBUS	0.13	0.12
tblVehicleEF	SBUS	5.5840e-003	4.6260e-003
tblVehicleEF	SBUS	3.12	1.26
tblVehicleEF	SBUS	3.92	2.08
tblVehicleEF	SBUS	1.00	0.51
tblVehicleEF	SBUS	2.7970e-003	1.0210e-003
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	5.7000e-005	4.3000e-005
tblVehicleEF	SBUS	2.6760e-003	9.7600e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6950e-003	2.6290e-003

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

tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	5.3000e-005	4.0000e-005
tblVehicleEF	SBUS	6.7700e-004	0.03
tblVehicleEF	SBUS	6.5220e-003	8.5010e-003
tblVehicleEF	SBUS	0.29	0.19
tblVehicleEF	SBUS	3.1500e-004	0.00
tblVehicleEF	SBUS	0.07	0.05
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.2730e-003	1.7010e-003
tblVehicleEF	SBUS	9.6760e-003	9.2440e-003
tblVehicleEF	SBUS	4.5000e-005	3.8000e-005
tblVehicleEF	SBUS	6.7700e-004	0.03
tblVehicleEF	SBUS	6.5220e-003	8.5010e-003
tblVehicleEF	SBUS	0.41	0.31
tblVehicleEF	SBUS	3.1500e-004	0.00
tblVehicleEF	SBUS	0.09	0.15
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.06	0.08
tblVehicleEF	SBUS	5.2150e-003	0.09
tblVehicleEF	SBUS	4.6670e-003	5.0470e-003
tblVehicleEF	SBUS	2.55	1.76
tblVehicleEF	SBUS	0.43	0.81
tblVehicleEF	SBUS	0.57	0.68
tblVehicleEF	SBUS	350.78	187.75
tblVehicleEF	SBUS	1,012.25	995.30
tblVehicleEF	SBUS	4.21	3.88
tblVehicleEF	SBUS	0.05	0.02

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

tblVehicleEF	SBUS	0.13	0.12
tblVehicleEF	SBUS	5.3140e-003	4.6260e-003
tblVehicleEF	SBUS	3.18	1.26
tblVehicleEF	SBUS	3.76	2.08
tblVehicleEF	SBUS	1.00	0.51
tblVehicleEF	SBUS	2.3670e-003	1.0210e-003
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	5.7000e-005	4.3000e-005
tblVehicleEF	SBUS	2.2640e-003	9.7600e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6950e-003	2.6290e-003
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	5.3000e-005	4.0000e-005
tblVehicleEF	SBUS	1.4710e-003	0.03
tblVehicleEF	SBUS	6.6920e-003	8.5010e-003
tblVehicleEF	SBUS	0.29	0.19
tblVehicleEF	SBUS	6.3300e-004	0.00
tblVehicleEF	SBUS	0.07	0.05
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.3420e-003	1.7010e-003
tblVehicleEF	SBUS	9.6760e-003	9.2440e-003
tblVehicleEF	SBUS	4.2000e-005	3.8000e-005
tblVehicleEF	SBUS	1.4710e-003	0.03
tblVehicleEF	SBUS	6.6920e-003	8.5010e-003
tblVehicleEF	SBUS	0.41	0.31
tblVehicleEF	SBUS	6.3300e-004	0.00

tblVehicleEF	SBUS	0.09	0.15
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.06	0.08
tblVehicleEF	SBUS	5.0770e-003	0.09
tblVehicleEF	SBUS	6.3440e-003	5.0470e-003
tblVehicleEF	SBUS	2.63	1.76
tblVehicleEF	SBUS	0.42	0.81
tblVehicleEF	SBUS	0.98	0.68
tblVehicleEF	SBUS	333.40	187.75
tblVehicleEF	SBUS	1,012.22	995.30
tblVehicleEF	SBUS	4.89	3.88
tblVehicleEF	SBUS	0.04	0.02
tblVehicleEF	SBUS	0.13	0.12
tblVehicleEF	SBUS	5.8330e-003	4.6260e-003
tblVehicleEF	SBUS	3.04	1.26
tblVehicleEF	SBUS	3.99	2.08
tblVehicleEF	SBUS	1.01	0.51
tblVehicleEF	SBUS	3.3910e-003	1.0210e-003
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	5.7000e-005	4.3000e-005
tblVehicleEF	SBUS	3.2450e-003	9.7600e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6950e-003	2.6290e-003
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	5.3000e-005	4.0000e-005
tblVehicleEF	SBUS	3.7800e-004	0.03

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

tblVehicleEF	SBUS	6.5940e-003	8.5010e-003
tblVehicleEF	SBUS	0.29	0.19
tblVehicleEF	SBUS	1.8400e-004	0.00
tblVehicleEF	SBUS	0.07	0.05
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	SBUS	3.1770e-003	1.7010e-003
tblVehicleEF	SBUS	9.6760e-003	9.2440e-003
tblVehicleEF	SBUS	4.8000e-005	3.8000e-005
tblVehicleEF	SBUS	3.7800e-004	0.03
tblVehicleEF	SBUS	6.5940e-003	8.5010e-003
tblVehicleEF	SBUS	0.41	0.31
tblVehicleEF	SBUS	1.8400e-004	0.00
tblVehicleEF	SBUS	0.09	0.15
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	UBUS	1.74	0.53
tblVehicleEF	UBUS	1.9120e-003	3.7050e-003
tblVehicleEF	UBUS	13.20	6.31
tblVehicleEF	UBUS	0.14	0.48
tblVehicleEF	UBUS	1,654.13	1,063.59
tblVehicleEF	UBUS	1.40	3.13
tblVehicleEF	UBUS	0.28	0.16
tblVehicleEF	UBUS	1.1770e-003	5.9640e-003
tblVehicleEF	UBUS	0.71	0.29
tblVehicleEF	UBUS	0.01	0.04
tblVehicleEF	UBUS	0.07	0.13
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	5.1700e-003	5.5380e-003

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

tblVehicleEF	UBUS	1.5000e-005	1.2000e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.9450e-003	5.2950e-003
tblVehicleEF	UBUS	1.4000e-005	1.1000e-005
tblVehicleEF	UBUS	3.2000e-005	0.02
tblVehicleEF	UBUS	3.3900e-004	4.7600e-003
tblVehicleEF	UBUS	1.6000e-005	0.00
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	6.9000e-005	0.01
tblVehicleEF	UBUS	8.0430e-003	0.01
tblVehicleEF	UBUS	0.01	8.5740e-003
tblVehicleEF	UBUS	1.4000e-005	3.1000e-005
tblVehicleEF	UBUS	3.2000e-005	0.02
tblVehicleEF	UBUS	3.3900e-004	4.7600e-003
tblVehicleEF	UBUS	1.6000e-005	0.00
tblVehicleEF	UBUS	1.78	0.60
tblVehicleEF	UBUS	6.9000e-005	0.01
tblVehicleEF	UBUS	8.8060e-003	0.01
tblVehicleEF	UBUS	1.74	0.53
tblVehicleEF	UBUS	1.6960e-003	3.7050e-003
tblVehicleEF	UBUS	13.20	6.31
tblVehicleEF	UBUS	0.11	0.48
tblVehicleEF	UBUS	1,654.13	1,063.59
tblVehicleEF	UBUS	1.35	3.13
tblVehicleEF	UBUS	0.28	0.16
tblVehicleEF	UBUS	1.1350e-003	5.9640e-003
tblVehicleEF	UBUS	0.71	0.29
tblVehicleEF	UBUS	0.01	0.04

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

tblVehicleEF	UBUS	0.07	0.13
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	5.1700e-003	5.5380e-003
tblVehicleEF	UBUS	1.5000e-005	1.2000e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.9450e-003	5.2950e-003
tblVehicleEF	UBUS	1.4000e-005	1.1000e-005
tblVehicleEF	UBUS	7.8000e-005	0.02
tblVehicleEF	UBUS	4.2200e-004	4.7600e-003
tblVehicleEF	UBUS	4.2000e-005	0.00
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	6.2000e-005	0.01
tblVehicleEF	UBUS	7.1170e-003	0.01
tblVehicleEF	UBUS	0.01	8.5740e-003
tblVehicleEF	UBUS	1.3000e-005	3.1000e-005
tblVehicleEF	UBUS	7.8000e-005	0.02
tblVehicleEF	UBUS	4.2200e-004	4.7600e-003
tblVehicleEF	UBUS	4.2000e-005	0.00
tblVehicleEF	UBUS	1.78	0.60
tblVehicleEF	UBUS	6.2000e-005	0.01
tblVehicleEF	UBUS	7.7920e-003	0.01
tblVehicleEF	UBUS	1.74	0.53
tblVehicleEF	UBUS	2.0920e-003	3.7050e-003
tblVehicleEF	UBUS	13.20	6.31
tblVehicleEF	UBUS	0.16	0.48
tblVehicleEF	UBUS	1,654.13	1,063.59
tblVehicleEF	UBUS	1.44	3.13
tblVehicleEF	UBUS	0.28	0.16

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

tblVehicleEF	UBUS	1.2190e-003	5.9640e-003
tblVehicleEF	UBUS	0.71	0.29
tblVehicleEF	UBUS	0.01	0.04
tblVehicleEF	UBUS	0.07	0.13
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	5.1700e-003	5.5380e-003
tblVehicleEF	UBUS	1.5000e-005	1.2000e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.9450e-003	5.2950e-003
tblVehicleEF	UBUS	1.4000e-005	1.1000e-005
tblVehicleEF	UBUS	1.7000e-005	0.02
tblVehicleEF	UBUS	3.6700e-004	4.7600e-003
tblVehicleEF	UBUS	8.0000e-006	0.00
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	8.6000e-005	0.01
tblVehicleEF	UBUS	8.8250e-003	0.01
tblVehicleEF	UBUS	0.01	8.5740e-003
tblVehicleEF	UBUS	1.4000e-005	3.1000e-005
tblVehicleEF	UBUS	1.7000e-005	0.02
tblVehicleEF	UBUS	3.6700e-004	4.7600e-003
tblVehicleEF	UBUS	8.0000e-006	0.00
tblVehicleEF	UBUS	1.78	0.60
tblVehicleEF	UBUS	8.6000e-005	0.01
tblVehicleEF	UBUS	9.6620e-003	0.01
tblVehicleTrips	ST_TR	4.91	4.86
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	8.14	4.86
tblVehicleTrips	ST_TR	122.40	91.56

tblVehicleTrips	ST_TR	8.57	7.38
tblVehicleTrips	ST_TR	9.54	7.02
tblVehicleTrips	SU_TR	4.09	4.05
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	6.28	4.05
tblVehicleTrips	SU_TR	142.64	106.70
tblVehicleTrips	SU_TR	1.42	1.22
tblVehicleTrips	SU_TR	8.55	6.30
tblVehicleTrips	WD_TR	5.44	5.39
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	7.32	5.39
tblVehicleTrips	WD_TR	112.18	83.92
tblVehicleTrips	WD_TR	34.80	29.98
tblVehicleTrips	WD_TR	9.44	6.95
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	4.5499	37.6388	43.5579	0.1063	20.4646	1.5771	21.7313	10.2416	1.4509	11.4070	0.0000	10,573.2933	10,573.2933	2.2080	0.1942	10,651.4690
2024	4.2577	15.0147	41.6049	0.1037	9.2745	0.6555	9.9299	2.4600	0.6157	3.0757	0.0000	10,316.2660	10,316.2660	0.7891	0.1812	10,390.0011
2025	3.9876	13.8866	39.8919	0.1012	9.2745	0.5678	9.8423	2.4600	0.5333	2.9934	0.0000	10,059.1942	10,059.1942	0.7687	0.1701	10,129.0938
2026	135.6655	13.7615	38.5442	0.0989	9.2745	0.5659	9.8404	2.4600	0.5316	2.9916	0.0000	9,831.1699	9,831.1699	0.7617	0.1609	9,897.9773
Maximum	**135.6655**	**37.6388**	**43.5579**	**0.1063**	**20.4646**	**1.5771**	**21.7313**	**10.2416**	**1.4509**	**11.4070**	**0.0000**	**10,573.2933**	**10,573.2933**	**2.2080**	**0.1942**	**10,651.4690**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.5107	22.9409	45.1876	0.1063	20.4646	0.1289	20.5274	10.2416	0.1254	10.3043	0.0000	10,573.2933	10,573.2933	2.2080	0.1942	10,651.4690
2024	3.3196	12.4831	43.3118	0.1037	9.2745	0.1268	9.4012	2.4600	0.1234	2.5834	0.0000	10,316.2660	10,316.2660	0.7891	0.1812	10,390.0011
2025	3.1537	12.3291	41.6810	0.1012	9.2745	0.1249	9.3994	2.4600	0.1217	2.5817	0.0000	10,059.1942	10,059.1942	0.7687	0.1701	10,129.0938
2026	134.9680	12.2040	40.3333	0.0989	9.2745	0.1230	9.3974	2.4600	0.1199	2.5799	0.0000	9,831.1699	9,831.1699	0.7617	0.1609	9,897.9773
Maximum	**134.9680**	**22.9409**	**45.1876**	**0.1063**	**20.4646**	**0.1289**	**20.5274**	**10.2416**	**0.1254**	**10.3043**	**0.0000**	**10,573.2933**	**10,573.2933**	**2.2080**	**0.1942**	**10,651.4690**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**2.36**	**25.34**	**-4.23**	**0.00**	**0.00**	**85.04**	**5.10**	**0.00**	**84.34**	**11.82**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	33.7523	0.8094	70.3230	3.7200e-003		0.3897	0.3897		0.3897	0.3897	0.0000	126.8354	126.8354	0.1224	0.0000	129.8951
Energy	0.3144	2.8585	2.4011	0.0172		0.2172	0.2172		0.2172	0.2172		3,430.1531	3,430.1531	0.0657	0.0629	3,450.5368
Mobile	60.7522	34.2180	346.0777	0.7488	76.8583	0.4961	77.3544	19.1438	0.4621	19.6059		76,204.4188	76,204.4188	4.4590	3.6110	77,391.9724
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**94.8188**	**37.8858**	**418.8018**	**0.7697**	**76.8583**	**1.1030**	**77.9613**	**19.1438**	**1.0690**	**20.2129**	**0.0000**	**79,761.4073**	**79,761.4073**	**4.6471**	**3.6739**	**80,972.4043**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	33.7523	0.8094	70.3230	3.7200e-003		0.3897	0.3897		0.3897	0.3897	0.0000	126.8354	126.8354	0.1224	0.0000	129.8951
Energy	0.3144	2.8585	2.4011	0.0172		0.2172	0.2172		0.2172	0.2172		3,430.1531	3,430.1531	0.0657	0.0629	3,450.5368
Mobile	60.7522	34.2180	346.0777	0.7488	76.8583	0.4961	77.3544	19.1438	0.4621	19.6059		76,204.4188	76,204.4188	4.4590	3.6110	77,391.9724
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**94.8188**	**37.8858**	**418.8018**	**0.7697**	**76.8583**	**1.1030**	**77.9613**	**19.1438**	**1.0690**	**20.2129**	**0.0000**	**79,761.4073**	**79,761.4073**	**4.6471**	**3.6739**	**80,972.4043**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/3/2023	6/9/2023	5	50	
2	Site Preparation	Site Preparation	6/10/2023	7/21/2023	5	30	
3	Grading	Grading	7/22/2023	11/3/2023	5	75	
4	Trenching	Trenching	7/22/2023	11/3/2023	5	75	

5	Building Construction	Building Construction	11/4/2023	9/4/2026	5	740	
6	Paving	Paving	9/5/2026	11/20/2026	5	55	
7	Architectural Coating	Architectural Coating	9/5/2026	11/20/2026	5	55	

Acres of Grading (Site Preparation Phase): 45

Acres of Grading (Grading Phase): 225

Acres of Paving: 0

Residential Indoor: 1,570,195; Residential Outdoor: 523,398; Non-Residential Indoor: 720,000; Non-Residential Outdoor: 240,000; Striped Parking Area: 50,520 (Architectural Coating – sqft)

<u>OffRoad Equipment</u>

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

Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	50.00	20.00	LD_Mix	HHDT	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	50.00	20.00	LD_Mix	HHDT	HHDT
Grading	8	20.00	0.00	0.00	10.80	50.00	20.00	LD_Mix	HHDT	HHDT
Trenching	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,129.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	226.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 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					0.3253	0.0000	0.3253	0.0493	0.0000	0.0493			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.984 0	3,746.984 0	1.0494		3,773.218 3
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**0.3253**	**0.9975**	**1.3228**	**0.0493**	**0.9280**	**0.9772**		**3,746.984 0**	**3,746.984 0**	**1.0494**		**3,773.218 3**

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	0.0396	0.0233	0.3629	1.0500e-003	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		106.5290	106.5290	2.7100e-003	2.5800e-003	107.3658
Total	**0.0396**	**0.0233**	**0.3629**	**1.0500e-003**	**0.1232**	**5.9000e-004**	**0.1238**	**0.0327**	**5.4000e-004**	**0.0332**		**106.5290**	**106.5290**	**2.7100e-003**	**2.5800e-003**	**107.3658**

3.2 Demolition - 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					0.3253	0.0000	0.3253	0.0493	0.0000	0.0493			0.0000			0.0000
Off-Road	0.5841	13.5576	24.6739	0.0388		0.0616	0.0616		0.0616	0.0616	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**0.5841**	**13.5576**	**24.6739**	**0.0388**	**0.3253**	**0.0616**	**0.3869**	**0.0493**	**0.0616**	**0.1109**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

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	0.0396	0.0233	0.3629	1.0500e-003	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		106.5290	106.5290	2.7100e-003	2.5800e-003	107.3658
Total	**0.0396**	**0.0233**	**0.3629**	**1.0500e-003**	**0.1232**	**5.9000e-004**	**0.1238**	**0.0327**	**5.4000e-004**	**0.0332**		**106.5290**	**106.5290**	**2.7100e-003**	**2.5800e-003**	**107.3658**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					20.3167	0.0000	20.3167	10.2023	0.0000	10.2023			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.308 1	3,687.308 1	1.1926		3,717.121 9
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**20.3167**	**1.2660**	**21.5827**	**10.2023**	**1.1647**	**11.3671**		**3,687.308 1**	**3,687.308 1**	**1.1926**		**3,717.121 9**

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	0.0475	0.0280	0.4355	1.2600e-003	0.1479	7.1000e-004	0.1486	0.0392	6.5000e-004	0.0399		127.8348	127.8348	3.2500e-003	3.1000e-003	128.8389
Total	**0.0475**	**0.0280**	**0.4355**	**1.2600e-003**	**0.1479**	**7.1000e-004**	**0.1486**	**0.0392**	**6.5000e-004**	**0.0399**		**127.8348**	**127.8348**	**3.2500e-003**	**3.1000e-003**	**128.8389**

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					20.3167	0.0000	20.3167	10.2023	0.0000	10.2023			0.0000			0.0000
Off-Road	0.6967	12.1620	22.9600	0.0381		0.0621	0.0621		0.0621	0.0621	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**0.6967**	**12.1620**	**22.9600**	**0.0381**	**20.3167**	**0.0621**	**20.3788**	**10.2023**	**0.0621**	**10.2644**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0475	0.0280	0.4355	1.2600e-003	0.1479	7.1000e-004	0.1486	0.0392	6.5000e-004	0.0399		127.8348	127.8348	3.2500e-003	3.1000e-003	128.8389
Total	**0.0475**	**0.0280**	**0.4355**	**1.2600e-003**	**0.1479**	**7.1000e-004**	**0.1486**	**0.0392**	**6.5000e-004**	**0.0399**		**127.8348**	**127.8348**	**3.2500e-003**	**3.1000e-003**	**128.8389**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0527	0.0311	0.4839	1.4100e-003	0.1643	7.9000e-004	0.1651	0.0436	7.2000e-004	0.0443		142.0387	142.0387	3.6100e-003	3.4400e-003	143.1544
Total	**0.0527**	**0.0311**	**0.4839**	**1.4100e-003**	**0.1643**	**7.9000e-004**	**0.1651**	**0.0436**	**7.2000e-004**	**0.0443**		**142.0387**	**142.0387**	**3.6100e-003**	**3.4400e-003**	**143.1544**

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	1.0110	19.2707	36.7226	0.0621		0.1015	0.1015		0.1015	0.1015	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**1.0110**	**19.2707**	**36.7226**	**0.0621**	**9.2036**	**0.1015**	**9.3051**	**3.6538**	**0.1015**	**3.7553**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0527	0.0311	0.4839	1.4100e-003	0.1643	7.9000e-004	0.1651	0.0436	7.2000e-004	0.0443		142.0387	142.0387	3.6100e-003	3.4400e-003	143.1544
Total	**0.0527**	**0.0311**	**0.4839**	**1.4100e-003**	**0.1643**	**7.9000e-004**	**0.1651**	**0.0436**	**7.2000e-004**	**0.0443**		**142.0387**	**142.0387**	**3.6100e-003**	**3.4400e-003**	**143.1544**

3.5 Trenching - 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	0.3400	3.0843	5.4891	8.2800e-003		0.1516	0.1516		0.1395	0.1395		801.6821	801.6821	0.2593		808.1641
Total	**0.3400**	**3.0843**	**5.4891**	**8.2800e-003**		**0.1516**	**0.1516**		**0.1395**	**0.1395**		**801.6821**	**801.6821**	**0.2593**		**808.1641**

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	0.0132	7.7800e-003	0.1210	3.5000e-004	0.0411	2.0000e-004	0.0413	0.0109	1.8000e-004	0.0111		35.5097	35.5097	9.0000e-004	8.6000e-004	35.7886
Total	**0.0132**	**7.7800e-003**	**0.1210**	**3.5000e-004**	**0.0411**	**2.0000e-004**	**0.0413**	**0.0109**	**1.8000e-004**	**0.0111**		**35.5097**	**35.5097**	**9.0000e-004**	**8.6000e-004**	**35.7886**

3.5 Trenching - 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	0.1332	3.6313	6.2601	8.2800e-003		0.0135	0.0135		0.0135	0.0135	0.0000	801.6821	801.6821	0.2593		808.1641
Total	**0.1332**	**3.6313**	**6.2601**	**8.2800e-003**		**0.0135**	**0.0135**		**0.0135**	**0.0135**	**0.0000**	**801.6821**	**801.6821**	**0.2593**		**808.1641**

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	0.0132	7.7800e-003	0.1210	3.5000e-004	0.0411	2.0000e-004	0.0413	0.0109	1.8000e-004	0.0111		35.5097	35.5097	9.0000e-004	8.6000e-004	35.7886
Total	**0.0132**	**7.7800e-003**	**0.1210**	**3.5000e-004**	**0.0411**	**2.0000e-004**	**0.0413**	**0.0109**	**1.8000e-004**	**0.0111**		**35.5097**	**35.5097**	**9.0000e-004**	**8.6000e-004**	**35.7886**

3.6 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	0.0000	0.0000	0.0000	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	2.9772	1.7568	27.3139	0.0793	9.2745	0.0443	9.3188	2.4600	0.0408	2.5008		8,018.0834	8,018.0834	0.2040	0.1942	8,081.0629
Total	**2.9772**	**1.7568**	**27.3139**	**0.0793**	**9.2745**	**0.0443**	**9.3188**	**2.4600**	**0.0408**	**2.5008**		**8,018.0834**	**8,018.0834**	**0.2040**	**0.1942**	**8,081.0629**

3.6 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	0.5335	10.9122	17.8738	0.0269		0.0846	0.0846		0.0846	0.0846	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**0.5335**	**10.9122**	**17.8738**	**0.0269**		**0.0846**	**0.0846**		**0.0846**	**0.0846**	**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	0.0000	0.0000	0.0000	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	2.9772	1.7568	27.3139	0.0793	9.2745	0.0443	9.3188	2.4600	0.0408	2.5008		8,018.0834	8,018.0834	0.2040	0.1942	8,081.0629
Total	**2.9772**	**1.7568**	**27.3139**	**0.0793**	**9.2745**	**0.0443**	**9.3188**	**2.4600**	**0.0408**	**2.5008**		**8,018.0834**	**8,018.0834**	**0.2040**	**0.1942**	**8,081.0629**

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	2.7861	1.5709	25.4380	0.0768	9.2745	0.0422	9.3166	2.4600	0.0388	2.4988		7,760.5671	7,760.5671	0.1847	0.1812	7,819.1935
Total	**2.7861**	**1.5709**	**25.4380**	**0.0768**	**9.2745**	**0.0422**	**9.3166**	**2.4600**	**0.0388**	**2.4988**		**7,760.5671**	**7,760.5671**	**0.1847**	**0.1812**	**7,819.1935**

3.6 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5335	10.9122	17.8738	0.0270		0.0846	0.0846		0.0846	0.0846	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**0.5335**	**10.9122**	**17.8738**	**0.0270**		**0.0846**	**0.0846**		**0.0846**	**0.0846**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	2.7861	1.5709	25.4380	0.0768	9.2745	0.0422	9.3166	2.4600	0.0388	2.4988		7,760.5671	7,760.5671	0.1847	0.1812	7,819.1935
Total	**2.7861**	**1.5709**	**25.4380**	**0.0768**	**9.2745**	**0.0422**	**9.3166**	**2.4600**	**0.0388**	**2.4988**		**7,760.5671**	**7,760.5671**	**0.1847**	**0.1812**	**7,819.1935**

3.6 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.474 4**	**2,556.474 4**	**0.6010**		**2,571.498 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	0.0000	0.0000	0.0000	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	2.6202	1.4169	23.8072	0.0742	9.2745	0.0403	9.3148	2.4600	0.0371	2.4971		7,502.719 8	7,502.719 8	0.1677	0.1701	7,557.595 7
Total	**2.6202**	**1.4169**	**23.8072**	**0.0742**	**9.2745**	**0.0403**	**9.3148**	**2.4600**	**0.0371**	**2.4971**		**7,502.719 8**	**7,502.719 8**	**0.1677**	**0.1701**	**7,557.595 7**

3.6 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5335	10.9122	17.8738	0.0270		0.0846	0.0846		0.0846	0.0846	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.5335**	**10.9122**	**17.8738**	**0.0270**		**0.0846**	**0.0846**		**0.0846**	**0.0846**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	2.6202	1.4169	23.8072	0.0742	9.2745	0.0403	9.3148	2.4600	0.0371	2.4971		7,502.7198	7,502.7198	0.1677	0.1701	7,557.5957
Total	**2.6202**	**1.4169**	**23.8072**	**0.0742**	**9.2745**	**0.0403**	**9.3148**	**2.4600**	**0.0371**	**2.4971**		**7,502.7198**	**7,502.7198**	**0.1677**	**0.1701**	**7,557.5957**

3.6 Building Construction - 2026

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	2.4777	1.2919	22.4595	0.0720	9.2745	0.0384	9.3128	2.4600	0.0353	2.4953		7,274.6956	7,274.6956	0.1531	0.1609	7,326.4792
Total	**2.4777**	**1.2919**	**22.4595**	**0.0720**	**9.2745**	**0.0384**	**9.3128**	**2.4600**	**0.0353**	**2.4953**		**7,274.6956**	**7,274.6956**	**0.1531**	**0.1609**	**7,326.4792**

3.6 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5335	10.9122	17.8738	0.0270		0.0846	0.0846		0.0846	0.0846	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.5335**	**10.9122**	**17.8738**	**0.0270**		**0.0846**	**0.0846**		**0.0846**	**0.0846**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	2.4777	1.2919	22.4595	0.0720	9.2745	0.0384	9.3128	2.4600	0.0353	2.4953		7,274.6956	7,274.6956	0.1531	0.1609	7,326.4792
Total	**2.4777**	**1.2919**	**22.4595**	**0.0720**	**9.2745**	**0.0384**	**9.3128**	**2.4600**	**0.0353**	**2.4953**		**7,274.6956**	**7,274.6956**	**0.1531**	**0.1609**	**7,326.4792**

3.7 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0329	0.0172	0.2984	9.6000e-004	0.1232	5.1000e-004	0.1237	0.0327	4.7000e-004	0.0332		96.6523	96.6523	2.0300e-003	2.1400e-003	97.3403
Total	**0.0329**	**0.0172**	**0.2984**	**9.6000e-004**	**0.1232**	**5.1000e-004**	**0.1237**	**0.0327**	**4.7000e-004**	**0.0332**		**96.6523**	**96.6523**	**2.0300e-003**	**2.1400e-003**	**97.3403**

3.7 Paving - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3341	6.8714	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,206.745 2	2,206.745 2	0.7137		2,224.587 8
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3341**	**6.8714**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,206.745 2**	**2,206.745 2**	**0.7137**		**2,224.587 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	0.0000	0.0000	0.0000	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	0.0329	0.0172	0.2984	9.6000e-004	0.1232	5.1000e-004	0.1237	0.0327	4.7000e-004	0.0332		96.6523	96.6523	2.0300e-003	2.1400e-003	97.3403
Total	**0.0329**	**0.0172**	**0.2984**	**9.6000e-004**	**0.1232**	**5.1000e-004**	**0.1237**	**0.0327**	**4.7000e-004**	**0.0332**		**96.6523**	**96.6523**	**2.0300e-003**	**2.1400e-003**	**97.3403**

3.8 Architectural Coating - 2026

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	134.0506					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**134.2214**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.4960	0.2586	4.4959	0.0144	1.8565	7.6800e-003	1.8642	0.4924	7.0700e-003	0.4995		1,456.2278	1,456.2278	0.0307	0.0322	1,466.5937
Total	**0.4960**	**0.2586**	**4.4959**	**0.0144**	**1.8565**	**7.6800e-003**	**1.8642**	**0.4924**	**7.0700e-003**	**0.4995**		**1,456.2278**	**1,456.2278**	**0.0307**	**0.0322**	**1,466.5937**

3.8 Architectural Coating - 2026

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	134.0506					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0545	1.0598	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**134.1051**	**1.0598**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.4960	0.2586	4.4959	0.0144	1.8565	7.6800e-003	1.8642	0.4924	7.0700e-003	0.4995		1,456.2278	1,456.2278	0.0307	0.0322	1,466.5937
Total	**0.4960**	**0.2586**	**4.4959**	**0.0144**	**1.8565**	**7.6800e-003**	**1.8642**	**0.4924**	**7.0700e-003**	**0.4995**		**1,456.2278**	**1,456.2278**	**0.0307**	**0.0322**	**1,466.5937**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	60.7522	34.2180	346.0777	0.7488	76.8583	0.4961	77.3544	19.1438	0.4621	19.6059		76,204.4188	76,204.4188	4.4590	3.6110	77,391.9724
Unmitigated	60.7522	34.2180	346.0777	0.7488	76.8583	0.4961	77.3544	19.1438	0.4621	19.6059		76,204.4188	76,204.4188	4.4590	3.6110	77,391.9724

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	4,328.17	3,902.58	3252.15	9,500,926	9,500,926
City Park	0.00	0.00	0.00		
Condo/Townhouse	123.97	111.78	93.15	272,131	272,131
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	1,258.80	1,373.40	1600.50	1,536,174	1,536,174
Medical Office Building	13,940.70	3,431.70	567.30	20,607,744	20,607,744
Single Family Housing	166.80	168.48	151.20	380,650	380,650
Total	19,818.44	8,987.94	5,664.30	32,297,624	32,297,624

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
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
City Park	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
Condo/Townhouse	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
Enclosed Parking with Elevator	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
High Turnover (Sit Down Restaurant)	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
Medical Office Building	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
Single Family Housing	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	0.3144	2.8585	2.4011	0.0172		0.2172	0.2172		0.2172	0.2172		3,430.153 1	3,430.153 1	0.0657	0.0629	3,450.536 8
NaturalGas Unmitigated	0.3144	2.8585	2.4011	0.0172		0.2172	0.2172		0.2172	0.2172		3,430.153 1	3,430.153 1	0.0657	0.0629	3,450.536 8

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					
Apartments Mid Rise	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
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	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
Enclosed Parking with Elevator	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
High Turnover (Sit Down Restaurant)	8517.95	0.0919	0.8351	0.7015	5.0100e-003		0.0635	0.0635		0.0635	0.0635		1,002.1112	1,002.1112	0.0192	0.0184	1,008.0663
Medical Office Building	20638.4	0.2226	2.0234	1.6996	0.0121		0.1538	0.1538		0.1538	0.1538		2,428.0419	2,428.0419	0.0465	0.0445	2,442.4705
Single Family Housing	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
Total		**0.3144**	**2.8585**	**2.4011**	**0.0172**		**0.2173**	**0.2173**		**0.2173**	**0.2173**		**3,430.1531**	**3,430.1531**	**0.0658**	**0.0629**	**3,450.5368**

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					
Apartments Mid Rise	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
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	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
Enclosed Parking with Elevator	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
High Turnover (Sit Down Restaurant)	8.51795	0.0919	0.8351	0.7015	5.0100e-003		0.0635	0.0635		0.0635	0.0635		1,002.1112	1,002.1112	0.0192	0.0184	1,008.0663
Medical Office Building	20.6384	0.2226	2.0234	1.6996	0.0121		0.1538	0.1538		0.1538	0.1538		2,428.0419	2,428.0419	0.0465	0.0445	2,442.4705
Single Family Housing	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
Total		**0.3144**	**2.8585**	**2.4011**	**0.0172**		**0.2173**	**0.2173**		**0.2173**	**0.2173**		**3,430.1531**	**3,430.1531**	**0.0658**	**0.0629**	**3,450.5368**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	33.7523	0.8094	70.3230	3.7200e-003		0.3897	0.3897		0.3897	0.3897	0.0000	126.8354	126.8354	0.1224	0.0000	129.8951
Unmitigated	33.7523	0.8094	70.3230	3.7200e-003		0.3897	0.3897		0.3897	0.3897	0.0000	126.8354	126.8354	0.1224	0.0000	129.8951

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	4.4586					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	27.1659					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.1278	0.8094	70.3230	3.7200e-003		0.3897	0.3897		0.3897	0.3897		126.8354	126.8354	0.1224		129.8951
Total	**33.7523**	**0.8094**	**70.3230**	**3.7200e-003**		**0.3897**	**0.3897**		**0.3897**	**0.3897**	**0.0000**	**126.8354**	**126.8354**	**0.1224**	**0.0000**	**129.8951**

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	4.4586					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	27.1659					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.1278	0.8094	70.3230	3.7200e-003		0.3897	0.3897		0.3897	0.3897		126.8354	126.8354	0.1224		129.8951
Total	**33.7523**	**0.8094**	**70.3230**	**3.7200e-003**		**0.3897**	**0.3897**		**0.3897**	**0.3897**	**0.0000**	**126.8354**	**126.8354**	**0.1224**	**0.0000**	**129.8951**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	50	1341	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (750 - 9999 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

11.0 Vegetation

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

1655 Berryessa Mixed Use [With VOC Mitigation]

Santa Clara County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Medical Office Building	465.00	1000sqft	10.67	465,000.00	0
Enclosed Parking with Elevator	2,105.00	Space	0.00	842,000.00	0
City Park	0.90	Acre	0.90	39,204.00	0
High Turnover (Sit Down Restaurant)	15.00	1000sqft	0.34	15,000.00	0
Apartments Mid Rise	803.00	Dwelling Unit	21.13	709,205.00	2297
Condo/Townhouse	23.00	Dwelling Unit	1.44	23,000.00	66
Single Family Housing	24.00	Dwelling Unit	7.79	43,200.00	69

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2027
Utility Company	San Jose Clean Energy				
CO2 Intensity (lb/MWhr)	807.98	**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.

Trips and VMT - Hauling trips consistent with the DEIR's model. However, see SWAPE comment on "Underestimated Number of Hauling Trips Required for Grading."

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

Demolition - Consistent with the DEIR's model.

Grading - Consistent with the DEIR's model.

Architectural Coating - Consistent with the DEIR's model.

Vehicle Trips - Consistent with the DEIR's model.

Vehicle Emission Factors - Consistent with the DEIR's model.

Vehicle Emission Factors - Consistent with the DEIR's model.

Vehicle Emission Factors - Consistent with the DEIR's model.

Woodstoves - Consistent with the DEIR's model.

Consumer Products - See SWAPE comment on "Unsubstantiated Reduction to Consumer Product Emission Factor."

Area Coating - See SWAPE comment on "Incorrect Reductions to Area Coating Emission Factors."

Energy Use - Consistent with the DEIR's model.

Water And Wastewater - See SWAPE comment on "Unsubstantiated Changes to Wastewater System Treatment Percentages."

Construction Off-road Equipment Mitigation - Consistent with DEIR's model. However, see SWAPE comment on "Incorrect application of Tier 4 mitigation."

Mobile Land Use Mitigation -

Energy Mitigation - See SWAPE comment on "Incorrect Application of Operational Energy-Related Mitigation Measure."

Stationary Sources - Emergency Generators and Fire Pumps - Consistent with the DEIR's model.

Stationary Sources - Emergency Generators and Fire Pumps EF - Consistent with the DEIR's model.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	66.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	46.00
tblArchitecturalCoating	EF_Parking	150.00	66.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	66.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	46.00
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
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tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	T24NG	5,226.68	0.00

tblEnergyUse	T24NG	14,104.62	0.00
tblEnergyUse	T24NG	23,474.54	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	120.45	0.00
tblFireplaces	NumberGas	3.45	0.00
tblFireplaces	NumberGas	6.00	0.00
tblFireplaces	NumberNoFireplace	32.12	0.00
tblFireplaces	NumberNoFireplace	0.92	0.00
tblFireplaces	NumberNoFireplace	1.92	0.00
tblFireplaces	NumberWood	136.51	0.00
tblFireplaces	NumberWood	3.91	0.00
tblFireplaces	NumberWood	10.32	0.00
tblGrading	MaterialExported	0.00	165,000.00
tblGrading	MaterialImported	0.00	10,000.00
tblLandUse	LandUseSquareFeet	803,000.00	709,205.00
tblLandUse	LotAcreage	18.95	0.00
tblStationaryGeneratorsPumpsEF	NOX_EF	4.56	0.50
tblStationaryGeneratorsPumpsEF	PM10_EF	0.15	0.02
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.15	0.02
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	1,341.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00

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

tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	75.00	0.00
tblTripsAndVMT	HaulingTripNumber	21,875.00	0.00
tblTripsAndVMT	VendorTripLength	7.30	50.00
tblTripsAndVMT	VendorTripLength	7.30	50.00
tblTripsAndVMT	VendorTripLength	7.30	50.00
tblTripsAndVMT	VendorTripNumber	314.00	0.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	HHDT
tblVehicleEF	HHD	0.02	0.22
tblVehicleEF	HHD	0.05	0.11
tblVehicleEF	HHD	6.31	5.12
tblVehicleEF	HHD	0.41	0.71
tblVehicleEF	HHD	6.0890e-003	7.8200e-004
tblVehicleEF	HHD	991.82	777.09
tblVehicleEF	HHD	1,327.03	1,519.26
tblVehicleEF	HHD	0.05	0.01
tblVehicleEF	HHD	0.16	0.13
tblVehicleEF	HHD	0.21	0.24
tblVehicleEF	HHD	4.0000e-006	7.0000e-006
tblVehicleEF	HHD	5.29	3.97
tblVehicleEF	HHD	2.62	1.63
tblVehicleEF	HHD	2.32	2.75
tblVehicleEF	HHD	2.3520e-003	1.9390e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00

tblVehicleEF	HHD	2.2500e-003	1.8490e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8950e-003	8.7840e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	2.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.1000e-005	2.9000e-005
tblVehicleEF	HHD	0.42	0.32
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.1000e-005	2.6100e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	9.2270e-003	6.7480e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	2.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.1000e-005	2.9000e-005
tblVehicleEF	HHD	0.49	0.57
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	0.07	0.12
tblVehicleEF	HHD	3.1000e-005	2.6100e-004
tblVehicleEF	HHD	3.0000e-006	0.00
tblVehicleEF	HHD	0.03	0.22
tblVehicleEF	HHD	0.05	0.11
tblVehicleEF	HHD	6.22	5.12
tblVehicleEF	HHD	0.41	0.71
tblVehicleEF	HHD	5.5970e-003	7.8200e-004
tblVehicleEF	HHD	980.16	777.09
tblVehicleEF	HHD	1,327.03	1,519.26
tblVehicleEF	HHD	0.05	0.01

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

tblVehicleEF	HHD	0.15	0.13
tblVehicleEF	HHD	0.21	0.24
tblVehicleEF	HHD	4.0000e-006	7.0000e-006
tblVehicleEF	HHD	5.04	3.97
tblVehicleEF	HHD	2.52	1.63
tblVehicleEF	HHD	2.32	2.75
tblVehicleEF	HHD	2.0660e-003	1.9390e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	1.9770e-003	1.8490e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8950e-003	8.7840e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	4.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.8000e-005	2.9000e-005
tblVehicleEF	HHD	0.45	0.32
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.0000e-005	2.6100e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	9.1180e-003	6.7480e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	4.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.8000e-005	2.9000e-005
tblVehicleEF	HHD	0.52	0.57
tblVehicleEF	HHD	2.0000e-006	0.00

tblVehicleEF	HHD	0.07	0.12
tblVehicleEF	HHD	3.0000e-005	2.6100e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	0.02	0.22
tblVehicleEF	HHD	0.05	0.11
tblVehicleEF	HHD	6.43	5.12
tblVehicleEF	HHD	0.41	0.71
tblVehicleEF	HHD	6.5340e-003	7.8200e-004
tblVehicleEF	HHD	1,007.92	777.09
tblVehicleEF	HHD	1,327.03	1,519.26
tblVehicleEF	HHD	0.05	0.01
tblVehicleEF	HHD	0.16	0.13
tblVehicleEF	HHD	0.21	0.24
tblVehicleEF	HHD	4.0000e-006	7.0000e-006
tblVehicleEF	HHD	5.62	3.97
tblVehicleEF	HHD	2.66	1.63
tblVehicleEF	HHD	2.32	2.75
tblVehicleEF	HHD	2.7480e-003	1.9390e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	2.6290e-003	1.8490e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8950e-003	8.7840e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	1.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.7000e-005	2.9000e-005

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

tblVehicleEF	HHD	0.39	0.32
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.4000e-005	2.6100e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	9.3770e-003	6.7480e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.0000e-006	9.2000e-005
tblVehicleEF	HHD	7.7000e-005	2.9000e-005
tblVehicleEF	HHD	0.45	0.57
tblVehicleEF	HHD	0.07	0.12
tblVehicleEF	HHD	3.4000e-005	2.6100e-004
tblVehicleEF	HHD	3.0000e-006	0.00
tblVehicleEF	LDA	1.2360e-003	1.5380e-003
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.45	0.54
tblVehicleEF	LDA	1.86	2.42
tblVehicleEF	LDA	214.18	230.34
tblVehicleEF	LDA	45.42	59.41
tblVehicleEF	LDA	3.4320e-003	3.5100e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.14	0.20
tblVehicleEF	LDA	0.04	7.1090e-003
tblVehicleEF	LDA	1.1160e-003	1.0170e-003
tblVehicleEF	LDA	1.5010e-003	1.7230e-003
tblVehicleEF	LDA	0.02	2.4880e-003
tblVehicleEF	LDA	1.0270e-003	9.3500e-004
tblVehicleEF	LDA	1.3800e-003	1.5840e-003
tblVehicleEF	LDA	0.03	0.25

tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	4.3670e-003	5.6030e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.15	0.24
tblVehicleEF	LDA	2.1190e-003	2.2770e-003
tblVehicleEF	LDA	4.5000e-004	5.8700e-004
tblVehicleEF	LDA	0.03	0.25
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.03	0.00
tblVehicleEF	LDA	6.3460e-003	8.1650e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.16	0.26
tblVehicleEF	LDA	1.3990e-003	1.5380e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.53	0.54
tblVehicleEF	LDA	1.47	2.42
tblVehicleEF	LDA	230.43	230.34
tblVehicleEF	LDA	44.72	59.41
tblVehicleEF	LDA	3.2160e-003	3.5100e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.12	0.20
tblVehicleEF	LDA	0.04	7.1090e-003
tblVehicleEF	LDA	1.1160e-003	1.0170e-003
tblVehicleEF	LDA	1.5010e-003	1.7230e-003
tblVehicleEF	LDA	0.02	2.4880e-003
tblVehicleEF	LDA	1.0270e-003	9.3500e-004
tblVehicleEF	LDA	1.3800e-003	1.5840e-003

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

tblVehicleEF	LDA	0.07	0.25
tblVehicleEF	LDA	0.08	0.07
tblVehicleEF	LDA	0.05	0.00
tblVehicleEF	LDA	4.8560e-003	5.6030e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.12	0.24
tblVehicleEF	LDA	2.2790e-003	2.2770e-003
tblVehicleEF	LDA	4.4300e-004	5.8700e-004
tblVehicleEF	LDA	0.07	0.25
tblVehicleEF	LDA	0.08	0.07
tblVehicleEF	LDA	0.05	0.00
tblVehicleEF	LDA	7.0600e-003	8.1650e-003
tblVehicleEF	LDA	0.02	0.19
tblVehicleEF	LDA	0.13	0.26
tblVehicleEF	LDA	1.1850e-003	1.5380e-003
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.44	0.54
tblVehicleEF	LDA	2.17	2.42
tblVehicleEF	LDA	211.51	230.34
tblVehicleEF	LDA	45.99	59.41
tblVehicleEF	LDA	3.6350e-003	3.5100e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.15	0.20
tblVehicleEF	LDA	0.04	7.1090e-003
tblVehicleEF	LDA	1.1160e-003	1.0170e-003
tblVehicleEF	LDA	1.5010e-003	1.7230e-003
tblVehicleEF	LDA	0.02	2.4880e-003
tblVehicleEF	LDA	1.0270e-003	9.3500e-004

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

tblVehicleEF	LDA	1.3800e-003	1.5840e-003
tblVehicleEF	LDA	0.01	0.25
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.01	0.00
tblVehicleEF	LDA	4.2440e-003	5.6030e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.17	0.24
tblVehicleEF	LDA	2.0920e-003	2.2770e-003
tblVehicleEF	LDA	4.5500e-004	5.8700e-004
tblVehicleEF	LDA	0.01	0.25
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.01	0.00
tblVehicleEF	LDA	6.1660e-003	8.1650e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.18	0.26
tblVehicleEF	LDT1	2.3950e-003	4.4930e-003
tblVehicleEF	LDT1	0.04	0.09
tblVehicleEF	LDT1	0.65	1.12
tblVehicleEF	LDT1	2.00	4.20
tblVehicleEF	LDT1	258.06	311.08
tblVehicleEF	LDT1	55.33	80.98
tblVehicleEF	LDT1	4.5300e-003	7.3650e-003
tblVehicleEF	LDT1	0.02	0.04
tblVehicleEF	LDT1	0.05	0.09
tblVehicleEF	LDT1	0.17	0.32
tblVehicleEF	LDT1	0.04	9.1980e-003
tblVehicleEF	LDT1	1.3260e-003	1.5760e-003
tblVehicleEF	LDT1	1.7710e-003	2.4760e-003
tblVehicleEF	LDT1	0.02	3.2190e-003

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

tblVehicleEF	LDT1	1.2200e-003	1.4490e-003
tblVehicleEF	LDT1	1.6290e-003	2.2770e-003
tblVehicleEF	LDT1	0.06	0.51
tblVehicleEF	LDT1	0.12	0.14
tblVehicleEF	LDT1	0.05	0.00
tblVehicleEF	LDT1	9.7520e-003	0.02
tblVehicleEF	LDT1	0.07	0.39
tblVehicleEF	LDT1	0.20	0.42
tblVehicleEF	LDT1	2.5540e-003	3.0750e-003
tblVehicleEF	LDT1	5.4800e-004	8.0100e-004
tblVehicleEF	LDT1	0.06	0.51
tblVehicleEF	LDT1	0.12	0.14
tblVehicleEF	LDT1	0.05	0.00
tblVehicleEF	LDT1	0.01	0.03
tblVehicleEF	LDT1	0.07	0.39
tblVehicleEF	LDT1	0.22	0.46
tblVehicleEF	LDT1	2.6850e-003	4.4930e-003
tblVehicleEF	LDT1	0.04	0.09
tblVehicleEF	LDT1	0.76	1.12
tblVehicleEF	LDT1	1.58	4.20
tblVehicleEF	LDT1	274.84	311.08
tblVehicleEF	LDT1	54.55	80.98
tblVehicleEF	LDT1	4.2030e-003	7.3650e-003
tblVehicleEF	LDT1	0.02	0.04
tblVehicleEF	LDT1	0.04	0.09
tblVehicleEF	LDT1	0.16	0.32
tblVehicleEF	LDT1	0.04	9.1980e-003
tblVehicleEF	LDT1	1.3260e-003	1.5760e-003
tblVehicleEF	LDT1	1.7710e-003	2.4760e-003

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

tblVehicleEF	LDT1	0.02	3.2190e-003
tblVehicleEF	LDT1	1.2200e-003	1.4490e-003
tblVehicleEF	LDT1	1.6290e-003	2.2770e-003
tblVehicleEF	LDT1	0.13	0.51
tblVehicleEF	LDT1	0.13	0.14
tblVehicleEF	LDT1	0.10	0.00
tblVehicleEF	LDT1	0.01	0.02
tblVehicleEF	LDT1	0.06	0.39
tblVehicleEF	LDT1	0.17	0.42
tblVehicleEF	LDT1	2.7200e-003	3.0750e-003
tblVehicleEF	LDT1	5.4000e-004	8.0100e-004
tblVehicleEF	LDT1	0.13	0.51
tblVehicleEF	LDT1	0.13	0.14
tblVehicleEF	LDT1	0.10	0.00
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.06	0.39
tblVehicleEF	LDT1	0.18	0.46
tblVehicleEF	LDT1	2.3060e-003	4.4930e-003
tblVehicleEF	LDT1	0.05	0.09
tblVehicleEF	LDT1	0.64	1.12
tblVehicleEF	LDT1	2.34	4.20
tblVehicleEF	LDT1	255.31	311.08
tblVehicleEF	LDT1	55.96	80.98
tblVehicleEF	LDT1	4.8250e-003	7.3650e-003
tblVehicleEF	LDT1	0.02	0.04
tblVehicleEF	LDT1	0.05	0.09
tblVehicleEF	LDT1	0.19	0.32
tblVehicleEF	LDT1	0.04	9.1980e-003
tblVehicleEF	LDT1	1.3260e-003	1.5760e-003

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

tblVehicleEF	LDT1	1.7710e-003	2.4760e-003
tblVehicleEF	LDT1	0.02	3.2190e-003
tblVehicleEF	LDT1	1.2200e-003	1.4490e-003
tblVehicleEF	LDT1	1.6290e-003	2.2770e-003
tblVehicleEF	LDT1	0.03	0.51
tblVehicleEF	LDT1	0.12	0.14
tblVehicleEF	LDT1	0.03	0.00
tblVehicleEF	LDT1	9.4930e-003	0.02
tblVehicleEF	LDT1	0.08	0.39
tblVehicleEF	LDT1	0.23	0.42
tblVehicleEF	LDT1	2.5260e-003	3.0750e-003
tblVehicleEF	LDT1	5.5400e-004	8.0100e-004
tblVehicleEF	LDT1	0.03	0.51
tblVehicleEF	LDT1	0.12	0.14
tblVehicleEF	LDT1	0.03	0.00
tblVehicleEF	LDT1	0.01	0.03
tblVehicleEF	LDT1	0.08	0.39
tblVehicleEF	LDT1	0.25	0.46
tblVehicleEF	LDT2	2.2120e-003	2.2390e-003
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.62	0.71
tblVehicleEF	LDT2	2.44	3.08
tblVehicleEF	LDT2	271.88	320.53
tblVehicleEF	LDT2	58.84	81.54
tblVehicleEF	LDT2	4.6700e-003	5.0850e-003
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.04	0.05
tblVehicleEF	LDT2	0.20	0.28
tblVehicleEF	LDT2	0.04	8.8520e-003

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

tblVehicleEF	LDT2	1.1980e-003	1.1830e-003
tblVehicleEF	LDT2	1.5540e-003	1.9260e-003
tblVehicleEF	LDT2	0.02	3.0980e-003
tblVehicleEF	LDT2	1.1030e-003	1.0890e-003
tblVehicleEF	LDT2	1.4290e-003	1.7710e-003
tblVehicleEF	LDT2	0.05	0.27
tblVehicleEF	LDT2	0.10	0.07
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	8.6200e-003	8.4950e-003
tblVehicleEF	LDT2	0.06	0.20
tblVehicleEF	LDT2	0.23	0.31
tblVehicleEF	LDT2	2.6900e-003	3.1680e-003
tblVehicleEF	LDT2	5.8200e-004	8.0600e-004
tblVehicleEF	LDT2	0.05	0.27
tblVehicleEF	LDT2	0.10	0.07
tblVehicleEF	LDT2	0.05	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.20
tblVehicleEF	LDT2	0.25	0.34
tblVehicleEF	LDT2	2.4920e-003	2.2390e-003
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.73	0.71
tblVehicleEF	LDT2	1.92	3.08
tblVehicleEF	LDT2	287.92	320.53
tblVehicleEF	LDT2	57.89	81.54
tblVehicleEF	LDT2	4.3620e-003	5.0850e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.04	0.05
tblVehicleEF	LDT2	0.18	0.28

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

tblVehicleEF	LDT2	0.04	8.8520e-003
tblVehicleEF	LDT2	1.1980e-003	1.1830e-003
tblVehicleEF	LDT2	1.5540e-003	1.9260e-003
tblVehicleEF	LDT2	0.02	3.0980e-003
tblVehicleEF	LDT2	1.1030e-003	1.0890e-003
tblVehicleEF	LDT2	1.4290e-003	1.7710e-003
tblVehicleEF	LDT2	0.12	0.27
tblVehicleEF	LDT2	0.11	0.07
tblVehicleEF	LDT2	0.10	0.00
tblVehicleEF	LDT2	9.5610e-003	8.4950e-003
tblVehicleEF	LDT2	0.05	0.20
tblVehicleEF	LDT2	0.19	0.31
tblVehicleEF	LDT2	2.8480e-003	3.1680e-003
tblVehicleEF	LDT2	5.7300e-004	8.0600e-004
tblVehicleEF	LDT2	0.12	0.27
tblVehicleEF	LDT2	0.11	0.07
tblVehicleEF	LDT2	0.10	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.05	0.20
tblVehicleEF	LDT2	0.20	0.34
tblVehicleEF	LDT2	2.1260e-003	2.2390e-003
tblVehicleEF	LDT2	0.06	0.07
tblVehicleEF	LDT2	0.61	0.71
tblVehicleEF	LDT2	2.86	3.08
tblVehicleEF	LDT2	269.25	320.53
tblVehicleEF	LDT2	59.60	81.54
tblVehicleEF	LDT2	4.9520e-003	5.0850e-003
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.05	0.05

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

tblVehicleEF	LDT2	0.22	0.28
tblVehicleEF	LDT2	0.04	8.8520e-003
tblVehicleEF	LDT2	1.1980e-003	1.1830e-003
tblVehicleEF	LDT2	1.5540e-003	1.9260e-003
tblVehicleEF	LDT2	0.02	3.0980e-003
tblVehicleEF	LDT2	1.1030e-003	1.0890e-003
tblVehicleEF	LDT2	1.4290e-003	1.7710e-003
tblVehicleEF	LDT2	0.03	0.27
tblVehicleEF	LDT2	0.11	0.07
tblVehicleEF	LDT2	0.03	0.00
tblVehicleEF	LDT2	8.3810e-003	8.4950e-003
tblVehicleEF	LDT2	0.07	0.20
tblVehicleEF	LDT2	0.25	0.31
tblVehicleEF	LDT2	2.6630e-003	3.1680e-003
tblVehicleEF	LDT2	5.9000e-004	8.0600e-004
tblVehicleEF	LDT2	0.03	0.27
tblVehicleEF	LDT2	0.11	0.07
tblVehicleEF	LDT2	0.03	0.00
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.20
tblVehicleEF	LDT2	0.28	0.34
tblVehicleEF	LHD1	4.5230e-003	4.8530e-003
tblVehicleEF	LHD1	6.3000e-003	5.7620e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.18	0.19
tblVehicleEF	LHD1	0.57	0.71
tblVehicleEF	LHD1	0.96	2.15
tblVehicleEF	LHD1	8.56	8.33
tblVehicleEF	LHD1	734.83	729.06

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

tblVehicleEF	LHD1	10.77	17.05
tblVehicleEF	LHD1	7.3900e-004	6.2200e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.44	0.46
tblVehicleEF	LHD1	0.26	0.38
tblVehicleEF	LHD1	8.8400e-004	6.8500e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.8520e-003	9.4090e-003
tblVehicleEF	LHD1	8.1460e-003	0.01
tblVehicleEF	LHD1	2.2600e-004	1.7400e-004
tblVehicleEF	LHD1	8.4600e-004	6.5600e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4630e-003	2.3520e-003
tblVehicleEF	LHD1	7.7480e-003	0.01
tblVehicleEF	LHD1	2.0700e-004	1.6000e-004
tblVehicleEF	LHD1	1.6310e-003	0.11
tblVehicleEF	LHD1	0.06	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	8.6800e-004	0.00
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.18	0.16
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD1	8.3000e-005	8.1000e-005
tblVehicleEF	LHD1	7.1690e-003	7.1170e-003
tblVehicleEF	LHD1	1.0700e-004	1.6900e-004
tblVehicleEF	LHD1	1.6310e-003	0.11
tblVehicleEF	LHD1	0.06	0.03

tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	8.6800e-004	0.00
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.18	0.16
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD1	4.5360e-003	4.8530e-003
tblVehicleEF	LHD1	6.4100e-003	5.7620e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.18	0.19
tblVehicleEF	LHD1	0.58	0.71
tblVehicleEF	LHD1	0.90	2.15
tblVehicleEF	LHD1	8.56	8.33
tblVehicleEF	LHD1	734.84	729.06
tblVehicleEF	LHD1	10.66	17.05
tblVehicleEF	LHD1	7.4200e-004	6.2200e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.42	0.46
tblVehicleEF	LHD1	0.24	0.38
tblVehicleEF	LHD1	8.8400e-004	6.8500e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.8520e-003	9.4090e-003
tblVehicleEF	LHD1	8.1460e-003	0.01
tblVehicleEF	LHD1	2.2600e-004	1.7400e-004
tblVehicleEF	LHD1	8.4600e-004	6.5600e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4630e-003	2.3520e-003
tblVehicleEF	LHD1	7.7480e-003	0.01

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

tblVehicleEF	LHD1	2.0700e-004	1.6000e-004
tblVehicleEF	LHD1	3.6370e-003	0.11
tblVehicleEF	LHD1	0.07	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7590e-003	0.00
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.18	0.16
tblVehicleEF	LHD1	0.05	0.10
tblVehicleEF	LHD1	8.3000e-005	8.1000e-005
tblVehicleEF	LHD1	7.1690e-003	7.1170e-003
tblVehicleEF	LHD1	1.0500e-004	1.6900e-004
tblVehicleEF	LHD1	3.6370e-003	0.11
tblVehicleEF	LHD1	0.07	0.03
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.7590e-003	0.00
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.18	0.16
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD1	4.5120e-003	4.8530e-003
tblVehicleEF	LHD1	6.2120e-003	5.7620e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	0.18	0.19
tblVehicleEF	LHD1	0.57	0.71
tblVehicleEF	LHD1	1.03	2.15
tblVehicleEF	LHD1	8.56	8.33
tblVehicleEF	LHD1	734.81	729.06
tblVehicleEF	LHD1	10.89	17.05
tblVehicleEF	LHD1	7.3700e-004	6.2200e-004
tblVehicleEF	LHD1	0.04	0.04

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

tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.45	0.46
tblVehicleEF	LHD1	0.28	0.38
tblVehicleEF	LHD1	8.8400e-004	6.8500e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.8520e-003	9.4090e-003
tblVehicleEF	LHD1	8.1460e-003	0.01
tblVehicleEF	LHD1	2.2600e-004	1.7400e-004
tblVehicleEF	LHD1	8.4600e-004	6.5600e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4630e-003	2.3520e-003
tblVehicleEF	LHD1	7.7480e-003	0.01
tblVehicleEF	LHD1	2.0700e-004	1.6000e-004
tblVehicleEF	LHD1	8.3300e-004	0.11
tblVehicleEF	LHD1	0.07	0.03
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	4.6300e-004	0.00
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.20	0.16
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD1	8.3000e-005	8.1000e-005
tblVehicleEF	LHD1	7.1690e-003	7.1170e-003
tblVehicleEF	LHD1	1.0800e-004	1.6900e-004
tblVehicleEF	LHD1	8.3300e-004	0.11
tblVehicleEF	LHD1	0.07	0.03
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	4.6300e-004	0.00
tblVehicleEF	LHD1	0.09	0.08

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

tblVehicleEF	LHD1	0.20	0.16
tblVehicleEF	LHD1	0.06	0.10
tblVehicleEF	LHD2	2.7350e-003	2.7890e-003
tblVehicleEF	LHD2	5.8140e-003	5.4840e-003
tblVehicleEF	LHD2	6.0230e-003	0.01
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.52	0.46
tblVehicleEF	LHD2	0.53	1.16
tblVehicleEF	LHD2	13.44	13.54
tblVehicleEF	LHD2	713.12	776.37
tblVehicleEF	LHD2	6.94	9.14
tblVehicleEF	LHD2	1.7040e-003	1.6800e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.54	0.66
tblVehicleEF	LHD2	0.15	0.21
tblVehicleEF	LHD2	1.4770e-003	1.4220e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.1400e-004	7.4000e-005
tblVehicleEF	LHD2	1.4140e-003	1.3600e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7030e-003	2.6620e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0400e-004	6.8000e-005
tblVehicleEF	LHD2	7.8300e-004	0.06
tblVehicleEF	LHD2	0.03	0.01

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

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	4.3200e-004	0.00
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	1.2800e-004	1.3000e-004
tblVehicleEF	LHD2	6.8810e-003	7.4740e-003
tblVehicleEF	LHD2	6.9000e-005	9.0000e-005
tblVehicleEF	LHD2	7.8300e-004	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	4.3200e-004	0.00
tblVehicleEF	LHD2	0.12	0.11
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	2.7430e-003	2.7890e-003
tblVehicleEF	LHD2	5.8580e-003	5.4840e-003
tblVehicleEF	LHD2	5.6970e-003	0.01
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.53	0.46
tblVehicleEF	LHD2	0.49	1.16
tblVehicleEF	LHD2	13.44	13.54
tblVehicleEF	LHD2	713.12	776.37
tblVehicleEF	LHD2	6.88	9.14
tblVehicleEF	LHD2	1.7060e-003	1.6800e-003
tblVehicleEF	LHD2	0.06	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.52	0.66

tblVehicleEF	LHD2	0.14	0.21
tblVehicleEF	LHD2	1.4770e-003	1.4220e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.1400e-004	7.4000e-005
tblVehicleEF	LHD2	1.4140e-003	1.3600e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7030e-003	2.6620e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0400e-004	6.8000e-005
tblVehicleEF	LHD2	1.7440e-003	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.7600e-004	0.00
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	1.2800e-004	1.3000e-004
tblVehicleEF	LHD2	6.8810e-003	7.4740e-003
tblVehicleEF	LHD2	6.8000e-005	9.0000e-005
tblVehicleEF	LHD2	1.7440e-003	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	8.7600e-004	0.00
tblVehicleEF	LHD2	0.12	0.11
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	2.7290e-003	2.7890e-003

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

tblVehicleEF	LHD2	5.7780e-003	5.4840e-003
tblVehicleEF	LHD2	6.3030e-003	0.01
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.52	0.46
tblVehicleEF	LHD2	0.56	1.16
tblVehicleEF	LHD2	13.44	13.54
tblVehicleEF	LHD2	713.11	776.37
tblVehicleEF	LHD2	7.00	9.14
tblVehicleEF	LHD2	1.7030e-003	1.6800e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.55	0.66
tblVehicleEF	LHD2	0.15	0.21
tblVehicleEF	LHD2	1.4770e-003	1.4220e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.1400e-004	7.4000e-005
tblVehicleEF	LHD2	1.4140e-003	1.3600e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7030e-003	2.6620e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0400e-004	6.8000e-005
tblVehicleEF	LHD2	4.0700e-004	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	2.3300e-004	0.00
tblVehicleEF	LHD2	0.10	0.10

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

tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	1.2800e-004	1.3000e-004
tblVehicleEF	LHD2	6.8810e-003	7.4740e-003
tblVehicleEF	LHD2	6.9000e-005	9.0000e-005
tblVehicleEF	LHD2	4.0700e-004	0.06
tblVehicleEF	LHD2	0.03	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	2.3300e-004	0.00
tblVehicleEF	LHD2	0.12	0.11
tblVehicleEF	LHD2	0.08	0.08
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	MCY	0.32	0.15
tblVehicleEF	MCY	0.25	0.17
tblVehicleEF	MCY	17.99	11.71
tblVehicleEF	MCY	9.14	7.90
tblVehicleEF	MCY	209.89	186.47
tblVehicleEF	MCY	59.90	45.31
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	7.0870e-003
tblVehicleEF	MCY	1.14	0.54
tblVehicleEF	MCY	0.27	0.12
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0840e-003	1.9590e-003
tblVehicleEF	MCY	2.9100e-003	3.4510e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9450e-003	1.8300e-003
tblVehicleEF	MCY	2.7280e-003	3.2360e-003
tblVehicleEF	MCY	0.90	3.85

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

tblVehicleEF	MCY	0.65	3.56
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.15	0.96
tblVehicleEF	MCY	0.49	3.78
tblVehicleEF	MCY	1.90	1.23
tblVehicleEF	MCY	2.0770e-003	1.8430e-003
tblVehicleEF	MCY	5.9300e-004	4.4800e-004
tblVehicleEF	MCY	0.90	0.08
tblVehicleEF	MCY	0.65	3.56
tblVehicleEF	MCY	0.48	0.00
tblVehicleEF	MCY	2.69	1.17
tblVehicleEF	MCY	0.49	3.78
tblVehicleEF	MCY	2.07	1.34
tblVehicleEF	MCY	0.31	0.15
tblVehicleEF	MCY	0.21	0.17
tblVehicleEF	MCY	17.40	11.71
tblVehicleEF	MCY	7.92	7.90
tblVehicleEF	MCY	208.72	186.47
tblVehicleEF	MCY	56.94	45.31
tblVehicleEF	MCY	0.06	0.04
tblVehicleEF	MCY	0.01	7.0870e-003
tblVehicleEF	MCY	1.01	0.54
tblVehicleEF	MCY	0.25	0.12
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0840e-003	1.9590e-003
tblVehicleEF	MCY	2.9100e-003	3.4510e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9450e-003	1.8300e-003
tblVehicleEF	MCY	2.7280e-003	3.2360e-003

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

tblVehicleEF	MCY	2.30	3.85
tblVehicleEF	MCY	0.88	3.56
tblVehicleEF	MCY	1.29	0.00
tblVehicleEF	MCY	2.09	0.96
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	1.59	1.23
tblVehicleEF	MCY	2.0650e-003	1.8430e-003
tblVehicleEF	MCY	5.6300e-004	4.4800e-004
tblVehicleEF	MCY	2.30	0.08
tblVehicleEF	MCY	0.88	3.56
tblVehicleEF	MCY	1.29	0.00
tblVehicleEF	MCY	2.61	1.17
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	1.74	1.34
tblVehicleEF	MCY	0.33	0.15
tblVehicleEF	MCY	0.29	0.17
tblVehicleEF	MCY	19.31	11.71
tblVehicleEF	MCY	10.49	7.90
tblVehicleEF	MCY	212.26	186.47
tblVehicleEF	MCY	63.05	45.31
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	7.0870e-003
tblVehicleEF	MCY	1.22	0.54
tblVehicleEF	MCY	0.29	0.12
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	2.0840e-003	1.9590e-003
tblVehicleEF	MCY	2.9100e-003	3.4510e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9450e-003	1.8300e-003

tblVehicleEF	MCY	2.7280e-003	3.2360e-003
tblVehicleEF	MCY	0.39	3.85
tblVehicleEF	MCY	0.76	3.56
tblVehicleEF	MCY	0.19	0.00
tblVehicleEF	MCY	2.23	0.96
tblVehicleEF	MCY	0.60	3.78
tblVehicleEF	MCY	2.20	1.23
tblVehicleEF	MCY	2.1000e-003	1.8430e-003
tblVehicleEF	MCY	6.2400e-004	4.4800e-004
tblVehicleEF	MCY	0.39	0.08
tblVehicleEF	MCY	0.76	3.56
tblVehicleEF	MCY	0.19	0.00
tblVehicleEF	MCY	2.78	1.17
tblVehicleEF	MCY	0.60	3.78
tblVehicleEF	MCY	2.40	1.34
tblVehicleEF	MDV	2.3750e-003	2.6750e-003
tblVehicleEF	MDV	0.05	0.08
tblVehicleEF	MDV	0.63	0.76
tblVehicleEF	MDV	2.55	3.20
tblVehicleEF	MDV	327.97	384.38
tblVehicleEF	MDV	69.67	97.04
tblVehicleEF	MDV	6.1060e-003	6.4690e-003
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.05	0.07
tblVehicleEF	MDV	0.22	0.32
tblVehicleEF	MDV	0.04	8.9330e-003
tblVehicleEF	MDV	1.2330e-003	1.1780e-003
tblVehicleEF	MDV	1.5830e-003	1.8910e-003
tblVehicleEF	MDV	0.02	3.1260e-003

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

tblVehicleEF	MDV	1.1370e-003	1.0850e-003
tblVehicleEF	MDV	1.4560e-003	1.7380e-003
tblVehicleEF	MDV	0.06	0.31
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	9.5210e-003	0.01
tblVehicleEF	MDV	0.06	0.24
tblVehicleEF	MDV	0.26	0.37
tblVehicleEF	MDV	3.2410e-003	3.7980e-003
tblVehicleEF	MDV	6.8900e-004	9.5900e-004
tblVehicleEF	MDV	0.06	0.31
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.06	0.00
tblVehicleEF	MDV	0.01	0.02
tblVehicleEF	MDV	0.06	0.24
tblVehicleEF	MDV	0.28	0.41
tblVehicleEF	MDV	2.6770e-003	2.6750e-003
tblVehicleEF	MDV	0.05	0.08
tblVehicleEF	MDV	0.74	0.76
tblVehicleEF	MDV	2.01	3.20
tblVehicleEF	MDV	343.91	384.38
tblVehicleEF	MDV	68.66	97.04
tblVehicleEF	MDV	5.7810e-003	6.4690e-003
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.04	0.07
tblVehicleEF	MDV	0.20	0.32
tblVehicleEF	MDV	0.04	8.9330e-003
tblVehicleEF	MDV	1.2330e-003	1.1780e-003
tblVehicleEF	MDV	1.5830e-003	1.8910e-003

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

tblVehicleEF	MDV	0.02	3.1260e-003
tblVehicleEF	MDV	1.1370e-003	1.0850e-003
tblVehicleEF	MDV	1.4560e-003	1.7380e-003
tblVehicleEF	MDV	0.14	0.31
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.12	0.00
tblVehicleEF	MDV	0.01	0.01
tblVehicleEF	MDV	0.05	0.24
tblVehicleEF	MDV	0.21	0.37
tblVehicleEF	MDV	3.3990e-003	3.7980e-003
tblVehicleEF	MDV	6.7900e-004	9.5900e-004
tblVehicleEF	MDV	0.14	0.31
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.12	0.00
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.05	0.24
tblVehicleEF	MDV	0.23	0.41
tblVehicleEF	MDV	2.2830e-003	2.6750e-003
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.62	0.76
tblVehicleEF	MDV	2.99	3.20
tblVehicleEF	MDV	325.36	384.38
tblVehicleEF	MDV	70.47	97.04
tblVehicleEF	MDV	6.4040e-003	6.4690e-003
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.05	0.07
tblVehicleEF	MDV	0.24	0.32
tblVehicleEF	MDV	0.04	8.9330e-003
tblVehicleEF	MDV	1.2330e-003	1.1780e-003

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

tblVehicleEF	MDV	1.5830e-003	1.8910e-003
tblVehicleEF	MDV	0.02	3.1260e-003
tblVehicleEF	MDV	1.1370e-003	1.0850e-003
tblVehicleEF	MDV	1.4560e-003	1.7380e-003
tblVehicleEF	MDV	0.03	0.31
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.03	0.00
tblVehicleEF	MDV	9.2720e-003	0.01
tblVehicleEF	MDV	0.07	0.24
tblVehicleEF	MDV	0.29	0.37
tblVehicleEF	MDV	3.2150e-003	3.7980e-003
tblVehicleEF	MDV	6.9700e-004	9.5900e-004
tblVehicleEF	MDV	0.03	0.31
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.03	0.00
tblVehicleEF	MDV	0.01	0.02
tblVehicleEF	MDV	0.07	0.24
tblVehicleEF	MDV	0.32	0.41
tblVehicleEF	MH	6.9300e-003	8.8150e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.58	0.77
tblVehicleEF	MH	1.80	2.17
tblVehicleEF	MH	1,418.06	1,669.13
tblVehicleEF	MH	16.70	21.21
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.17	1.40
tblVehicleEF	MH	0.24	0.30
tblVehicleEF	MH	0.13	0.04

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

tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.3200e-004	2.6700e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2900e-003	3.3210e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.1400e-004	2.4600e-004
tblVehicleEF	MH	0.47	26.64
tblVehicleEF	MH	0.04	6.73
tblVehicleEF	MH	0.18	0.00
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	9.6720e-003	0.16
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.6500e-004	2.1000e-004
tblVehicleEF	MH	0.47	26.64
tblVehicleEF	MH	0.04	6.73
tblVehicleEF	MH	0.18	0.00
tblVehicleEF	MH	0.06	0.08
tblVehicleEF	MH	9.6720e-003	0.16
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MH	7.1210e-003	8.8150e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.60	0.77
tblVehicleEF	MH	1.64	2.17
tblVehicleEF	MH	1,418.10	1,669.13
tblVehicleEF	MH	16.43	21.21
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	0.03	0.03

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

tblVehicleEF	MH	1.11	1.40
tblVehicleEF	MH	0.22	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.3200e-004	2.6700e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2900e-003	3.3210e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.1400e-004	2.4600e-004
tblVehicleEF	MH	1.05	26.64
tblVehicleEF	MH	0.04	6.73
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	9.4280e-003	0.16
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.6300e-004	2.1000e-004
tblVehicleEF	MH	1.05	26.64
tblVehicleEF	MH	0.04	6.73
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.06	0.08
tblVehicleEF	MH	9.4280e-003	0.16
tblVehicleEF	MH	0.08	0.11
tblVehicleEF	MH	6.7830e-003	8.8150e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.56	0.77
tblVehicleEF	MH	1.94	2.17
tblVehicleEF	MH	1,418.04	1,669.13

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

tblVehicleEF	MH	16.94	21.21
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.20	1.40
tblVehicleEF	MH	0.25	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.3200e-004	2.6700e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2900e-003	3.3210e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.1400e-004	2.4600e-004
tblVehicleEF	MH	0.25	26.64
tblVehicleEF	MH	0.05	6.73
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	0.01	0.16
tblVehicleEF	MH	0.09	0.10
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.6800e-004	2.1000e-004
tblVehicleEF	MH	0.25	26.64
tblVehicleEF	MH	0.05	6.73
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.06	0.08
tblVehicleEF	MH	0.01	0.16
tblVehicleEF	MH	0.09	0.11
tblVehicleEF	MHD	3.6950e-003	0.01
tblVehicleEF	MHD	1.2530e-003	9.5450e-003

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

tblVehicleEF	MHD	8.5300e-003	7.5570e-003
tblVehicleEF	MHD	0.40	0.66
tblVehicleEF	MHD	0.18	0.22
tblVehicleEF	MHD	0.94	0.88
tblVehicleEF	MHD	68.38	154.32
tblVehicleEF	MHD	1,034.78	1,175.45
tblVehicleEF	MHD	8.72	7.64
tblVehicleEF	MHD	9.8750e-003	0.02
tblVehicleEF	MHD	0.13	0.15
tblVehicleEF	MHD	7.4170e-003	5.5230e-003
tblVehicleEF	MHD	0.37	0.81
tblVehicleEF	MHD	1.44	0.81
tblVehicleEF	MHD	1.70	1.37
tblVehicleEF	MHD	2.4000e-004	1.1860e-003
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	7.0420e-003	8.3150e-003
tblVehicleEF	MHD	1.1100e-004	9.3000e-005
tblVehicleEF	MHD	2.3000e-004	1.1340e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.7300e-003	7.9470e-003
tblVehicleEF	MHD	1.0200e-004	8.5000e-005
tblVehicleEF	MHD	3.1800e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.7500e-004	0.00
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	6.4900e-004	1.4270e-003

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

tblVehicleEF	MHD	9.8700e-003	0.01
tblVehicleEF	MHD	8.6000e-005	7.6000e-005
tblVehicleEF	MHD	3.1800e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	1.7500e-004	0.00
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	3.4830e-003	0.01
tblVehicleEF	MHD	1.2830e-003	9.5450e-003
tblVehicleEF	MHD	8.0480e-003	7.5570e-003
tblVehicleEF	MHD	0.33	0.66
tblVehicleEF	MHD	0.18	0.22
tblVehicleEF	MHD	0.86	0.88
tblVehicleEF	MHD	68.21	154.32
tblVehicleEF	MHD	1,034.78	1,175.45
tblVehicleEF	MHD	8.59	7.64
tblVehicleEF	MHD	9.8080e-003	0.02
tblVehicleEF	MHD	0.13	0.15
tblVehicleEF	MHD	7.1120e-003	5.5230e-003
tblVehicleEF	MHD	0.36	0.81
tblVehicleEF	MHD	1.38	0.81
tblVehicleEF	MHD	1.69	1.37
tblVehicleEF	MHD	2.0600e-004	1.1860e-003
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	7.0420e-003	8.3150e-003
tblVehicleEF	MHD	1.1100e-004	9.3000e-005
tblVehicleEF	MHD	1.9700e-004	1.1340e-003

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

tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.7300e-003	7.9470e-003
tblVehicleEF	MHD	1.0200e-004	8.5000e-005
tblVehicleEF	MHD	7.2000e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	3.6600e-004	0.00
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	6.4700e-004	1.4270e-003
tblVehicleEF	MHD	9.8700e-003	0.01
tblVehicleEF	MHD	8.5000e-005	7.6000e-005
tblVehicleEF	MHD	7.2000e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	3.6600e-004	0.00
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.04	0.04
tblVehicleEF	MHD	3.9020e-003	0.01
tblVehicleEF	MHD	1.2290e-003	9.5450e-003
tblVehicleEF	MHD	8.9220e-003	7.5570e-003
tblVehicleEF	MHD	0.46	0.66
tblVehicleEF	MHD	0.18	0.22
tblVehicleEF	MHD	1.01	0.88
tblVehicleEF	MHD	68.72	154.32
tblVehicleEF	MHD	1,034.77	1,175.45
tblVehicleEF	MHD	8.84	7.64

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

tblVehicleEF	MHD	9.9720e-003	0.02
tblVehicleEF	MHD	0.13	0.15
tblVehicleEF	MHD	7.7050e-003	5.5230e-003
tblVehicleEF	MHD	0.39	0.81
tblVehicleEF	MHD	1.46	0.81
tblVehicleEF	MHD	1.70	1.37
tblVehicleEF	MHD	2.8800e-004	1.1860e-003
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	7.0420e-003	8.3150e-003
tblVehicleEF	MHD	1.1100e-004	9.3000e-005
tblVehicleEF	MHD	2.7600e-004	1.1340e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.7300e-003	7.9470e-003
tblVehicleEF	MHD	1.0200e-004	8.5000e-005
tblVehicleEF	MHD	1.6200e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	9.2000e-005	0.00
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	MHD	6.5200e-004	1.4270e-003
tblVehicleEF	MHD	9.8700e-003	0.01
tblVehicleEF	MHD	8.8000e-005	7.6000e-005
tblVehicleEF	MHD	1.6200e-004	0.02
tblVehicleEF	MHD	0.02	4.6660e-003
tblVehicleEF	MHD	0.03	0.04
tblVehicleEF	MHD	9.2000e-005	0.00
tblVehicleEF	MHD	0.02	0.04

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

tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	OBUS	7.0730e-003	7.5660e-003
tblVehicleEF	OBUS	2.7540e-003	0.01
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.62	0.54
tblVehicleEF	OBUS	0.33	0.37
tblVehicleEF	OBUS	1.69	1.70
tblVehicleEF	OBUS	96.38	89.08
tblVehicleEF	OBUS	1,261.24	1,320.54
tblVehicleEF	OBUS	14.17	13.66
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.13	0.16
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.41	0.36
tblVehicleEF	OBUS	1.44	0.90
tblVehicleEF	OBUS	1.12	1.00
tblVehicleEF	OBUS	1.3500e-004	3.7200e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.6000e-003	0.01
tblVehicleEF	OBUS	1.5100e-004	1.2700e-004
tblVehicleEF	OBUS	1.3000e-004	3.5600e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.2580e-003	0.01
tblVehicleEF	OBUS	1.3900e-004	1.1700e-004
tblVehicleEF	OBUS	1.0730e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8500e-004	0.00

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

tblVehicleEF	OBUS	0.02	0.04
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	9.1500e-004	8.4100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.4000e-004	1.3500e-004
tblVehicleEF	OBUS	1.0730e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8500e-004	0.00
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.09	0.09
tblVehicleEF	OBUS	7.1720e-003	7.5660e-003
tblVehicleEF	OBUS	2.8370e-003	0.01
tblVehicleEF	OBUS	0.01	0.02
tblVehicleEF	OBUS	0.62	0.54
tblVehicleEF	OBUS	0.33	0.37
tblVehicleEF	OBUS	1.54	1.70
tblVehicleEF	OBUS	95.21	89.08
tblVehicleEF	OBUS	1,261.26	1,320.54
tblVehicleEF	OBUS	13.92	13.66
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.13	0.16
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.39	0.36
tblVehicleEF	OBUS	1.38	0.90
tblVehicleEF	OBUS	1.11	1.00
tblVehicleEF	OBUS	1.2000e-004	3.7200e-004

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

tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.6000e-003	0.01
tblVehicleEF	OBUS	1.5100e-004	1.2700e-004
tblVehicleEF	OBUS	1.1500e-004	3.5600e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.2580e-003	0.01
tblVehicleEF	OBUS	1.3900e-004	1.1700e-004
tblVehicleEF	OBUS	2.3400e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	9.7700e-004	0.00
tblVehicleEF	OBUS	0.02	0.04
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	OBUS	9.0400e-004	8.4100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.3800e-004	1.3500e-004
tblVehicleEF	OBUS	2.3400e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	9.7700e-004	0.00
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.08	0.09
tblVehicleEF	OBUS	6.9500e-003	7.5660e-003
tblVehicleEF	OBUS	2.6900e-003	0.01
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.63	0.54
tblVehicleEF	OBUS	0.32	0.37

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

tblVehicleEF	OBUS	1.82	1.70
tblVehicleEF	OBUS	98.01	89.08
tblVehicleEF	OBUS	1,261.23	1,320.54
tblVehicleEF	OBUS	14.40	13.66
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.13	0.16
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.44	0.36
tblVehicleEF	OBUS	1.47	0.90
tblVehicleEF	OBUS	1.13	1.00
tblVehicleEF	OBUS	1.5600e-004	3.7200e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.6000e-003	0.01
tblVehicleEF	OBUS	1.5100e-004	1.2700e-004
tblVehicleEF	OBUS	1.4900e-004	3.5600e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.2580e-003	0.01
tblVehicleEF	OBUS	1.3900e-004	1.1700e-004
tblVehicleEF	OBUS	5.9400e-004	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	2.8100e-004	0.00
tblVehicleEF	OBUS	0.02	0.04
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.09	0.08
tblVehicleEF	OBUS	9.3100e-004	8.4100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.4200e-004	1.3500e-004
tblVehicleEF	OBUS	5.9400e-004	0.07

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

tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	2.8100e-004	0.00
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.09	0.09
tblVehicleEF	SBUS	0.06	0.08
tblVehicleEF	SBUS	5.1390e-003	0.09
tblVehicleEF	SBUS	5.5510e-003	5.0470e-003
tblVehicleEF	SBUS	2.58	1.76
tblVehicleEF	SBUS	0.42	0.81
tblVehicleEF	SBUS	0.77	0.68
tblVehicleEF	SBUS	343.48	187.75
tblVehicleEF	SBUS	1,012.23	995.30
tblVehicleEF	SBUS	4.55	3.88
tblVehicleEF	SBUS	0.05	0.02
tblVehicleEF	SBUS	0.13	0.12
tblVehicleEF	SBUS	5.5840e-003	4.6260e-003
tblVehicleEF	SBUS	3.12	1.26
tblVehicleEF	SBUS	3.92	2.08
tblVehicleEF	SBUS	1.00	0.51
tblVehicleEF	SBUS	2.7970e-003	1.0210e-003
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	5.7000e-005	4.3000e-005
tblVehicleEF	SBUS	2.6760e-003	9.7600e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6950e-003	2.6290e-003

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

tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	5.3000e-005	4.0000e-005
tblVehicleEF	SBUS	6.7700e-004	0.03
tblVehicleEF	SBUS	6.5220e-003	8.5010e-003
tblVehicleEF	SBUS	0.29	0.19
tblVehicleEF	SBUS	3.1500e-004	0.00
tblVehicleEF	SBUS	0.07	0.05
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.2730e-003	1.7010e-003
tblVehicleEF	SBUS	9.6760e-003	9.2440e-003
tblVehicleEF	SBUS	4.5000e-005	3.8000e-005
tblVehicleEF	SBUS	6.7700e-004	0.03
tblVehicleEF	SBUS	6.5220e-003	8.5010e-003
tblVehicleEF	SBUS	0.41	0.31
tblVehicleEF	SBUS	3.1500e-004	0.00
tblVehicleEF	SBUS	0.09	0.15
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.06	0.08
tblVehicleEF	SBUS	5.2150e-003	0.09
tblVehicleEF	SBUS	4.6670e-003	5.0470e-003
tblVehicleEF	SBUS	2.55	1.76
tblVehicleEF	SBUS	0.43	0.81
tblVehicleEF	SBUS	0.57	0.68
tblVehicleEF	SBUS	350.78	187.75
tblVehicleEF	SBUS	1,012.25	995.30
tblVehicleEF	SBUS	4.21	3.88
tblVehicleEF	SBUS	0.05	0.02

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

tblVehicleEF	SBUS	0.13	0.12
tblVehicleEF	SBUS	5.3140e-003	4.6260e-003
tblVehicleEF	SBUS	3.18	1.26
tblVehicleEF	SBUS	3.76	2.08
tblVehicleEF	SBUS	1.00	0.51
tblVehicleEF	SBUS	2.3670e-003	1.0210e-003
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	5.7000e-005	4.3000e-005
tblVehicleEF	SBUS	2.2640e-003	9.7600e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6950e-003	2.6290e-003
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	5.3000e-005	4.0000e-005
tblVehicleEF	SBUS	1.4710e-003	0.03
tblVehicleEF	SBUS	6.6920e-003	8.5010e-003
tblVehicleEF	SBUS	0.29	0.19
tblVehicleEF	SBUS	6.3300e-004	0.00
tblVehicleEF	SBUS	0.07	0.05
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.3420e-003	1.7010e-003
tblVehicleEF	SBUS	9.6760e-003	9.2440e-003
tblVehicleEF	SBUS	4.2000e-005	3.8000e-005
tblVehicleEF	SBUS	1.4710e-003	0.03
tblVehicleEF	SBUS	6.6920e-003	8.5010e-003
tblVehicleEF	SBUS	0.41	0.31
tblVehicleEF	SBUS	6.3300e-004	0.00

tblVehicleEF	SBUS	0.09	0.15
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	0.06	0.08
tblVehicleEF	SBUS	5.0770e-003	0.09
tblVehicleEF	SBUS	6.3440e-003	5.0470e-003
tblVehicleEF	SBUS	2.63	1.76
tblVehicleEF	SBUS	0.42	0.81
tblVehicleEF	SBUS	0.98	0.68
tblVehicleEF	SBUS	333.40	187.75
tblVehicleEF	SBUS	1,012.22	995.30
tblVehicleEF	SBUS	4.89	3.88
tblVehicleEF	SBUS	0.04	0.02
tblVehicleEF	SBUS	0.13	0.12
tblVehicleEF	SBUS	5.8330e-003	4.6260e-003
tblVehicleEF	SBUS	3.04	1.26
tblVehicleEF	SBUS	3.99	2.08
tblVehicleEF	SBUS	1.01	0.51
tblVehicleEF	SBUS	3.3910e-003	1.0210e-003
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	5.7000e-005	4.3000e-005
tblVehicleEF	SBUS	3.2450e-003	9.7600e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6950e-003	2.6290e-003
tblVehicleEF	SBUS	0.02	0.01
tblVehicleEF	SBUS	5.3000e-005	4.0000e-005
tblVehicleEF	SBUS	3.7800e-004	0.03

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

tblVehicleEF	SBUS	6.5940e-003	8.5010e-003
tblVehicleEF	SBUS	0.29	0.19
tblVehicleEF	SBUS	1.8400e-004	0.00
tblVehicleEF	SBUS	0.07	0.05
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	SBUS	3.1770e-003	1.7010e-003
tblVehicleEF	SBUS	9.6760e-003	9.2440e-003
tblVehicleEF	SBUS	4.8000e-005	3.8000e-005
tblVehicleEF	SBUS	3.7800e-004	0.03
tblVehicleEF	SBUS	6.5940e-003	8.5010e-003
tblVehicleEF	SBUS	0.41	0.31
tblVehicleEF	SBUS	1.8400e-004	0.00
tblVehicleEF	SBUS	0.09	0.15
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	UBUS	1.74	0.53
tblVehicleEF	UBUS	1.9120e-003	3.7050e-003
tblVehicleEF	UBUS	13.20	6.31
tblVehicleEF	UBUS	0.14	0.48
tblVehicleEF	UBUS	1,654.13	1,063.59
tblVehicleEF	UBUS	1.40	3.13
tblVehicleEF	UBUS	0.28	0.16
tblVehicleEF	UBUS	1.1770e-003	5.9640e-003
tblVehicleEF	UBUS	0.71	0.29
tblVehicleEF	UBUS	0.01	0.04
tblVehicleEF	UBUS	0.07	0.13
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	5.1700e-003	5.5380e-003

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

tblVehicleEF	UBUS	1.5000e-005	1.2000e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.9450e-003	5.2950e-003
tblVehicleEF	UBUS	1.4000e-005	1.1000e-005
tblVehicleEF	UBUS	3.2000e-005	0.02
tblVehicleEF	UBUS	3.3900e-004	4.7600e-003
tblVehicleEF	UBUS	1.6000e-005	0.00
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	6.9000e-005	0.01
tblVehicleEF	UBUS	8.0430e-003	0.01
tblVehicleEF	UBUS	0.01	8.5740e-003
tblVehicleEF	UBUS	1.4000e-005	3.1000e-005
tblVehicleEF	UBUS	3.2000e-005	0.02
tblVehicleEF	UBUS	3.3900e-004	4.7600e-003
tblVehicleEF	UBUS	1.6000e-005	0.00
tblVehicleEF	UBUS	1.78	0.60
tblVehicleEF	UBUS	6.9000e-005	0.01
tblVehicleEF	UBUS	8.8060e-003	0.01
tblVehicleEF	UBUS	1.74	0.53
tblVehicleEF	UBUS	1.6960e-003	3.7050e-003
tblVehicleEF	UBUS	13.20	6.31
tblVehicleEF	UBUS	0.11	0.48
tblVehicleEF	UBUS	1,654.13	1,063.59
tblVehicleEF	UBUS	1.35	3.13
tblVehicleEF	UBUS	0.28	0.16
tblVehicleEF	UBUS	1.1350e-003	5.9640e-003
tblVehicleEF	UBUS	0.71	0.29
tblVehicleEF	UBUS	0.01	0.04

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

tblVehicleEF	UBUS	0.07	0.13
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	5.1700e-003	5.5380e-003
tblVehicleEF	UBUS	1.5000e-005	1.2000e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.9450e-003	5.2950e-003
tblVehicleEF	UBUS	1.4000e-005	1.1000e-005
tblVehicleEF	UBUS	7.8000e-005	0.02
tblVehicleEF	UBUS	4.2200e-004	4.7600e-003
tblVehicleEF	UBUS	4.2000e-005	0.00
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	6.2000e-005	0.01
tblVehicleEF	UBUS	7.1170e-003	0.01
tblVehicleEF	UBUS	0.01	8.5740e-003
tblVehicleEF	UBUS	1.3000e-005	3.1000e-005
tblVehicleEF	UBUS	7.8000e-005	0.02
tblVehicleEF	UBUS	4.2200e-004	4.7600e-003
tblVehicleEF	UBUS	4.2000e-005	0.00
tblVehicleEF	UBUS	1.78	0.60
tblVehicleEF	UBUS	6.2000e-005	0.01
tblVehicleEF	UBUS	7.7920e-003	0.01
tblVehicleEF	UBUS	1.74	0.53
tblVehicleEF	UBUS	2.0920e-003	3.7050e-003
tblVehicleEF	UBUS	13.20	6.31
tblVehicleEF	UBUS	0.16	0.48
tblVehicleEF	UBUS	1,654.13	1,063.59
tblVehicleEF	UBUS	1.44	3.13
tblVehicleEF	UBUS	0.28	0.16

tblVehicleEF	UBUS	1.2190e-003	5.9640e-003
tblVehicleEF	UBUS	0.71	0.29
tblVehicleEF	UBUS	0.01	0.04
tblVehicleEF	UBUS	0.07	0.13
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	5.1700e-003	5.5380e-003
tblVehicleEF	UBUS	1.5000e-005	1.2000e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.9450e-003	5.2950e-003
tblVehicleEF	UBUS	1.4000e-005	1.1000e-005
tblVehicleEF	UBUS	1.7000e-005	0.02
tblVehicleEF	UBUS	3.6700e-004	4.7600e-003
tblVehicleEF	UBUS	8.0000e-006	0.00
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	8.6000e-005	0.01
tblVehicleEF	UBUS	8.8250e-003	0.01
tblVehicleEF	UBUS	0.01	8.5740e-003
tblVehicleEF	UBUS	1.4000e-005	3.1000e-005
tblVehicleEF	UBUS	1.7000e-005	0.02
tblVehicleEF	UBUS	3.6700e-004	4.7600e-003
tblVehicleEF	UBUS	8.0000e-006	0.00
tblVehicleEF	UBUS	1.78	0.60
tblVehicleEF	UBUS	8.6000e-005	0.01
tblVehicleEF	UBUS	9.6620e-003	0.01
tblVehicleTrips	ST_TR	4.91	4.86
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	8.14	4.86
tblVehicleTrips	ST_TR	122.40	91.56

tblVehicleTrips	ST_TR	8.57	7.38
tblVehicleTrips	ST_TR	9.54	7.02
tblVehicleTrips	SU_TR	4.09	4.05
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	6.28	4.05
tblVehicleTrips	SU_TR	142.64	106.70
tblVehicleTrips	SU_TR	1.42	1.22
tblVehicleTrips	SU_TR	8.55	6.30
tblVehicleTrips	WD_TR	5.44	5.39
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	7.32	5.39
tblVehicleTrips	WD_TR	112.18	83.92
tblVehicleTrips	WD_TR	34.80	29.98
tblVehicleTrips	WD_TR	9.44	6.95
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00
tblWoodstoves	WoodstoveWoodMass	956.80	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	4.6355	37.6474	42.0913	0.1005	20.4646	1.5771	21.7313	10.2416	1.4509	11.4070	0.0000	9,988.2490	9,988.2490	2.2086	0.2219	10,075.3244
2024	4.3495	15.3590	40.3201	0.0981	9.2745	0.6555	9.9299	2.4600	0.6157	3.0757	0.0000	9,751.3332	9,751.3332	0.8136	0.2070	9,833.3432
2025	4.0834	14.1967	38.7480	0.0958	9.2745	0.5678	9.8423	2.4600	0.5333	2.9934	0.0000	9,514.1528	9,514.1528	0.7914	0.1941	9,591.7896
2026	135.6868	14.0440	37.5070	0.0937	9.2745	0.5659	9.8404	2.4600	0.5316	2.9916	0.0000	9,303.4912	9,303.4912	0.7753	0.1836	9,377.5919
Maximum	**135.6868**	**37.6474**	**42.0913**	**0.1005**	**20.4646**	**1.5771**	**21.7313**	**10.2416**	**1.4509**	**11.4070**	**0.0000**	**9,988.2490**	**9,988.2490**	**2.2086**	**0.2219**	**10,075.3244**

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)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.5962	22.9494	43.7210	0.1005	20.4646	0.1289	20.5274	10.2416	0.1254	10.3043	0.0000	9,988.2490	9,988.2490	2.2086	0.2219	10,075.3244
2024	3.4114	12.8274	42.0271	0.0981	9.2745	0.1268	9.4012	2.4600	0.1234	2.5834	0.0000	9,751.3332	9,751.3332	0.8136	0.2070	9,833.3432
2025	3.2495	12.6392	40.5371	0.0958	9.2745	0.1249	9.3994	2.4600	0.1217	2.5817	0.0000	9,514.1528	9,514.1528	0.7914	0.1941	9,591.7896
2026	134.9894	12.4865	39.2961	0.0937	9.2745	0.1230	9.3974	2.4600	0.1199	2.5799	0.0000	9,303.4912	9,303.4912	0.7753	0.1836	9,377.5919
Maximum	**134.9894**	**22.9494**	**43.7210**	**0.1005**	**20.4646**	**0.1289**	**20.5274**	**10.2416**	**0.1254**	**10.3043**	**0.0000**	**9,988.2490**	**9,988.2490**	**2.2086**	**0.2219**	**10,075.3244**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**2.36**	**25.04**	**-4.36**	**0.00**	**0.00**	**85.04**	**5.10**	**0.00**	**84.34**	**11.82**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	33.7523	0.8094	70.3230	3.7200e-003		0.3897	0.3897		0.3897	0.3897	0.0000	126.8354	126.8354	0.1224	0.0000	129.8951
Energy	0.3144	2.8585	2.4011	0.0172		0.2172	0.2172		0.2172	0.2172		3,430.1531	3,430.1531	0.0657	0.0629	3,450.5368
Mobile	60.7522	34.2180	346.0777	0.7488	76.8583	0.4961	77.3544	19.1438	0.4621	19.6059		76,204.4188	76,204.4188	4.4590	3.6110	77,391.9724
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**94.8188**	**37.8858**	**418.8018**	**0.7697**	**76.8583**	**1.1030**	**77.9613**	**19.1438**	**1.0690**	**20.2129**	**0.0000**	**79,761.4073**	**79,761.4073**	**4.6471**	**3.6739**	**80,972.4043**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	33.7523	0.8094	70.3230	3.7200e-003		0.3897	0.3897		0.3897	0.3897	0.0000	126.8354	126.8354	0.1224	0.0000	129.8951
Energy	0.3144	2.8585	2.4011	0.0172		0.2172	0.2172		0.2172	0.2172		3,430.1531	3,430.1531	0.0657	0.0629	3,450.5368
Mobile	60.7522	34.2180	346.0777	0.7488	76.8583	0.4961	77.3544	19.1438	0.4621	19.6059		76,204.4188	76,204.4188	4.4590	3.6110	77,391.9724
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**94.8188**	**37.8858**	**418.8018**	**0.7697**	**76.8583**	**1.1030**	**77.9613**	**19.1438**	**1.0690**	**20.2129**	**0.0000**	**79,761.4073**	**79,761.4073**	**4.6471**	**3.6739**	**80,972.4043**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/3/2023	6/9/2023	5	50	
2	Site Preparation	Site Preparation	6/10/2023	7/21/2023	5	30	
3	Grading	Grading	7/22/2023	11/3/2023	5	75	
4	Trenching	Trenching	7/22/2023	11/3/2023	5	75	

5	Building Construction	Building Construction	11/4/2023	9/4/2026	5	740	
6	Paving	Paving	9/5/2026	11/20/2026	5	55	
7	Architectural Coating	Architectural Coating	9/5/2026	11/20/2026	5	55	

Acres of Grading (Site Preparation Phase): 45

Acres of Grading (Grading Phase): 225

Acres of Paving: 0

Residential Indoor: 1,570,195; Residential Outdoor: 523,398; Non-Residential Indoor: 720,000; Non-Residential Outdoor: 240,000; Striped Parking Area: 50,520 (Architectural Coating – sqft)

OffRoad Equipment

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

Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	50.00	20.00	LD_Mix	HHDT	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	50.00	20.00	LD_Mix	HHDT	HHDT
Grading	8	20.00	0.00	0.00	10.80	50.00	20.00	LD_Mix	HHDT	HHDT
Trenching	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,129.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	226.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 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					0.3253	0.0000	0.3253	0.0493	0.0000	0.0493			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.984 0	3,746.984 0	1.0494		3,773.218 3
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**0.3253**	**0.9975**	**1.3228**	**0.0493**	**0.9280**	**0.9772**		**3,746.984 0**	**3,746.984 0**	**1.0494**		**3,773.218 3**

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	0.0407	0.0285	0.3434	9.8000e-004	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		98.7561	98.7561	3.0600e-003	2.9500e-003	99.7111
Total	**0.0407**	**0.0285**	**0.3434**	**9.8000e-004**	**0.1232**	**5.9000e-004**	**0.1238**	**0.0327**	**5.4000e-004**	**0.0332**		**98.7561**	**98.7561**	**3.0600e-003**	**2.9500e-003**	**99.7111**

3.2 Demolition - 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					0.3253	0.0000	0.3253	0.0493	0.0000	0.0493			0.0000			0.0000
Off-Road	0.5841	13.5576	24.6739	0.0388		0.0616	0.0616		0.0616	0.0616	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**0.5841**	**13.5576**	**24.6739**	**0.0388**	**0.3253**	**0.0616**	**0.3869**	**0.0493**	**0.0616**	**0.1109**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

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	0.0407	0.0285	0.3434	9.8000e-004	0.1232	5.9000e-004	0.1238	0.0327	5.4000e-004	0.0332		98.7561	98.7561	3.0600e-003	2.9500e-003	99.7111
Total	**0.0407**	**0.0285**	**0.3434**	**9.8000e-004**	**0.1232**	**5.9000e-004**	**0.1238**	**0.0327**	**5.4000e-004**	**0.0332**		**98.7561**	**98.7561**	**3.0600e-003**	**2.9500e-003**	**99.7111**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					20.3167	0.0000	20.3167	10.2023	0.0000	10.2023			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**20.3167**	**1.2660**	**21.5827**	**10.2023**	**1.1647**	**11.3671**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0488	0.0342	0.4121	1.1700e-003	0.1479	7.1000e-004	0.1486	0.0392	6.5000e-004	0.0399		118.5073	118.5073	3.6700e-003	3.5400e-003	119.6533
Total	**0.0488**	**0.0342**	**0.4121**	**1.1700e-003**	**0.1479**	**7.1000e-004**	**0.1486**	**0.0392**	**6.5000e-004**	**0.0399**		**118.5073**	**118.5073**	**3.6700e-003**	**3.5400e-003**	**119.6533**

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					20.3167	0.0000	20.3167	10.2023	0.0000	10.2023			0.0000			0.0000
Off-Road	0.6967	12.1620	22.9600	0.0381		0.0621	0.0621		0.0621	0.0621	0.0000	3,687.308 1	3,687.308 1	1.1926		3,717.121 9
Total	**0.6967**	**12.1620**	**22.9600**	**0.0381**	**20.3167**	**0.0621**	**20.3788**	**10.2023**	**0.0621**	**10.2644**	**0.0000**	**3,687.308 1**	**3,687.308 1**	**1.1926**		**3,717.121 9**

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	0.0488	0.0342	0.4121	1.1700e-003	0.1479	7.1000e-004	0.1486	0.0392	6.5000e-004	0.0399		118.5073	118.5073	3.6700e-003	3.5400e-003	119.6533
Total	**0.0488**	**0.0342**	**0.4121**	**1.1700e-003**	**0.1479**	**7.1000e-004**	**0.1486**	**0.0392**	**6.5000e-004**	**0.0399**		**118.5073**	**118.5073**	**3.6700e-003**	**3.5400e-003**	**119.6533**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0543	0.0380	0.4579	1.3000e-003	0.1643	7.9000e-004	0.1651	0.0436	7.2000e-004	0.0443		131.6747	131.6747	4.0800e-003	3.9300e-003	132.9481
Total	**0.0543**	**0.0380**	**0.4579**	**1.3000e-003**	**0.1643**	**7.9000e-004**	**0.1651**	**0.0436**	**7.2000e-004**	**0.0443**		**131.6747**	**131.6747**	**4.0800e-003**	**3.9300e-003**	**132.9481**

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	1.0110	19.2707	36.7226	0.0621		0.1015	0.1015		0.1015	0.1015	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**1.0110**	**19.2707**	**36.7226**	**0.0621**	**9.2036**	**0.1015**	**9.3051**	**3.6538**	**0.1015**	**3.7553**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0543	0.0380	0.4579	1.3000e-003	0.1643	7.9000e-004	0.1651	0.0436	7.2000e-004	0.0443		131.6747	131.6747	4.0800e-003	3.9300e-003	132.9481
Total	**0.0543**	**0.0380**	**0.4579**	**1.3000e-003**	**0.1643**	**7.9000e-004**	**0.1651**	**0.0436**	**7.2000e-004**	**0.0443**		**131.6747**	**131.6747**	**4.0800e-003**	**3.9300e-003**	**132.9481**

3.5 Trenching - 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	0.3400	3.0843	5.4891	8.2800e-003		0.1516	0.1516		0.1395	0.1395		801.6821	801.6821	0.2593		808.1641
Total	**0.3400**	**3.0843**	**5.4891**	**8.2800e-003**		**0.1516**	**0.1516**		**0.1395**	**0.1395**		**801.6821**	**801.6821**	**0.2593**		**808.1641**

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	0.0136	9.4900e-003	0.1145	3.3000e-004	0.0411	2.0000e-004	0.0413	0.0109	1.8000e-004	0.0111		32.9187	32.9187	1.0200e-003	9.8000e-004	33.2370
Total	**0.0136**	**9.4900e-003**	**0.1145**	**3.3000e-004**	**0.0411**	**2.0000e-004**	**0.0413**	**0.0109**	**1.8000e-004**	**0.0111**		**32.9187**	**32.9187**	**1.0200e-003**	**9.8000e-004**	**33.2370**

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

3.5 Trenching - 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	0.1332	3.6313	6.2601	8.2800e-003		0.0135	0.0135		0.0135	0.0135	0.0000	801.6821	801.6821	0.2593		808.1641
Total	**0.1332**	**3.6313**	**6.2601**	**8.2800e-003**		**0.0135**	**0.0135**		**0.0135**	**0.0135**	**0.0000**	**801.6821**	**801.6821**	**0.2593**		**808.1641**

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	0.0136	9.4900e-003	0.1145	3.3000e-004	0.0411	2.0000e-004	0.0413	0.0109	1.8000e-004	0.0111		32.9187	32.9187	1.0200e-003	9.8000e-004	33.2370
Total	**0.0136**	**9.4900e-003**	**0.1145**	**3.3000e-004**	**0.0411**	**2.0000e-004**	**0.0413**	**0.0109**	**1.8000e-004**	**0.0111**		**32.9187**	**32.9187**	**1.0200e-003**	**9.8000e-004**	**33.2370**

3.6 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0628	2.1426	25.8473	0.0735	9.2745	0.0443	9.3188	2.4600	0.0408	2.5008		7,433.0391	7,433.0391	0.2303	0.2219	7,504.9183
Total	**3.0628**	**2.1426**	**25.8473**	**0.0735**	**9.2745**	**0.0443**	**9.3188**	**2.4600**	**0.0408**	**2.5008**		**7,433.0391**	**7,433.0391**	**0.2303**	**0.2219**	**7,504.9183**

3.6 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	0.5335	10.9122	17.8738	0.0269		0.0846	0.0846		0.0846	0.0846	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**0.5335**	**10.9122**	**17.8738**	**0.0269**		**0.0846**	**0.0846**		**0.0846**	**0.0846**	**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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0628	2.1426	25.8473	0.0735	9.2745	0.0443	9.3188	2.4600	0.0408	2.5008		7,433.0391	7,433.0391	0.2303	0.2219	7,504.9183
Total	**3.0628**	**2.1426**	**25.8473**	**0.0735**	**9.2745**	**0.0443**	**9.3188**	**2.4600**	**0.0408**	**2.5008**		**7,433.0391**	**7,433.0391**	**0.2303**	**0.2219**	**7,504.9183**

3.6 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	2.8779	1.9153	24.1533	0.0712	9.2745	0.0422	9.3166	2.4600	0.0388	2.4988		7,195.6343	7,195.6343	0.2092	0.2070	7,262.5355
Total	**2.8779**	**1.9153**	**24.1533**	**0.0712**	**9.2745**	**0.0422**	**9.3166**	**2.4600**	**0.0388**	**2.4988**		**7,195.6343**	**7,195.6343**	**0.2092**	**0.2070**	**7,262.5355**

3.6 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5335	10.9122	17.8738	0.0270		0.0846	0.0846		0.0846	0.0846	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**0.5335**	**10.9122**	**17.8738**	**0.0270**		**0.0846**	**0.0846**		**0.0846**	**0.0846**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	2.8779	1.9153	24.1533	0.0712	9.2745	0.0422	9.3166	2.4600	0.0388	2.4988		7,195.6343	7,195.6343	0.2092	0.2070	7,262.5355
Total	**2.8779**	**1.9153**	**24.1533**	**0.0712**	**9.2745**	**0.0422**	**9.3166**	**2.4600**	**0.0388**	**2.4988**		**7,195.6343**	**7,195.6343**	**0.2092**	**0.2070**	**7,262.5355**

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

3.6 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.474 4**	**2,556.474 4**	**0.6010**		**2,571.498 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	0.0000	0.0000	0.0000	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	2.7160	1.7270	22.6634	0.0688	9.2745	0.0403	9.3148	2.4600	0.0371	2.4971		6,957.678 5	6,957.678 5	0.1905	0.1941	7,020.291 5
Total	**2.7160**	**1.7270**	**22.6634**	**0.0688**	**9.2745**	**0.0403**	**9.3148**	**2.4600**	**0.0371**	**2.4971**		**6,957.678 5**	**6,957.678 5**	**0.1905**	**0.1941**	**7,020.291 5**

3.6 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5335	10.9122	17.8738	0.0270		0.0846	0.0846		0.0846	0.0846	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	**0.5335**	**10.9122**	**17.8738**	**0.0270**		**0.0846**	**0.0846**		**0.0846**	**0.0846**	**0.0000**	**2,556.474 4**	**2,556.474 4**	**0.6010**		**2,571.498 1**

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	2.7160	1.7270	22.6634	0.0688	9.2745	0.0403	9.3148	2.4600	0.0371	2.4971		6,957.678 5	6,957.678 5	0.1905	0.1941	7,020.291 5
Total	**2.7160**	**1.7270**	**22.6634**	**0.0688**	**9.2745**	**0.0403**	**9.3148**	**2.4600**	**0.0371**	**2.4971**		**6,957.678 5**	**6,957.678 5**	**0.1905**	**0.1941**	**7,020.291 5**

3.6 Building Construction - 2026

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	2.5776	1.5743	21.4223	0.0668	9.2745	0.0384	9.3128	2.4600	0.0353	2.4953		6,747.0169	6,747.0169	0.1744	0.1836	6,806.0938
Total	**2.5776**	**1.5743**	**21.4223**	**0.0668**	**9.2745**	**0.0384**	**9.3128**	**2.4600**	**0.0353**	**2.4953**		**6,747.0169**	**6,747.0169**	**0.1744**	**0.1836**	**6,806.0938**

3.6 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5335	10.9122	17.8738	0.0270		0.0846	0.0846		0.0846	0.0846	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.5335**	**10.9122**	**17.8738**	**0.0270**		**0.0846**	**0.0846**		**0.0846**	**0.0846**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	2.5776	1.5743	21.4223	0.0668	9.2745	0.0384	9.3128	2.4600	0.0353	2.4953		6,747.0169	6,747.0169	0.1744	0.1836	6,806.0938
Total	**2.5776**	**1.5743**	**21.4223**	**0.0668**	**9.2745**	**0.0384**	**9.3128**	**2.4600**	**0.0353**	**2.4953**		**6,747.0169**	**6,747.0169**	**0.1744**	**0.1836**	**6,806.0938**

3.7 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0343	0.0209	0.2846	8.9000e-004	0.1232	5.1000e-004	0.1237	0.0327	4.7000e-004	0.0332		89.6415	89.6415	2.3200e-003	2.4400e-003	90.4264
Total	**0.0343**	**0.0209**	**0.2846**	**8.9000e-004**	**0.1232**	**5.1000e-004**	**0.1237**	**0.0327**	**4.7000e-004**	**0.0332**		**89.6415**	**89.6415**	**2.3200e-003**	**2.4400e-003**	**90.4264**

3.7 Paving - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3341	6.8714	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3341**	**6.8714**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0343	0.0209	0.2846	8.9000e-004	0.1232	5.1000e-004	0.1237	0.0327	4.7000e-004	0.0332		89.6415	89.6415	2.3200e-003	2.4400e-003	90.4264
Total	**0.0343**	**0.0209**	**0.2846**	**8.9000e-004**	**0.1232**	**5.1000e-004**	**0.1237**	**0.0327**	**4.7000e-004**	**0.0332**		**89.6415**	**89.6415**	**2.3200e-003**	**2.4400e-003**	**90.4264**

3.8 Architectural Coating - 2026

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	134.0506					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**134.2214**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.5160	0.3151	4.2883	0.0134	1.8565	7.6800e-003	1.8642	0.4924	7.0700e-003	0.4995		1,350.5986	1,350.5986	0.0349	0.0368	1,362.4245
Total	**0.5160**	**0.3151**	**4.2883**	**0.0134**	**1.8565**	**7.6800e-003**	**1.8642**	**0.4924**	**7.0700e-003**	**0.4995**		**1,350.5986**	**1,350.5986**	**0.0349**	**0.0368**	**1,362.4245**

3.8 Architectural Coating - 2026

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	134.0506					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0545	1.0598	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**134.1051**	**1.0598**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.5160	0.3151	4.2883	0.0134	1.8565	7.6800e-003	1.8642	0.4924	7.0700e-003	0.4995		1,350.5986	1,350.5986	0.0349	0.0368	1,362.4245
Total	**0.5160**	**0.3151**	**4.2883**	**0.0134**	**1.8565**	**7.6800e-003**	**1.8642**	**0.4924**	**7.0700e-003**	**0.4995**		**1,350.5986**	**1,350.5986**	**0.0349**	**0.0368**	**1,362.4245**

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	60.7522	34.2180	346.0777	0.7488	76.8583	0.4961	77.3544	19.1438	0.4621	19.6059		76,204.4188	76,204.4188	4.4590	3.6110	77,391.9724
Unmitigated	60.7522	34.2180	346.0777	0.7488	76.8583	0.4961	77.3544	19.1438	0.4621	19.6059		76,204.4188	76,204.4188	4.4590	3.6110	77,391.9724

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	4,328.17	3,902.58	3252.15	9,500,926	9,500,926
City Park	0.00	0.00	0.00		
Condo/Townhouse	123.97	111.78	93.15	272,131	272,131
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	1,258.80	1,373.40	1600.50	1,536,174	1,536,174
Medical Office Building	13,940.70	3,431.70	567.30	20,607,744	20,607,744
Single Family Housing	166.80	168.48	151.20	380,650	380,650
Total	19,818.44	8,987.94	5,664.30	32,297,624	32,297,624

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
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Single Family Housing	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
City Park	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
Condo/Townhouse	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
Enclosed Parking with Elevator	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
High Turnover (Sit Down Restaurant)	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
Medical Office Building	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624
Single Family Housing	0.575564	0.056293	0.184251	0.115043	0.020151	0.005257	0.008159	0.006240	0.000877	0.000356	0.024310	0.000874	0.002624

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	0.3144	2.8585	2.4011	0.0172		0.2172	0.2172		0.2172	0.2172		3,430.153 1	3,430.153 1	0.0657	0.0629	3,450.536 8
NaturalGas Unmitigated	0.3144	2.8585	2.4011	0.0172		0.2172	0.2172		0.2172	0.2172		3,430.153 1	3,430.153 1	0.0657	0.0629	3,450.536 8

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					
Apartments Mid Rise	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
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	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
Enclosed Parking with Elevator	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
High Turnover (Sit Down Restaurant)	8517.95	0.0919	0.8351	0.7015	5.0100e-003		0.0635	0.0635		0.0635	0.0635		1,002.1112	1,002.1112	0.0192	0.0184	1,008.0663
Medical Office Building	20638.4	0.2226	2.0234	1.6996	0.0121		0.1538	0.1538		0.1538	0.1538		2,428.0419	2,428.0419	0.0465	0.0445	2,442.4705
Single Family Housing	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
Total		**0.3144**	**2.8585**	**2.4011**	**0.0172**		**0.2173**	**0.2173**		**0.2173**	**0.2173**		**3,430.1531**	**3,430.1531**	**0.0658**	**0.0629**	**3,450.5368**

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					
Apartments Mid Rise	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
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	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
Enclosed Parking with Elevator	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
High Turnover (Sit Down Restaurant)	8.51795	0.0919	0.8351	0.7015	5.0100e-003		0.0635	0.0635		0.0635	0.0635		1,002.1112	1,002.1112	0.0192	0.0184	1,008.0663
Medical Office Building	20.6384	0.2226	2.0234	1.6996	0.0121		0.1538	0.1538		0.1538	0.1538		2,428.0419	2,428.0419	0.0465	0.0445	2,442.4705
Single Family Housing	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
Total		**0.3144**	**2.8585**	**2.4011**	**0.0172**		**0.2173**	**0.2173**		**0.2173**	**0.2173**		**3,430.1531**	**3,430.1531**	**0.0658**	**0.0629**	**3,450.5368**

6.0 Area Detail

6.1 Mitigation Measures Area

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	33.7523	0.8094	70.3230	3.7200e-003		0.3897	0.3897		0.3897	0.3897	0.0000	126.8354	126.8354	0.1224	0.0000	129.8951
Unmitigated	33.7523	0.8094	70.3230	3.7200e-003		0.3897	0.3897		0.3897	0.3897	0.0000	126.8354	126.8354	0.1224	0.0000	129.8951

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	4.4586					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	27.1659					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.1278	0.8094	70.3230	3.7200e-003		0.3897	0.3897		0.3897	0.3897		126.8354	126.8354	0.1224		129.8951
Total	**33.7523**	**0.8094**	**70.3230**	**3.7200e-003**		**0.3897**	**0.3897**		**0.3897**	**0.3897**	**0.0000**	**126.8354**	**126.8354**	**0.1224**	**0.0000**	**129.8951**

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	4.4586					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	27.1659					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.1278	0.8094	70.3230	3.7200e-003		0.3897	0.3897		0.3897	0.3897		126.8354	126.8354	0.1224		129.8951
Total	**33.7523**	**0.8094**	**70.3230**	**3.7200e-003**		**0.3897**	**0.3897**		**0.3897**	**0.3897**	**0.0000**	**126.8354**	**126.8354**	**0.1224**	**0.0000**	**129.8951**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	50	1341	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (750 - 9999 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

11.0 Vegetation

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

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

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

Education:

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

Professional Certifications:

California Professional Geologist
California Certified Hydrogeologist
Qualified SWPPP Developer and Practitioner

Professional Experience:

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

Positions Matt has held include:

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

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

<u>Senior Regulatory and Litigation Support Analyst:</u>

With SWAPE, Matt's responsibilities have included:

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

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

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

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

Executive Director:

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

Hydrogeology:

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

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

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

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

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

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

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

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

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

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

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

Policy:

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

Activities included the following:

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

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

Geology:

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

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

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

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

Teaching:

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

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

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

Invited Testimony, Reports, Papers and Presentations:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Other Experience:

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

SOIL WATER AIR PROTECTION ENTERPRISE
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Paul Rosenfeld, Ph.D.

Chemical Fate and Transport & Air Dispersion Modeling

Principal Environmental Chemist

Risk Assessment & Remediation Specialist

Education

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

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

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

Professional Experience

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

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

Professional History:

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

Publications:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Presentations:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Teaching Experience:

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

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

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

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

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

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

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

Academic Grants Awarded:

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

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

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

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

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

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

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

Deposition and/or Trial Testimony:

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

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

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

In the Superior Court of the State of Arizona In and For the Cunty of Maricopa
Mary Tryon et al., Plaintiff vs. The City of Pheonix v. Cox Cactus Farm, L.L.C., Utah Shelter Systems, Inc.
Case Number CV20127-094749
Rosenfeld Deposition: 5-7-2021

In the United States District Court for the Eastern District of Texas Beaumont Division
Robinson, Jeremy et al *Plaintiffs*, vs. CNA Insurance Company et al.
Case Number 1:17-cv-000508
Rosenfeld Deposition: 3-25-2021

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

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

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

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

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

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

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

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

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

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

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

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

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

In the Northern District Court of Mississippi, Greenville Division
Brenda J. Cooper, et al., *Plaintiffs,* vs. Meritor Inc., et al., *Defendants*
Case Number: 4:16-cv-52-DMB-JVM
Rosenfeld Deposition: July 2017

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

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

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

In The Circuit Court of Ohio County, West Virginia
Robert Andrews, et al. v. Antero, et al.
Civil Action N0. 14-C-30000
Rosenfeld Deposition, June 2015

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

In the Circuit Court of the 17th Judicial Circuit, in and For Broward County, Florida
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.
Case Number CACE07030358 (26)
Rosenfeld Deposition: December 2014

In the County Court of Dallas County Texas
Lisa Parr et al, *Plaintiff*, vs. Aruba et al, *Defendant.*
Case Number cc-11-01650-E
Rosenfeld Deposition: March and September 2013
Rosenfeld Trial: April 2014

In the Court of Common Pleas of Tuscarawas County Ohio
John Michael Abicht, et al., *Plaintiffs,* vs. Republic Services, Inc., et al., *Defendants*
Case Number: 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)
Rosenfeld Deposition: October 2012

In the United States District Court for the Middle District of Alabama, Northern Division
James K. Benefield, et al., *Plaintiffs*, vs. International Paper Company, *Defendant*.
Civil Action Number 2:09-cv-232-WHA-TFM
Rosenfeld Deposition: July 2010, June 2011

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

In the United States District Court, Western District Lafayette Division
Ackle et al., *Plaintiffs*, vs. Citgo Petroleum Corporation, et al., *Defendants*.
Case Number 2:07CV1052
Rosenfeld Deposition: July 2009

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

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

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

Education:

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

Professional Certifications:

California Professional Geologist
California Certified Hydrogeologist
Qualified SWPPP Developer and Practitioner

Professional Experience:

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

Positions Matt has held include:

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

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

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

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

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

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

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

Executive Director:

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

Hydrogeology:

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

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

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

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

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

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

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

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

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

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

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

Policy:

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

Activities included the following:

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

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

Geology:

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

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

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

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

Teaching:

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

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

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

Invited Testimony, Reports, Papers and Presentations:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Other Experience:

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

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

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Paul Rosenfeld, Ph.D.

Chemical Fate and Transport & Air Dispersion Modeling

Principal Environmental Chemist

Risk Assessment & Remediation Specialist

Education

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

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

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

Professional Experience

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

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

Professional History:

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

Publications:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Presentations:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Teaching Experience:

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

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

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

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

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

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

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

Academic Grants Awarded:

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

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

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

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

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

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

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

Deposition and/or Trial Testimony:

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

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

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

In the Superior Court of the State of Arizona In and For the Cunty of Maricopa
Mary Tryon et al., Plaintiff vs. The City of Pheonix v. Cox Cactus Farm, L.L.C., Utah Shelter Systems, Inc.
Case Number CV20127-094749
Rosenfeld Deposition: 5-7-2021

In the United States District Court for the Eastern District of Texas Beaumont Division
Robinson, Jeremy et al *Plaintiffs*, vs. CNA Insurance Company et al.
Case Number 1:17-cv-000508
Rosenfeld Deposition: 3-25-2021

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

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

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

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

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

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

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

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

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

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

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

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

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

In the Northern District Court of Mississippi, Greenville Division
Brenda J. Cooper, et al., *Plaintiffs,* vs. Meritor Inc., et al., *Defendants*
Case Number: 4:16-cv-52-DMB-JVM
Rosenfeld Deposition: July 2017

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

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

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

In The Circuit Court of Ohio County, West Virginia
Robert Andrews, et al. v. Antero, et al.
Civil Action N0. 14-C-30000
Rosenfeld Deposition, June 2015

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

In the Circuit Court of the 17th Judicial Circuit, in and For Broward County, Florida
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.
Case Number CACE07030358 (26)
Rosenfeld Deposition: December 2014

In the County Court of Dallas County Texas
Lisa Parr et al, *Plaintiff*, vs. Aruba et al, *Defendant.*
Case Number cc-11-01650-E
Rosenfeld Deposition: March and September 2013
Rosenfeld Trial: April 2014

In the Court of Common Pleas of Tuscarawas County Ohio
John Michael Abicht, et al., *Plaintiffs,* vs. Republic Services, Inc., et al., *Defendants*
Case Number: 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)
Rosenfeld Deposition: October 2012

In the United States District Court for the Middle District of Alabama, Northern Division
James K. Benefield, et al., *Plaintiffs*, vs. International Paper Company, *Defendant*.
Civil Action Number 2:09-cv-232-WHA-TFM
Rosenfeld Deposition: July 2010, June 2011

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

In the United States District Court, Western District Lafayette Division
Ackle et al., *Plaintiffs*, vs. Citgo Petroleum Corporation, et al., *Defendants*.
Case Number 2:07CV1052
Rosenfeld Deposition: July 2009

EXHIBIT B

WILSON IHRIG
ACOUSTICS, NOISE & VIBRATION

CALIFORNIA
WASHINGTON
NEW YORK

WI #22-005.22

26 September 2022

Aidan P. Marshall, Esq.
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080

Subject: *Berryessa Road Mixed-Use Development, San José, California*
Draft Environmental Impact Report
Review and Comment on Noise Analysis

Dear Mr. Marshall,

As requested, we have reviewed the information and noise impact analyses in the following documents:

> *Berryessa Road Mixed-Use Development, San José, California*
> *Draft Environmental Impact Report ("DEIR")*
> *File Nos. PDC18-036, PD21-009, PT21-030; SCH No. 2021070467*
> *August 2022*
>
> *1655 Berryessa Mixed-Use Development, San José, California*
> *Environmental Noise and Vibration Assessment ("Noise Assessment")*
> *Illingworth & Rodkin, Inc.*
> *March 11, 2022*

This letter reports our comments on the noise analysis in the subject document.

Wilson, Ihrig & Associates, Acoustical Consultants, has practiced exclusively in the field of acoustics since 1966. During our 55 years of operation, we have prepared hundreds of noise studies for Environmental Impact Reports and Statements. We have one of the largest technical laboratories in the acoustical consulting industry. We also utilize industry-standard acoustical programs such as Environmental Noise Model (ENM), Traffic Noise Model (TNM), SoundPLAN, and CADNA. In short, we are well qualified to prepare environmental noise studies and review studies prepared by others.

Adverse Effects of Noise[1]

Although the health effects of noise are not taken as seriously in the United States as they are in other countries, they are real and, in many parts of the country, pervasive.

Noise-Induced Hearing Loss. If a person is repeatedly exposed to loud noises, he or she may experience noise-induced hearing impairment or loss. In the United States, both the Occupational Health and Safety Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) promote standards and regulations to protect the hearing of people exposed to high levels of industrial noise.

Speech Interference. Another common problem associated with noise is speech interference. In addition to the obvious issues that may arise from misunderstandings, speech interference also leads to problems with concentration fatigue, irritation, decreased working capacity, and automatic stress reactions. For complete speech intelligibility, the sound level of the speech should be 15 to 18 dBA higher than the background noise. Typical indoor speech levels are 45 to 50 dBA at 1 meter, so any noise above 30 dBA begins to interfere with speech intelligibility. The common reaction to higher background noise levels is to raise one's voice. If this is required persistently for long periods of time, stress reactions and irritation will likely result. The problems and irritation that are associated with speech disturbance have become more pronounced during the COVID-19 pandemic because many people find themselves and others they live with trying to work and learn simultaneously in spaces that were not designed for speech privacy.

Sleep Disturbance. Noise can disturb sleep by making it more difficult to fall asleep, by waking someone after they are asleep, or by altering their sleep stage, e.g., reducing the amount of rapid eye movement (REM) sleep. Noise exposure for people who are sleeping has also been linked to increased blood pressure, increased heart rate, increase in body movements, and other physiological effects. Not surprisingly, people whose sleep is disturbed by noise often experience secondary effects such as increased fatigue, depressed mood, and decreased work performance.

Cardiovascular and Physiological Effects. Human's bodily reactions to noise are rooted in the "fight or flight" response that evolved when many noises signaled imminent danger. These include increased blood pressure, elevated heart rate, and vasoconstriction. Prolonged exposure to acute noises can result in permanent effects such as hypertension and heart disease.

Impaired Cognitive Performance. Studies have established that noise exposure impairs people's abilities to perform complex tasks (tasks that require attention to detail or analytical processes) and it makes reading, paying attention, solving problems, and memorizing more difficult. This is why there are standards for classroom background noise levels and why offices and libraries are designed to provide quiet work environments. While sheltering-in-place during the COVID-19 pandemic, many people are finding working and learning more difficult because their home environment is not as quiet as their office or school was.

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[1] More information on these and other adverse effects of noise may be found in *Guidelines for Community Noise*, eds B Berglund, T Lindvall, and D Schwela, World Health Organization, Geneva, Switzerland, 1999. (https://www.who.int/docstore/peh/noise/Comnoise-1.pdf)

The DEIR Errs in Finding Construction Noise Impact "Less-Than-Significant"

Construction noise is addressed in *Envision San José 2040 General Plan* Policy EC-1.7 which plainly states what is obvious to anyone who has ever lived or worked near a major construction project:

> The City considers significant construction noise impacts to occur if a project located within 500 feet of residential uses or 200 feet of commercial or office uses would . . . involve substantial noise generating activities (such as building demolition, grading, excavation, pile driving, use of impact equipment, or building framing) continuing for more than 12 months.
>
> [Quoted *verbatim* in DEIR at p. 164; emphasis added]

This project meets the three basic conditions established for a significant impact to occur:

1. The entire project site is within 500 feet of existing residential use (Figure 1)
2. Project construction will require substantial noise-generating activities
3. Project construction will take 44 months (DEIR at p. 169)

Figure 1 Entire Project Site Within 500 Feet of Residential Use

The full text of General Plan Policy EC-1.7 requires the use of "best available noise suppression devices and techniques" and limiting "construction hours near residential uses per the City's Municipal Code" and yet still makes the declaration that it considers construction that meets the three conditions stated above to cause a significant noise impact. Therefore, *prima facia*, the DEIR has erred in finding that construction noise impacts will be less than significant simply by virtue of the fact that noise reduction measures will be deployed and hours limited.

The DEIR Mitigation Measures Do Not Reduce the Project's Significant Construction Noise Impact to a Less-Than-Significant Level

The DEIR might have – but does not – tried to present substantial evidence that the noise reduction measures would reduce noise to levels less than a reasonable threshold. In fact, the City does not even include a numeric threshold for construction noise impacts. However, had a reasonable threshold been included and an analysis to substantiate that construction noise could be reduced to level below that threshold, I assert that that effort would have failed.

CEQA requires an assessment of whether the project would generate "a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise" [DEIR at p. 168]. The City's General Plan sets an acceptable exterior noise level objective of 60 dBA DNL or less for residential and most institutional land uses (Table EC-1). Similarly, in an Initial Study prepared for another project in San José, the same project team that prepared the subject DEIR used the following quantitative threshold for construction noise:

> The temporary construction noise impact would be considered significant if project construction activities exceeded 60 dBA Leq at nearby residences or exceeded 70 dBA Leq at nearby commercial land uses and exceeded the ambient noise environment by five dBA Leq or more for a period longer than 12 months.[2]

For this project, the existing ambient for the western property line is 48 dBA Leq and for the northern property line is 43 dBA Leq [DEIR Table 3.13-2 at p. 166], so if the threshold is interpreted as "exceed 60 dBA Leq" AND "exceed ambient plus 5 dBA", then, in this case, exceeding 60 dBA Leq would be the determining factor.

The DEIR states that "project construction is expected to generate noise levels ranging from 72 to 88 dBA Leq at a distance of 50 feet during construction of residential buildings" [DEIR at p. 169]. Because the vast majority of the project is residential, I'll use these values and not those for construction of the commercial building (which are similar, in any case). For simplicity, I'll use the average of the given range, 80 dBA Leq.

The DEIR states – without adequate substantiation, in my opinion – that "With implementation of the mitigation measure MM NOI-1.1, compliance of GP Policy EC-1.7, and Municipal Code requirements, noise levels would be reduced by 5 to 10 dBA" [DEIR at p. 171]. Lack of substantiation aside, I'll use the upwardly rounded average of this range, 8 dB, in calculations.

The unmitigated construction noise level is on the order of 80 dBA Leq at 50 feet and the mitigation will reduce that on the order of 8 dB, so the mitigated reference noise level is 72 dBA Leq at 50 feet. The threshold of significance is 60 dBA Leq which corresponds to a distance of 200 feet.[3] In other words, work done at the project site that is within 200 feet of a residence will cause a significant impact. Figure 2 shows this area graphically – it's about 75% of the project site. So, the Project's construction activities will result in a substantial increase in noise, above the "Normally Acceptable"

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[2] *Empire Lumber Mixed-Use Project Initial Study*, City of San José, December 2020, p. 132.

[3] Assuming an attenuation rate of 6 dB per doubling of distance which is common and reasonable.

levels identified in the General Plan. Additionally, as the DEIR notes, "The nearest residences are located 25 feet north and west of the site" [DEIR at p. 168]. At that distance, the mitigated noise levels would be on the order of 78 dBA L_{eq}, some 30 to 35 dBA above the existing ambient levels.

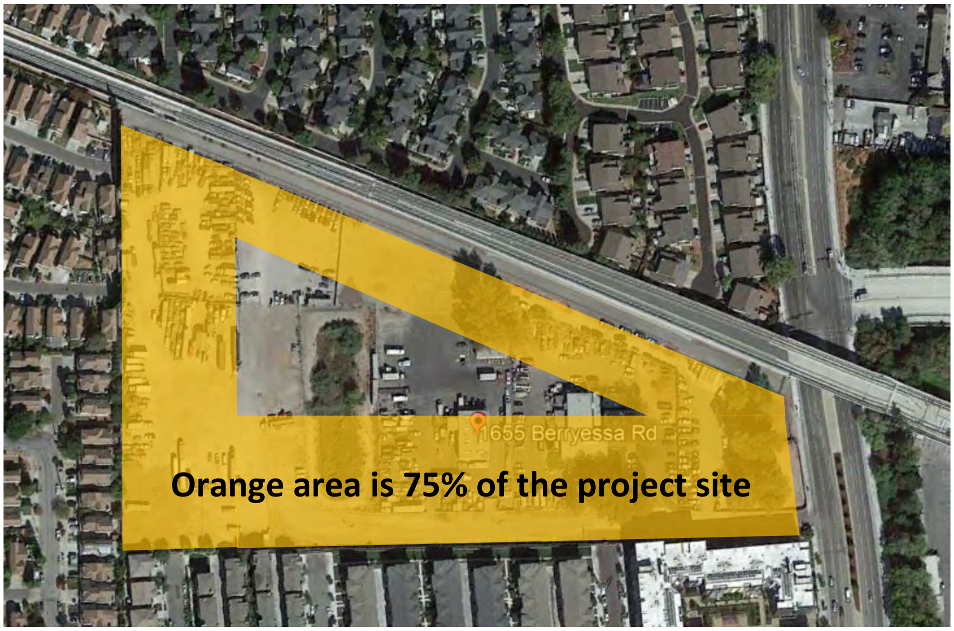

Figure 2 Area of the Project Site within 200 Feet of Residences

The proceeding analysis indicates that the proposed mitigation measures will fall well short of reducing the construction noise impact to a less-than-significant level. City of San José *Envision San José 2040 General Plan* Policy EC-1.7 requires the use of "best available noise suppression devices and techniques" [quoted *verbatim* at DEIR p. 164]. Because the Project's significant construction noise impacts remain unmitigated with the proposed measures, the City must adopt more stringent noise reduction measures. In this situation, the most practical measure would be the deployment of a tall, heavy construction noise barrier.[4] An example of such a barrier is shown in Figure 3. The particular curtain shown is a BBC-13X-2" curtain provided by Acoustical Surfaces, Inc.[5] This curtain, when properly installed, can provide on the order of 10 to 15 dB of attenuation assuming adequate height (on the order of 18 to 20 feet).

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[4] The DEIR states that "Temporary noise barrier fences would provide a 5 dBA noise reduction if the noise barrier interrupts the line-of-sight between the noise source and receptor and if the barrier is constructed in a manner that eliminates any cracks or gaps" [DEIR at p. 170]. If the barrier is taller than necessary to just break the line-of-sight, more attenuation may be achieved.

[5] https://www.acousticalsurfaces.com/curtan_stop/sound_blankets.htm

Figure 3 Substantial Temporary Construction Noise Barrier

The DEIR Fails to Address Construction Hauling Noise

Whereas the DEIR acknowledged on-site construction noise, it is completely silent on the matter of construction hauling noise. Spoils removal, materials deliveries, and worker access will necessarily be via Berryessa Road. There are residences facing Berryessa Road in both directions, so this presents a potentially significant noise impact. The noise analysis should be expanded to include a description of the haul and transit routes, estimates of the number of trips by vehicles type, and noise estimates associated with those trips. Once this is done, an assessment of the noise should be included in the DEIR.

♦ ♦ ♦ ♦ ♦

Please contact me if you have any question about this review of the construction noise analysis in the *Berryessa Road Mixed-Use Development DEIR*.

Very truly yours,

WILSON IHRIG

Derek L. Watry
Principal

2022-09-26 - berryessa mixed-use - noise - d watry.docx

DEREK L. WATRY

Principal

Since joining Wilson Ihrig in 1992, Derek has gained experienced in many areas of practice including environmental, construction, forensic, architectural, and industrial. For all of these, he has conducted extensive field measurements, established acceptability criteria, and calculated future noise and vibration levels. In the many of these areas, he has prepared CEQA and NEPA noise technical studies and EIR/EIS sections. Derek has a thorough understanding of the technical, public relations, and political aspects of environmental noise and vibration compliance work. He has helped resolve complex community noise issues, and he has also served as an expert witness in numerous legal matters.

Education

- M.S. Mechanical Engineering, University of California, Berkeley
- B.S. Mechanical Engineering, University of California, San Diego
- M.B.A. Saint Mary's College of California

Project Experience

12th Street Reconstruction, Oakland, CA

Responsible for construction noise control plan from pile driving after City received complaints from nearby neighbors. Attendance required at community meetings.

525 Golden Gate Avenue Demolition, San Francisco, CA

Noise and vibration monitoring and consultation during demolition of a multi-story office building next to Federal, State, and Municipal Court buildings for the SFDPW.

911 Emergency Communications Center, San Francisco, CA

Technical assistance on issues relating to the demolition and construction work including vibration monitoring, developing specification and reviewing/recommending appropriate methods and equipment for demolition of Old Emergency Center for the SFDPW.

Central Contra Costa Sanitary District, Grayson Creek Sewer, Pleasant Hill, CA

Evaluation of vibration levels due to construction of new sewer line in hard soil.

City of Atascadero, Review of Walmart EIR Noise Analysis, Atascadero, CA

Review and Critique of EIR Noise Analysis for the Del Rio Road Commercial Area Specific Plan.

City of Fremont, Ongoing Environmental Services On-Call Contract, Fremont, CA

Work tasks primarily focus on noise insulation and vibration control design compliance for new residential projects and peer review other consultant's projects.

City of Fremont, Patterson Ranch EIR, Fremont, CA

Conducted noise and vibration portion of the EIR.

City of King City, Silva Ranch Annexation EIR, King City, CA

Conducted the noise portion of the EIR and assessed the suitability of the project areas for the intended development. Work included a reconnaissance of existing noise sources and receptors in and around the project areas, and long-term noise measurements at key locations.

Conoco Phillips Community Study and Expert Witness, Rodeo, CA
Investigated low frequency noise from exhaust stacks and provided expert witness services representing Conoco Phillips. Evaluated effectiveness of noise controls implemented by the refinery.

Golden Gate Park Concourse Underground Garage, San Francisco, CA
Noise and vibration testing during underground garage construction to monitor for residences and an old sandstone statue during pile driving for the City of San Francisco.

Laguna Honda Hospital, Clarendon Hall Demolition, San Francisco, CA
Project manager for performed vibration monitoring during demolition of an older wing of the Laguna Honda Hospital.

Loch Lomond Marina EIR, San Rafael, CA
Examined traffic noise impacts on existing residences for the City of San Rafael. Provided the project with acoustical analyses and reports to satisfy the requirements of Title 24.

Mare Island Dredge and Material Disposal, Vallejo, CA
EIR/EIS analysis of noise from planned dredged material off-loading operations for the City of Vallejo.

Napa Creek Vibration Monitoring Review, CA
Initially brought in to peer review construction vibration services provided by another firm, but eventually was tapped for its expertise to develop a vibration monitoring plan for construction activities near historic buildings and long-term construction vibration monitoring.

San Francisco DPW, Environmental Services On-Call, CA
Noise and vibration monitoring for such tasks as: Northshore Main Improvement project, and design noise mitigation for SOMA West Skate Park.

San Francisco PUC, Islais Creek Clean Water Program, San Francisco, CA
Community noise and vibration monitoring during construction, including several stages of pile driving. Coordination of noise and ground vibration measurements during pile driving and other construction activity to determine compliance with noise ordinance. Coordination with Department of Public Works to provide a vibration seminar for inspectors and interaction with Construction Management team and nearby businesses to resolve noise and vibration issues.

San Francisco PUC, Richmond Transport Tunnel Clean Water Program, San Francisco, CA
Environmental compliance monitoring of vibration during soft tunnel mining and boring, cut-and-cover trenching for sewer lines, hard rock tunnel blasting and site remediation. Work involved long-term monitoring of general construction activity, special investigations of groundborne vibration from pumps and bus generated ground vibration, and interaction with the public (homeowners).

Santa Clara VTA, Capitol Expressway Light Rail (CELR) Bus Rapid Transit (BRT) Update EIS, CA
Reviewed previous BRT analysis and provide memo to support EIS.

Shell Oil Refinery, Martinez, CA
Identified source of community noise complaints from tonal noise due to refinery equipment and operations. Developed noise control recommendations. Conducted round-the-clock noise measurements at nearby residence and near to the property line of the refinery and correlated results. Conducted an exhaustive noise survey of the noisier pieces of equipment throughout the refinery to identify and characterize the dominant noise sources that were located anywhere from a quarter to three-quarters of a mile away. Provided a list of actions to mitigate noise from the noisiest pieces of refinery equipment. Assisted the refinery in the selection of long-term noise monitoring equipment to be situated on the refinery grounds so that a record of the current noise environment will be documented, and future noise complaints can be addressed more efficiently.

Tyco Electronics Corporation, Annual Noise Compliance Study, Menlo Park, CA
Conducted annual noise compliance monitoring. Provided letter critiquing the regulatory requirements and recommending improvements.

University of California, San Francisco Mission Bay Campus Vibration Study, CA
Conducted measurements and analysis of ground vibration across site due to heavy traffic on Third Street. Analysis included assessment of pavement surface condition and propensity of local soil structure.

AMTB Inc.
Amah Mutsun Tribal Band

If you have done a Sacred Lands File (SLF) search and California Historical Resource Information System (CHRIS) and the Native American Heritage Commission (NAHC). If you have received any positives within 1 mile of the project area:

Our recommendations are as follows:

All Crews and Individuals who will be moving any earth be Cultural Sensitivity Trained.

A Qualified California Trained Archaeological Monitor be present during any earth movement. D.1

A Qualified Native American Monitor be present during any earth movement.

If you have not done the searches, please do so and contact us with the results for our recommendations.

Any further questions or information we are happy to assist.

Irenne Zwierlein

3030 Soda Bay Road,
Lakeport, CA 95453
amtbinc21@gmail.com
650-851-7489

AMTB Inc.
Amah Mutsun Tribal Band
3030 Soda Bay Road
Lakeport, CA 95453

Our rates for 2022

$ 150.00 per hour.

4 hours minimum

Cancellations not 48 hours prior will be charged a 4-hour minimum. There is a round trip mileage charge if canceled after they have traveled to site.

Anything over 8 hours a day is charged as time and a half.

Weekends are charged at time and a half.

Holidays are charged at double time.

For fiscal year (FY) 2022, standard per diem rate of $324 ($255 lodging, $69 M&IE).

M&IE Breakdown FY 2022					
M&IE Total[1]	Continental Breakfast/ Breakfast[2]	Lunch[2]	Dinner[2]	Incidental Expenses	First & Last Day of Travel[3]
$69	$16	$17	$31	$5	$64.00

Beginning on January 1, 2022, the standard mileage rates for the use of a car round trip (also vans, pickups or panel trucks) will be: 58.5 cents per mile driven for business use. or what the current federal standard is at the time. As of July 1, 2022 the rate will increase to 62.5 cents per mile.

Our Payment terms are 5 days from date on invoice.

Our Monitors are Members of the Amah Mutsun Tribal Band of Mission San Juan Bautista.

If you have any questions, please feel free to contact the AMTB Inc. at the below contact information.

Sincerely,
Irenne Zwierlein

Irenne Zwierlein

amtbinc21@gmail.com
650 851 7489

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 7/25/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Allied Brokers
591 Lytton Avenue
Palo Alto CA 94301

CONTACT NAME: Brenda Aldaco
PHONE (A/C, No, Ext): (650) 328-1000 | FAX (A/C, No): (650) 324-1142
E-MAIL ADDRESS: BusinessVIP@alliedbrokers.com

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A :	Scottsdale Insurance Company	41297
INSURER B :	United States Liability Insurance Company	25895
INSURER C :		
INSURER D :		
INSURER E :		
INSURER F :		

INSURED
Amah Mutsun Tribal Band
3030 SODA BAY RD
LAKEPORT CA 95453

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY; CLAIMS-MADE; X OCCUR; GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY; PRO-JECT; LOC; OTHER:			CPS7617452	07/09/2022	07/09/2023	EACH OCCURRENCE	$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
							MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 1,000,000
							GENERAL AGGREGATE	$ 2,000,000
							PRODUCTS - COMP/OP AGG	$ 2,000,000
							Deductible	$ 500
	AUTOMOBILE LIABILITY; ANY AUTO; OWNED AUTOS ONLY; SCHEDULED AUTOS; HIRED AUTOS ONLY; NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident)	$
							BODILY INJURY (Per person)	$
							BODILY INJURY (Per accident)	$
							PROPERTY DAMAGE (Per accident)	$
								$
	UMBRELLA LIAB; OCCUR; EXCESS LIAB; CLAIMS-MADE; DED; RETENTION $						EACH OCCURRENCE	$
							AGGREGATE	$
								$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N; ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH); If yes, describe under DESCRIPTION OF OPERATIONS below	N / A					PER STATUTE; OTH-ER	
							E.L. EACH ACCIDENT	$
							E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$
B	Professional Liability			SP 1573468B	06/21/2022	06/21/2023	Each Claim	$1,000,000
							Aggregate	$1,000,000
							Deductible	$2,500

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

PROOF OF COVERAGE

CERTIFICATE HOLDER

For Your Information

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Brenda Aldaco

CARPENTERS LOCAL UNION 405
SERVING SANTA CLARA & SAN BENITO COUNTIES

By Email

September 28, 2022

Tina Garg
Department of Planning, Building and Code Enforcement
200 E Santa Clara St
San Jose, CA 95113
Email: Tina.Garg@sanjoseca.gov

Re: Berryessa Road Mixed-Use Project Draft Environmental Impact Report
File Nos. PDC18-036/PD21-009/PT21-030/ER20-260.

Dear Ms. Tina Garg;

Carpenters Local 405 appreciates the opportunity to take part in the review process for the proposed Berryessa Road Mixed-Use Project (the Project) and to commenting on the City's Draft Environmental Impact Report (DEIR).

The Project presents tremendous economic opportunities if properly implemented, but also presents significant environmental impacts - including implications for worker safety - that must be mitigated or eliminated to the maximum extent feasible. In this regard, it is the eventual selection of a responsible contractor for the construction phase of the Project that will allow the DEIR's mitigation steps to be best realized. As elaborated further in this letter, the City can and should take steps beyond the CEQA process to encourage this, thereby ensuring to the maximum extent possible that its mitigation steps related to worker welfare are in fact carried out in practice. E.1

Local 405 intends to participate in the Project's CEQA and subsequent processes to ensure that the City of San Jose complies with its CEQA's mandate to minimize the Project's environmental impacts and hazards while maximizing its economic benefits for the community and skilled craft workers.

Local 405 commends the DEIR's identification and intention that mitigating steps should be taken to ensure worker safety during the construction phase of the Project in a number of areas. This includes the DEIR's regard to the following: E.2

- The identification of mitigation steps to reduce construction workers' exposure to residual concentrations of chemicals including organochlorine pesticides and pesticide-related metals.

2102 ALMADEN ROAD, SUITE 115 • SAN JOSE, CA 95125 • (408) 269-7316 FAX: (408) 264-7650

- The identification of mitigation steps to reduce construction workers' exposure to potential total petroleum hydrocarbons.

- The identification of mitigation steps to reduce construction workers' exposure to asbestos-containing materials and lead based paint during demolition.

E.2

Local 405 also notes the DEIR's assertion that this project is subject to the City's Private Sector Green Building Policy. This policy also takes account of worker welfare by fostering practices in the design, construction, and maintenance of buildings that will minimize the use and waste of energy, water, and other resources.

However, other than the mitigating measures and City policy identified within the DEIR, Local 405 notes that – beyond the CEQA process - a crucial mitigating factor in terms of worker welfare will ultimately be the Project Developer's eventual selection of responsible contractors to undertake construction. The City of San Jose currently has no adequate policy in place that would definitively encourage the use of responsible contractors on private developments such as the project in question. City policy that remains permissive to the presence of irresponsible E.3
contractors on projects of this size and nature jeopardizes the realization of the various, commendable mitigating steps that the City has outlined in its DEIR with regards to worker safety. After all, the mitigating steps the City has identified in its DEIR will ultimately rely on cooperation between the Project's eventual contractors and the various public agencies implicated by the DEIR's stated mitigation measures.

A lack of jobsite safety presents a clear burden for taxpayers when taking into account costs such as those posed by injuries to the State's workers' compensation system. Instead, recent research[1] cited by the Department of Labor[2] has advocated for the enactment of responsible bidder provisions as an "insurance policy" for taxpayers. This same research demonstrates that construction projects with responsible contractors were 19% less likely to have OSHA violations and had an average of 34% fewer violations per OSHA inspection when compared to projects that failed to ensure the inclusion of responsible contractors.

E.4

Local 405 has recently engaged the City of San Jose on the subject of responsible bidder provisions within City policy. On September 20, 2022, Local 405 formally submitted a letter to the City's planning department which proposes additions to the City's Municipal Code for any residential project larger than 10 units. These proposals include apprenticeship, healthcare, and local hire requirements that would encourage the selection of responsible contractors on a project such as this, including the use of a well-trained workforce able to identify and address safety issues; such as those identified as necessary-to-mitigate within the DEIR.

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[1] The Impact of Unions On Construction Worksite Health and Safety: Evidence From OSHA Inspections, *Illinois Economic Policy Institute and Illinois Labor and Employment*, November, 2021. Available at https://illinoisepi.files.wordpress.com/2021/11/ilepi-pmcr-unions-and-construction-health-and-safety-final.pdf

[2] The Connection Between Unions and Worker Safety, *U.S Department of Labor Blog*, May, 2022. Available at https://blog.dol.gov/2022/05/11/the-connection-between-unions-and-worker-safety#:~:text=A%20recent%20report%20surveying%20the,inspection%20than%20non%20union%20worksites.

The adoption of such standards is one example of steps the City can take to better guarantee worker welfare and, by extension, effectively realize the DEIR's mitigation steps for worker safety. Local 405 commends the City's intentions regarding worker welfare within this DEIR and looks forward to collaborating with the City beyond the Project's CEQA process to ensure its various mitigation measures are effectively realized and enforced. E.4

Sincerely,

Douglas Chesshire
Senior Field Representative
Carpenters Local 405