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BY E-MAIL ONLY

June 10, 2020

Planning Commission Chair Kristina Sturm
Members of the Planning Commission
Planners: Greg Wolff (gwolff@lovelafayette.org); Nancy Tran (ntran@lovelafayette.org)
c/o City Clerk Joanne Robbins, CMC (JRobbins@ci.lafayette.ca.us)
City of Lafayette
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Re: L03-11 Terraces of Lafayette

Planning Commission Chair Sturm and Honorable Members of the Planning Commission:

I am writing on behalf of Save Lafayette, a non-profit organization composed of residents living in and around the City of Lafayette ("City") concerning the proposed Terraces of Lafayette Project ("Project") proposed to be constructed at the southwest corner of Pleasant Hill and Deer Hill Roads by the O'Brien Land Company, LLC ("Developer"). This letter supplements our comments dated May 18, 2020. Despite our filing of detailed comments supported by expert analysis, there has been no response to our comments of May 18, 2020. Those comments clearly explained that the Project requires a Subsequent Environmental Impact Report ("SEIR") because of changed circumstances and new environmental impacts since the 2013 environmental impact report ("2013 EIR") was certified. Until an SEIR is prepared and certified, the City should not consider Project approval, or any issues that arise under the Housing Accountability Act ("HAA").

With this letter we submit the comments of Dr. Paul Rosenfeld, Ph.D., and Matt Hagemann, PG, C.Hg., of the environmental consulting firm, Soil Water Air Protection Enterprise (SWAPE). (Exhibit A). SWAPE concludes that the Project will have significant air quality impacts, exceeding numerical significance thresholds established by the Bay Area Air Quality Management District (BAAQMD).

Notably, City Attorney Robert Hodil stated at the May 18, 2020 Planning Commission hearing that exceedance of BAAQMD numerical significance thresholds would provide a cognizable basis to deny Project approval under the HAA. SWAPE concludes that the Project will create cancer risks from indoor air pollution

of 112 per million – more than 10 times above the BAAQMD CEQA cancer risk significance threshold of 10 per million. (Exhibit A, p. 3). SWAPE further concludes that diesel emissions generated during Project construction and operation will create a cancer risk of 130 per million at the maximally exposed individual receptor, approximately 200 meters away from the Project site. (Exhibit A, p. 20). SWAPE also concludes that the Project's proximity to SR-24 results in a cancer risk of 51.4 per million. (Exhibit A, p. 21). All of these numbers are far above the BAAQMD CEQA significance threshold of 10 per million. SWAPE also concludes that the Project will exceed CEQA significance thresholds for Greenhouse Gases (GHG). (Exhibit A, p. 24). An SEIR is required to analyze and mitigate these and other impacts of the Project. Furthermore, since the Project "would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific adverse impact," the City should deny approval of the Project. (Gov. Code sect. 65589.5(d)(2)).

SWAPE determined that the consultant for the 2020 Addendum improperly manually adjusted the CalEEMod air pollution model used to calculate the Project's air quality impacts, resulting in a significant underestimation of Project impacts. (Exhibit A, p. 8-10). For example, the consultant extended the construction schedule by up to 780% from the CalEEMod default values, resulting in an underestimation of construction emissions. (Id. p. 9). The consultant also assumed that the contractor would impose numerous construction dust mitigation measures when only one of these measures is required as a mitigation measure. (Id. p. 11-12). The Addendum consultant took credit for several mitigation measures that are not entitled to emission reductions in CalEEMod. (Id. p. 13-15). Finally, the Addendum conducted its analysis on the nearest sensitive receptor, which is 43 meters to the east of the Project site. However, AERSCREEN and other models require analysis to be conducted at the maximally exposed individual receptor (MEIR), which is 200 meters downwind of the Project site. (Id. pp. 18-19). Correcting these calculation errors, and calculating the impact at the proper MEIR, SWAPE determined that the Project will create a cancer risk of 130 per million at the offsite MEIR. (Id. p. 20).

The impacts identified by SWAPE are in addition to the impacts discussed in our May 18, 2020 letter. As explained in our May 18, 2020 letter:

1. A subsequent environmental impact report is required for the Project because it has new significant impacts that were not analyzed in the 2013 EIR; there are new mitigation measures that are feasible today that were not feasible in 2013; and there are impacts that are more severe today than analyzed in the 2013 EIR, including but not limited to the following:

    a. Wildlife biologist Dr. Shawn Smallwood, Ph.D., visited the site on May 10, 2020. Dr. Smallwood identified six special status species on the site which will be adversely impacted by the Project. (Exhibit A). The 2013 EIR and 2020 Addendum erroneously state that there are no special status species on the site.
    b. The Project requires destruction of 101 of 117 protected trees from the Project site -- 10 more mature trees than the Project analyzed in the

2013 EIR. This is a significant new impact of the Project that did not exist in 2013.

c. The Project proposes to add a new southbound lane on Pleasant Hill Road, which will cause a conflict with the Gateway Constraints policy, which is a significant impact under CEQA.
d. The Project has significant new traffic impacts that are more severe than analyzed in the 2013 EIR due to changed circumstances, as explained in the comment letter from the Elite Transportation Group.
e. The Project fails to preserve wildrye areas, in violation of mitigation measures imposed on the 2013 EIR.
f. The Addendum fails to analyze impacts on indoor air quality due to air pollution from adjacent Highway 24, and air pollution from composite wood products, despite the fact that this hazard was analyzed in the 2018 Addendum prepared by the Developer.
g. The Addendum fails to analyze wildfire risks, in violation of Section XX of CEQA Guidelines Appendix G, adopted in 2019. This risk is heightened since 2013, and highlighted by the fall 2019 fire that destroyed the Lafayette Tennis Club. An SEIR is required to analyze this risk, and whether the Project exacerbates risks related to evacuation, emergency vehicle access, adequacy of fire suppression water, etc.
h. The Project is different than the Project described in the 2013 EIR. The Project is reconfigured such that it no longer preserves wildrye areas, it requires destruction of 10 additional mature trees, and includes an extra lane on southbound Pleasant Hill Road. CEQA requires that the Project being approved must be analyzed in the EIR not some other project.

A subsequent EIR is required to analyze the above impacts and to propose feasible mitigation measures and to consider feasible alternatives to reduce these and other impacts. This is clearly significant new information that was not known and could not have been known in 2013, which necessitates an SEIR. Thus, the addendum prepared for the Project is inadequate.

2. The City should not even reach issues under the Housing Accountability Act ("HAA") until a legally adequate CEQA document is prepared. CEQA must be completed prior to any Project approval, and the HAA expressly preserves the City's authority under CEQA. (Gov. Code sect. 65589.5(e), 65589.5(o)(6)). If the City nevertheless decides to consider the HAA, the City is not compelled to approve the Project under the HAA for several reasons:

    a. The Project "would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific adverse impact." (Gov. Code sect. 65589.5(d)(2)). In particular, as discussed in the attached comments of environmental consulting firm, Soil Water Air Protection Enterprise (SWAPE), the Project will create cancer risks for future residents and nearby residents far above CEQA significance thresholds established by the Bay Area Air Quality Management District ("BAAQMD"). The Project will also create

significant wildfire risks. Thus, the City should therefore deny the Project under the provisions of the HAA.

b. The Project "is inconsistent with both the jurisdiction's zoning ordinance and general plan land use designation as specified in any element of the general plan as it existed on the date the application was deemed complete, and the jurisdiction has adopted a revised housing element in accordance with Section 65588 that is in substantial compliance with this article." (Gov. Code sect. 65589.5(d)(5)).
c. There has been an intervening change in the number of units in the proposed project of more than 20%, from 315 units to 44 units, thereby rendering the 2013 proposal void. As a result, the Project must comply with the current General Plan and zoning. (Gov. Code sect. 65589.5(o)(2)(E)). There is not dispute that the Project does not comply with the current General Plan and zoning.
d. The City has failed to comply with CEQA because a Subsequent EIR is required for the Project. Therefore, the City may not approve the Project pursuant to the terms of the HAA. (Gov. Code sect. 65589.5(e), 65589.5(o)(6)).

For the above reasons, we urge the Commission to continue consideration of this matter, and to require preparation of a Subsequent EIR before any further consideration of the Project.

PROJECT DESCRIPTION

The proposed project ("Project") consists of a multi-unit residential housing project at the southwest corner of Deer Hill Road and Pleasant Hill Road known as Terraces of Lafayette, which would include 315 residential units within 14 buildings and a clubhouse building on 22.27 acres of land. The Project would require removal of 101 of 117 protected trees from the Project site, destruction of one of the largest valley oaks in the City (58-inches), and destruction of 2 acres of native blue wildrye. The Project site includes a lush riparian woodland habitat, which is home to several protected species. Project construction requires 500,000 cubic yards of earth movement.

A somewhat similar project was proposed by the same Developer in 2011 ("2011 Project"). The City Council certified the final EIR for that version of the project in August 12, 2013. ("2013 EIR"). The 2013 EIR found that the 2011 Project would have 13 significant unmitigated environmental impacts in five different subject areas of aesthetics, air quality, biological resources, land use and planning, and transportation. The Project may therefore not be approved without a statement of overriding considerations. However, the City is under no legal obligation to adopt a statement of overriding considerations as this is a quintessentially discretionary political decision. In fact, in 2013, the city was poised to reject the Project with a finding that the Project's economic benefits did not outweigh its environmental impacts.

Facing near certain defeat, in December 9 2013, the developer abandoned the 2013 Project and submitted a very different project for approval, known as the Homes at

Deer Hill. ("2013 Project"). The 2013 Project included only 44 homes, preserved many of the protected trees on site and blue wildrye, including the 58-inch Great Oak tree. The City certified a new EIR for the 2013 Project. However, on June 5, 2018, the voters of the City rejected the 2013 Project by referendum, following successful litigation against the City's effort to thwart the voter's attempt to exercise their Constitutional rights. (*Save Lafayette v. City of Lafayette* (2018) 20 Cal.App.5th 657).

On June 15, 2018, the developer proposed the current Project. The current proposal has some similarities to the 2011 Project, but also many significant differences, including, but not limited to, the following:

- The current Project, requires destruction of 10 more protected tress than the 2011 Project,
- The current Project destroys more blue wildrye than the 2011 Project,
- The current Project requires a new southbound lane on Pleasant Hill Road, unlike the 2011 Project,
- The current Project does not include a median break on Pleasant Hill Road,
- The current Project extends the northbound left-turn lane at Pleasant Hill Road and Deer Hill Road/Stanley Blvd., to Acalanes Avenue,
- The current Project generates higher noise levels than the 2011 Project at nearby sensitive receptors such as home and the nearby Acalanes High School.

In 2018, the Developer submitted a CEQA Addendum for the Project prepared by consultant, First Carbon. ("2018 Addendum"). The City retained an independent consultant to review the 2018 Addendum. The independent consultant determined that the 2018 Addendum was legally inadequate, and that a Subsequent EIR was required due to changed circumstances since the 2013 EIR was certified. However, after threats of litigation from the developer's attorney, the City changed course, and decided to prepare a new CEQA Addendum, which was released on May 4, 2020. ("2020 Addendum").

BROWN ACT

As discussed in our letter of May 11, 2020, we ask the City to continue consideration of the Project until after the COVID-19 State of Emergency is lifted. The state of emergency makes it impossible for the public to actively participate in public meetings at which the Project will be considered. Since the Project does not pose any emergency, there is no reason that its consideration cannot be continued until after the state of emergency is lifted and the City is once again able to conduct regular meetings with public attendance. Many residents would like to address the Planning Commission, but City Staff has made clear that there will be no opportunity for the public to make oral comments to the Commission, in violation of the Brown Act. We incorporate the May 11, 2020 letter herein by reference.

Furthermore, we understand that it is the Planning commission's intention to prohibit any public comment at the upcoming meeting on June 15, 2020. This would

violate the Brown Act. The Brown Act requires the City to allow public comment on any matter on the agenda. Gov. Code sect. 54954.3 (a). Agenda is required 72 hours in advance of meeting. Only exception is when a meeting is continued for 24 hours or less, in which case a new agenda is not required, but only a notice of continuance. Gov. Code sect. 54955, 54955.1. Since the City has continued the meeting for more than 24 hours, a new agenda is required, and public comment must be allowed. Another exception exists when a subcommittee of the body is created, and the subcommittee has allowed public comment. Gov. Code sect. 54954.3(a). The Planning Commission has created no such subcommittee.

CEQA

As discussed in our letter of May 18, 2020, a Subsequent Environmental Impact Report is required for the Project because of changed circumstances and new environmental impacts since the 2013 environmental impact report ("2013 EIR") was certified. Until an SEIR is prepared and certified, the City should not consider Project approval, or any issues that arise under the Housing Accountability Act ("HAA").

In addition to the impacts summarized above, and discussed in our May 18, 2020 letter, we submit herewith as Exhibit A the comments of Dr. Paul Rosenfeld, Ph.D., and Matt Hagemann, C. Hg., of environmental consulting firm SWAPE who conclude that the Project will have significant air quality and greenhouse gas impacts, far exceeding CEQA significance thresholds established by the Bay Area Air Quality Management District ("BAAQMD").

A. The Project will have Significant Indoor Air Quality Impacts from Composite Wood Products.

Dr. Rosenfeld of SWAPE concludes that the Project will have significant indoor air quality impacts. He concludes that composite wood products commonly used in construction of this type off-gas formaldehyde. Dr. Rosenfeld concludes that even if the project uses CARB-compliant composite wood products, it will create a cancer risk for future residents of 112 per million – which vastly exceed the BAAQMD CEQA significance threshold of 10 per million. (Exhibit A, p. 3). SWAPE points out that there are feasible mitigation measures to reduce this risk, such as requiring no-added formaldehyde (NAF) composite wood products. This impact and mitigation measures should be analyzed in a SEIR.

The 2020 Addendum contends that impacts on future residents of the Project are not an impact cognizable under CEQA. (2020 Addendum 44). This is based on an erroneous reading of *California Building Industry Ass'n v. Bay Area Air Quality Mgmt. Dist.* (2015) 62 Cal.4th 369, 386 ("*CBIA*"). The failure to address the project's indoor air quality impacts is contrary to the California Supreme Court's decision in *CBIA*. At issue in *CBIA* was whether the Air District could enact CEQA guidelines that advised lead agencies that they must analyze the impacts of adjacent environmental conditions on a project. The Supreme Court held that CEQA does not generally require lead agencies to consider the environment's effects on a project. *CBIA*, 62 Cal.4th at 800-801. However, to

the extent a project may exacerbate existing adverse environmental conditions at or near a project site, those would still have to be considered pursuant to CEQA. *Id*. at 801 ("CEQA calls upon an agency to evaluate existing conditions in order to assess whether a project could exacerbate hazards that are already present"). In so holding, the Court expressly held that CEQA's statutory language requires lead agencies to disclose and analyze "impacts on ***a project's users or residents*** that arise ***from the project's effects*** on the environment." *Id*. at 800 (emphasis added).) Here, the Project exacerbates the indoor air quality impacts of SR-24 by adding emissions of formaldehyde, creating a "toxic soup." Therefore, the impact must be analyzed in an SEIR.

B. The Project will have Significant Indoor and Outdoor Air Quality Impacts due to the Proximity to SR-24.

The Project will have significant impacts related to indoor air quality that have not been addressed in the 2013 EIR or the 2020 Addendum. Oddly, these impacts were analyzed in the developer's 2018 Addendum, and mitigation measures were proposed, but those mitigation measures are not included in the 2020 Addendum. SWAPE concludes that air pollution, and diesel particulate matter from SR-24 will create a cancer risk of 51 per million. (Exhbit A, p. 21).

The 2018 Addendum concludes that future residents of the Project will suffer a cancer risk of over 51 per million due largely to the Project's adjacency to SR-24. (2018 Addendum 43 (https://www.lovelafayette.org/Home/ShowDocument?id=5674)). This exceeds the Bay Area Air Quality Management District (BAAQMD) CEQA significance threshold of 10 per million by over five hundred percent. Id. Therefore, this is a significant impact within the meaning of CEQA.[1] As a result the 2018 Addendum recommends a mitigation measure of requiring MERV 13 air filtration, which would allegedly reduce the impact to less than significant levels. (2018 Addendum 46).

The 2020 Addendum ignores this impact identified in the 2018 Addendum entirely, and relies on the analysis from the 2013 EIR. (2020 Addendum 30). But, as discussed above, the City cannot relegate the 2018 Addendum to oblivion simply by ignoring its

[1] Such air quality thresholds are treated as dispositive in evaluating the significance of a project's air quality impacts. See, e.g. *Schenck v. County of Sonoma* (2011) 198 Cal.App.4th 949, 960 (County applies BAAQMD's "published CEQA quantitative criteria" and "threshold level of cumulative significance"). See also *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 110-111 ("A 'threshold of significance' for a given environmental effect is simply that level at which the lead agency finds the effects of the project to be significant"). The California Supreme Court recently made clear the substantial importance that a BAAQMD significance threshold plays in providing substantial evidence of a significant adverse impact. *Communities for a Better Environment v. South Coast Air Quality Management Dist*. (2010) 48 Cal.4th 310, 327 ("As the [South Coast Air Quality Management] District's established significance threshold for NOx is 55 pounds per day, these estimates [of NOx emissions of 201 to 456 pounds per day] constitute substantial evidence supporting a fair argument for a significant adverse impact").

conclusions. The City cannot "unring the bell." (*Stanislaus Audobon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144.) Therefore, the impact remains significant and unmitigated. The 2020 Addendum relies on the mitigation measures from the 2013 EIR, which are MERV 9-12 filtration. (2020 Addendum 30, 40, 43). However, the 2018 Addendum found that this mitigation failed to reduce the impact to less than significant, and that much more stringent MERV 13 or higher was required. These conflicting conclusions create a fair argument of a significant impact that must be analyzed in an SEIR. The impact must be analyzed and mitigated in an SEIR to safeguard the health of future residents of the Project. Furthermore, the SEIR should analyze more stringent mitigation measures which are available and feasible, such as MERV 16 air filtration, which would further reduce pollution levels. These mitigation measures were not feasible at the time of the 2013 EIR, so this constitutes new mitigation measures that were not feasible at the time of the prior EIR that must be analyzed in an SEIR to mitigate a significant impact.

In any case, MERV filters do now work at all if residents open their windows, or engage in outdoor activities. Since the Project includes operable windows, and outdoor recreation areas, the City cannot conclude that MERV filtration will mitigate air pollution to less than significant levels. Residents and guests may be exposed to very high levels of cancer-cause air pollution from nearby SR-24 when their windows are open and when they are recreating outdoors. This risk is heightened since respiration levels or much higher during outdoor recreation activities then when relaxing indoors.

In addition, neither the 2013 EIR, the 2018 Addendum, nor the 2020 Addendum analyzed the impacts of formaldehyde emissions from composite wood products. This impact was not widely known until 2015 – after the publication of the 2013 EIR. Therefore, it is a new significant impact, which exacerbates the indoor air quality impacts identified in the 2018 Addendum.

C. The Project Will have Significant Air Quality Impacts Related to Diesel Particulate Matter Emissions.

SWAPE concludes that the Project will generate significant diesel particulate matter emissions, both during the major earth moving during Project construction, and during ongoing operation from trucks and other diesel powered equipment that will service the Project. SWAPE concludes that the cancer risk at the maximally exposed individual receptor (MEIR), which is 200 meters from the Project site, would be **130 per million** – far above the BAAQMD's 10 per million CEQA significance threshold. (Exhibit A, p. 20). SWAPE concludes that the Addendum based its conclusions on several erroneous assumptions. The Addendum analyzed cancer risk at the nearest receptor, which is 43 meters from the Project site. However, due to wind patterns, the nearest receptor is not the maximally exposed receptor, which is actually 200 meters from the project site. (Exhibit A, p. 18-19). SWAPE also found several inputs parameters had been manually altered in the air model without explanation, skewing the results. (Exhibit A., pp. 8-15). The Addendum does not even conduct a health risk assessment (HRA), and thus, there is no substantial evidence to rebut SWAPE's conclusions. (Exhibit A, p. 16). This impact must be analyzed and mitigated in an SEIR.

D. The Project will have Significant Greenhouse Gas Impacts.

SWAPE concludes that the Project will have significant greenhouse gas (GHG) impacts, in excess of CEQA significance thresholds. (Exhibit A, p. 23). SWAPE points out that the Addendum invents its own GHG significance threshold of 2.77 metric tons CO2e per service pollution per year. (Exhibit A, p. 22). However, this threshold we invented by the Addendum author and has not been endorsed by any authoritative agency. Instead, SWAPE concludes that the Association of Environmental Professions GHG threshold of 2.6 MT CO2/SP/year should be used and has been used by agencies throughout the BAAQMD. (Exhibit A, p. 23). Applying that threshold, the Project's GHG emissions of 2.88 MT CO2/SP/year are significant and must be mitigated. SWAPE suggests numerous mitigation measures that should be analyzed in an SEIR.

HOUSING ACCOUNTABILITY ACT

The City should not consider issues under the Housing Accountability Act (HAA) at all until a subsequent EIR is prepared. The HAA expressly requires CEQA compliance. (Gov. Code sect. 65589.5(e), 65589.5(o)(6)). CEQA review must be completed prior to any project approval.

If the City nevertheless decides to proceed with consideration of the HAA, Save Lafayette urges the City to reject the Project for several reasons. First, the HAA expressly requires compliance with CEQA. (Gov. Code sect. 65589.5(e), 65589.5(o)(6)). As discussed above, the Project fails to comply with CEQA. The City may therefore not make the findings necessary to issue a statement of overriding considerations which is necessary given the Project's numerous significant unmitigated impacts.

Second, the HAA provides that the City may decline to approve the Project if it has significant unmitigated effects on public health and safety. (Gov. Code sect. 65589.5(d)(2)). As discussed above, the Project has numerous significant unmitigated impacts on public health and safety. The Project will expose both residents of the Project and nearby residents to cancer risks far above applicable BAAQMD CEQA significance thresholds. The Project will create risks of interference with wildfire evacuation routes. The Project will create traffic impacts, including impacts related to traffic safety. Although the Staff Report contends that traffic impacts are not health and safety impacts, this is patently false, since the evidence shows that traffic impacts will interfere with wildfire evacuation and emergency vehicle access, and will also cause risks of vehicular accidents and pedestrian safety impacts. There are not merely issues of convenience. These are all public health and safety impacts which provide ample basis for the City to reject the Project.

Third, the HAA provides that the City may decline to approve the Project if it is inconsistent with the General Plan and Zoning as it existed at the time the application was "deemed complete." (Gov. Code sect. 65589.5 (d)(5).) The developer contends that the application was deemed complete in 2011 and that the Project was consistent with the

General Plan and Zoning as it existed in 2011. As discussed by former Lafayette Planning Commissioner Guy Atwood, the Project failed to comply with the General Plan and Zoning even in 2011. Mr. Atwood was the Chair of the 2002 General Plan Advisory Committee that wrote the General Plan. Mr. Atwood explains that the APO zoning existing in 2011 required the area to remain semi-rural, and to protect the natural and scenic quality of the hillsides and ridgelines. The 2020 Addendum concludes that the Project fails to comply with nearly identical requirements of the current General Plan. Therefore, even if the developer is correct, and the 2011 General Plan applies, the Project is inconsistent with that version of the General Plan and Zoning and the City may reject the Project.

Fourth, under the HAA, the City must apply the current General Plan and Zoning if the developer amended the project since the time it was "deemed complete" to change the number of units by more than 20%. The HAA provides that the current General Plan and Zoning apples if, "The housing development project is revised following submittal of a preliminary application pursuant to Section 65941.1 such that the number of residential units or square footage of construction changes by 20 percent or more." (Cal. Gov't Code § 65589.5 (o)(2)(E)). Since the Project was "deemed complete" in 2011, the developer changed the Project into the Deer Hill Project, which had only 44 units. This Deer Hill project resulted in much more than 20% reduction in the number of units. Then, in 2018, the developer changed the Project again, increasing the number of units back to 315. Again, this is an increase of more than 20%. These changes of more than 20% require application of the current General Plan and Zoning under Section 65589.6 (o)(2)(E) of the HAA. There is no dispute that the Project fails to comply with the current General Plan and Zoning and the City must therefore reject the Project. (Gov. Code sect. 65589.5 (d)(5).)

Fifth, far more than 2.5 years have passed since the 2011 Project was approved. Cal. Gov't Code § 65589.5 (o)(2)(D)). The HAA provides that the developer cannot rely on the prior General Plan and Zoning if it fails to commence construction within two and a half years of receiving approval for the Project. The intent of this provision is to encourage developers to construct affordable housing as quickly as possible, rather than sitting on entitlements indefinitely, as has occurred in this case. The HAA provides that the developer may not rely on the prior General Plan and Zoning if: "The housing development project has not commenced construction within two and one-half years following the date that the project received final approval." (Cal. Gov't Code § 65589.5 (o)(2)(d).)

In this case, the developer and City attempt to avoid application of this provision by reliance on a so-called "Process Agreement." However, process agreements are nowhere mentioned in the HAA. Indeed, this type of agreement seems to have no meaning under any of California's land use laws. The City and developer appear to have invented the Process Agreement out of whole cloth. The City cannot rely on such an extra-legal agreement to undermine the language and purposes of the HAA – namely to ensure the timely and speedy construction of affordable housing. Allowing the use of Process Agreements would allow developers to obtain entitlements and then sit on projects for years or decades, thereby depriving the state of needed housing. This clearly

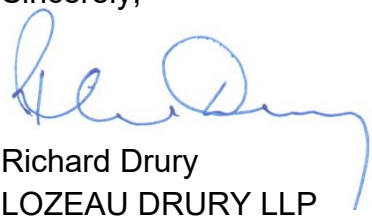
is not the intent of the HAA. The Process Agreement violates Government Code section 65950 (a)(3), which requires that a CEQA lead agency must either approve or disapprove a project within ninety days of the date of certification of the EIR. This provision ensures that the EIR will not become stale, as has clearly occurred in this case. The law simply does not allow the City to put a proposed project in suspended animation for years after certification of the EIR. Since more than 2.5 years have passed since Project approval, the City must apply the current General Plan and Zoning. There is no dispute that the Project fails to comply, and the City must deny the Project.

CONCLUSION

For the above reasons, Save Lafayette asks the Planning Commission to:

1. Continue consideration of this matter until after the lifting of the COVID-19 State of Emergency;
2. Require preparation of a Subsequent Environmental Impact Report to analyze the Project's significant adverse environmental impacts, including many new significant impacts that were not analyzed in the 2013 EIR.
3. Reject the Project because it fails to quality for approval under the Housing Accountability Act.

Sincerely,



Richard Drury
LOZEAU DRURY LLP

CC: Mayor Mike Anderson (manderson@lovelafayette.org)
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EXHIBIT A

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

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June 8, 2020

Richard Drury
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Subject: Comments on Resumed Terraces of Lafayette Project (SCH No. 2011072055)

Dear Mr. Drury,

We have reviewed the May 2020 Addendum ("Addendum") for the Resumed Terraces of Lafayette Project ("Project") located in the City of Lafayette ("City"). The Project proposes to construct 315 multi-family apartments, totaling 332,395-SF, as well as a 13,300-SF clubhouse, a 950-SF leasing office, and 567 parking spaces on the 22.27-acre Project site.

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

Air Quality

Failure to Evaluate Indoor Air Quality Impacts[1]

The Project documents fail to evaluate the proposed Project's indoor air quality ("IAQ") impacts, and as such, the less than significant air quality conclusion should not be relied upon.

IAQ is particularly important because occupants, on average, spend approximately ninety percent of their time indoors with the majority of this time spent at home.[2] IAQ also is a serious concern for

[1] As referenced from: Offermann, Francis J, (May 2020) "Indoor Air Quality: Lafayette West End Project – 3721 Mt. Diablo Blvd., Lafayette, CA (IEE File Reference: P-4359).
[2] U.S. Environmental Protection Agency (EPA). (September 2011) Exposure Factors Handbook: 2011 Edition, Chapter 16 – Activity Factors. Report EPA/600/R-09/052F.

workers in hotels, offices and other business establishments. The concentrations of many air pollutants are often elevated indoors relative to outdoors because many materials and products used indoors contain and release a variety of air pollutants.[3] Specifically, the primary source of formaldehyde indoors is composite wood products manufactured with urea-formaldehyde resins, such as plywood, medium density fiberboard, and particleboard. These materials are most commonly used in flooring, cabinetry, baseboards, window shades, interior doors, and window/door trims during building construction. As inhalation is the primary route of exposure to indoor air pollutants, the design and construction parameters are the critical provision for adequate ventilation and the reduction of sources of indoor air contaminants.

In a recent study[4] of 108 new homes in California, 25 air contaminants were measured, with formaldehyde being identified as the contaminant with the highest cancer risk as determined by the California Proposition 65 Safe Harbor Levels,[5] No Significant Risk Levels ("NSRL") for carcinogens. The NSRL is the daily intake threshold that would result in one excess case of cancer in an exposed population of 100,000 (i.e., ten in one million cancer risk). The calculated NSRL for formaldehyde is 40 µg/day. The formaldehyde NSRL concentration that represents a daily dose of 40 µg is 2 µg/m^3, assuming a continuous 24-hour exposure, a total daily inhaled air volume of 20 m^3, and 100% respiratory absorption. All of the homes examined in this study exceeded this NSRL concentration of 2 µg/m^3. The median indoor formaldehyde concentration was 36 µg/m^3, and ranged from 4.8 to 136 µg/m^3, which corresponds to a median exceedance of the 2 µg/m^3 NSRL concentration of 18 and a range of 2.3 to 68. Therefore, for a resident living in a California home with the ***median*** indoor formaldehyde concentration of 36 µg/m^3, the increased cancer risk is 180 in one million, as a result of formaldehyde alone. According to the Bay Area Air Quality Management District's ("BAAQMD") CEQA Guidelines, the significance threshold for airborne cancer risk is 10 in one million.[6]

In addition to being carcinogenic to humans, formaldehyde also acts as a potent eye and respiratory irritant. In the study discussed above, 98% of homes exceeded the Chronic reference exposure level ("REL") of 9 µg/m^3 and 28% of homes exceeded the Acute REL of 55 µg/m^3.

In January 2009, the California Air Resource Board ("CARB") adopted an Airborne Toxics Control Measure (ATCM) in order to reduce formaldehyde emissions from composite wood products.[7] However,

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[3] Hodgson, A. T., D. Beal, J.E.R. McIlvaine, (2002), "Sources of formaldehyde, other aldehydes and terpenes in a new manufactured house." Indoor Air 12: 235–242

[4] California Air Resources Board (CARB) and California Environmental Protection Agency (EPA). (November 2009), "Ventilation and Indoor Air Quality In New Homes," https://ww2.arb.ca.gov/sites/default/files/classic//research/apr/past/04-310.pdf

[5] Office of Environmental Health Hazard Assessment (OEHHA), (March 2019), "Proposition 65 No Significant Risk Levels (NSRLs) for Carcinogens and Maximum Allowable Dose Levels (MADLs) for Chemicals Causing Reproductive Toxicity," https://oehha.ca.gov/media/downloads/proposition-65//safeharborlist032519.pdf.

[6] BAAQMD (May 2017) California Environmental Quality Act Air Quality Guidelines, https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, p. 2-2.

[7] California Air Resources Board (CARB), (2007), "Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products," See also California Code of Regulations, title 17, §93120.

while this ATCM has helped reduce formaldehyde emissions in California, it does not preclude that homes built with CARB ATCM-certified wood composite products are below exposure guidelines.

A follow up study[8] was conducted in 2016-2018 to the study discussed above, and found that the median indoor formaldehyde in new homes built after 2009 to include CARB Phase 2 Formaldehyde ATCM materials had lower indoor formaldehyde concentrations, with median indoor concentrations of 22.4 µg/m^3, as compared to a median of 36 µg/m^3 in the 2007 study. Thus, while new homes built after the 2009 CARB Formaldehyde ATCM have an approximately 38% lower median indoor formaldehyde concentration and cancer risk, the median lifetime cancer risk is still 112 in one million for homes built with CARB-compliant composite wood products. This vastly exceeds the BAAQMD threshold of a 10 in one million excess cancer risk.

In regard to the Resumed Terraces of Lafayette Project, residents will potentially have continuous exposure (e.g., 24 hours per day, 52 weeks per year). These exposures are anticipated to result in significant cancer risks resulting from exposures to formaldehyde released by the building materials and furnishing. We will assume these residences will be construction with CARB Phase 2 Formaldehyde ATCM materials and will be ventilated with the minimum code required outdoor air. As such, the indoor residential formaldehyde concentrations are assumed to be represented by the residences observed in the study built with CARB Phase 2 Formaldehyde ATCM materials, with a median value of 22.4 µg/m^3.[9] Assuming that the residents have a daily breathing rate ("DBR") of 20 m^3, the average 70-year lifetime formaldehyde dose is 448 µg/day for continuous exposure in the residences. This represents an excess cancer risk of 112 in one million, which vastly exceeds the BAAQMD cancer risk threshold of 10 in one million.[10] This is the most conservative and health protective analysis. However, for occupants without continuous exposure, the cancer risk will be proportionately less, but still substantially above the BAAQMD threshold (e.g., for 12 hours/day occupancy, excess cancer risk is still more than 5 times the BAAQMD threshold).

Please see Exhibit A, *Indoor Formaldehyde Concentrations* and the *CARB Formaldehyde ATCM*, for additional analysis to show that utilization of CARB Phase 2 Formaldehyde ATCM materials will not ensure acceptable cancer risks with respect to formaldehyde emissions from composite wood products.

The following describes a method that we recommend to be used prior to Project construction, during the environmental review under CEQA, for determining if a project's indoor concentrations resulting from formaldehyde emissions of the project-specific building materials/furnishings exceed applicable thresholds. Such analysis can be used to identify those materials/furnishings that have formaldehyde

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[8] Chan, W., Kim, Y., Singer, B., and Walker I. 2019. Ventilation and Indoor Air Quality in New California Homes with Gas Appliances and Mechanical Ventilation. Lawrence Berkeley National Laboratory, Energy Technologies Area, LBNL-2001200, DOI: 10.20357/B7QC7X.

[9] Chan, W., Kim, Y., Singer, B., and Walker I. 2019. Ventilation and Indoor Air Quality in New California Homes with Gas Appliances and Mechanical Ventilation. Lawrence Berkeley National Laboratory, Energy Technologies Area, LBNL-2001200, DOI: 10.20357/B7QC7X.

[10] BAAQMD (May 2017) California Environmental Quality Act Air Quality Guidelines, https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, p. 2-2.

emissions rates that contribute to significant indoor concentrations, prior to completion of the City's CEQA review and project approval, so that alternative, lower-emitting materials/furnishings may be selected and higher minimum outdoor air ventilation rates can be increased to achieve acceptable indoor air concentrations and incorporated as mitigation measures for the project.

Building Material/Furnishing Formaldehyde Emissions Assessment

This formaldehyde emissions assessment should be used for environmental review under CEQA to assess the indoor formaldehyde concentrations from the proposed loading of building materials/furnishings, area-specific formaldehyde emission rate data for building materials/furnishings, and design minimum outdoor air ventilation rates. This assessment allows the City to determine prior to the conclusion of the environmental review process and the building materials/furnishings are specified, purchased, and installed whether the total chemical emissions will exceed applicable cancer and non-cancer guidelines. If so, this assessment also allows for changes in the selection of specific material/furnishings and/or the design of minimum outdoor air ventilation rates such that cancer and non-cancer thresholds are not exceeded.

(1) Define Indoor Air Quality Zones

Divide the building into separate indoor air quality zones ("IAQ Zones"). IAQ Zones are defined as areas of well-mixed air. As such, each ventilation system with recirculating air is considered a single zone, and each room or group of rooms where air is not recirculated (e.g. 100% outdoor air) is considered a separate zone. For IAQ Zones with the same construction material/furnishings and design minimum outdoor air ventilation rates (e.g. hotel rooms, apartments, condominiums, etc.), the formaldehyde emission rates need only be assessed for a single IAQ Zone of that type.

(2) Calculate Material/Furnishing Loading

For each IAQ Zone, determine the total building material and furnishing loads (e.g. m^2 material/m^2 floor area) from an inventory of *all* potential indoor formaldehyde sources, including floor, ceiling tiles, furnishings, finishes, insulation, sealants, adhesives, and any products constructed with composite wood products containing urea-formaldehyde resins (e.g., plywood, medium density fiberboard, particleboard, etc.).

(3) Calculate the Formaldehyde Emission Rate

For each building material, calculate the formaldehyde emission rate (µg/h) from the product of the area-specific formaldehyde emission rate (µg/m2-h) and the area (m^2) of material in the IAQ Zone, and from each furnishing (e.g., chairs, desks, etc.) from the unit-specific formaldehyde emission rate (µg/unit-h) and the number of units in the IAQ Zone.

NOTE: As a result of high-performance building rating systems and building codes (California Building Standards Commission; USGBC), most manufacturers of building materials furnishings sold in the US conduct chemical emission rate tests using the California Department of Health ("CDPH") "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using

Environmental Chambers,"[11] or other equivalent chemical emission rate testing methods. Most manufacturers of building furnishings sold in the US conduct chemical emission rate tests using ANSI/BIFMA M7.1 Standard Test Method for Determining VOC Emissions,[12] or other equivalent chemical emission rate testing methods. These, as well as other chemical emission rate testing program, typically certify that a material or finishing does not create indoor chemical concentrations in excess of the maximum concentrations permitted by their certification. For instance, the CDPH emission rate testing requires that the measured emission rates when input into an office, school, or residential model do not exceed one-half of the OEHHA Chronic Exposure Guidelines[13] for the 35 specific VOCs, including formaldehyde, as listed in the CDPH test method.[14] These certifications themselves do not provide the actual area-specific formaldehyde emission rate of the product, but rather provide data that the formaldehyde emission rates do not exceed the maximum rate allowed by the certification. For example, the data for a certification of a specific type of flooring may be used to calculate that the area-specific emission rate of formaldehyde is less than 31 $\mu g/m^2$-h, but not the actual measured specific emission rate. These area-specific emission rates determine from the product certifications can be used as an initial screening-level estimate of the formaldehyde emission rate.

If the area-specific emission rates of a building material or furnishing is needed (i.e., if the initial emission estimates exceed the certification levels), then data, including the complete chemical emission rate test report, can be acquired from the manufacturer. For instance, the complete CDPH emission test report will provide the actual area-specific emission rates for not only the 35 specific VOCs, including formaldehyde, but also of the cancer and reproductive/developmental chemical listed in the California Proposition 65 Safe Harbor Levels,[15] all of the toxic air contaminants ("TACs") in the CARB Toxic Air Contamination List,[16] and the 10 chemicals with the greatest emission rates. Alternatively, a sample of the building material furnishing can be submitted to a chemical emission rate testing laboratory, to measure the formaldehyde emission rate.

(4) *Calculate the Total Formaldehyde Emission Rate*

[11] California Department of Public Health (CDPH), (January 2017), "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/CDPH%20Document%20Library/CDPH-IAQ_StandardMethod_V1_2_2017_ADA.pdf

[12] BIFMA, "Product Safety and Performance Standards and Guidelines," https://www.bifma.org/page/standardsoverview.

[13] OEHHA, (November 2019), "Acute, 8-hour and Chronic Reference Exposure Level (REL) Summary," https://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary.

[14] California Department of Public Health (CDPH), (January 2017), "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/CDPH%20Document%20Library/CDPH-IAQ_StandardMethod_V1_2_2017_ADA.pdf, Table 4-1.

[15] Office of Environmental Health Hazard Assessment (OEHHA), (March 2019), "Proposition 65 No Significant Risk Levels (NSRLs) for Carcinogens and Maximum Allowable Dose Levels (MADLs) for Chemicals Causing Reproductive Toxicity," https://oehha.ca.gov/media/downloads/proposition-65//safeharborlist032519.pdf.

[16] CARB, "Identified Toxic Air Contaminants," https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants.

For each IAQ Zone, calculate the total formaldehyde emission rate (i.e., µg/h) from the individual formaldehyde emission rates from each of the building material/furnishings as determined in Step 3.

(5) *Calculate the Indoor Formaldehyde Concentration*

For each IAQ Zone, calculate the indoor formaldehyde concentration (µg/m^3) from Equation 1 (below)) by dividing the total formaldehyde emission rates (µg/h) as determined in Step 4, by the design minimum outdoor air ventilation rate (m^3/h) for the IAQ Zone.

$$\text{Equation 1: } C_{in} = \frac{E_{total}}{Q_{oa}}\text{, where:}$$

C_{in} = indoor formaldehyde concentration (µg/m^3)

E_{total} = total formaldehyde emission rate into the IAQ Zone (µg/h)

Q_{oz} = design minimum outdoor air ventilation rate to the IAQ Zone (m^3/h)[17]

(6) *Calculate the Indoor Exposure Cancer and Non-Cancer Health Risks*

For each IAQ Zone, calculate the cancer and non-cancer health risks from indoor formaldehyde concentrations determined in Step 5.[18]

(7) *Mitigate Indoor Formaldehyde Exposures of Exceeding the CEQA Cancer and/or Non-Cancer Health Risks*

In each IAQ Zone, provide mitigation for any formaldehyde exposure risk, described in Step 6, that exceeds the CEQA cancer risk threshold of 10 in one million, or the CEQA non-cancer Hazard Quotient of 1.0. Provide the source and/or ventilation mitigation required in all IAQ Zones to reduce the health risks of the chemical exposures to below the CEQA thresholds.

Source mitigation for formaldehyde may include:

(A) Reducing the amount of materials and furnishings that emit formaldehyde; and
(B) Substituting different materials with lower area-specific emission rates of formaldehyde.

Ventilation mitigation to reduce formaldehyde emitted from building materials/furnishings includes:

(A) Increasing the design minimum outdoor ventilation rate to the IAQ Zone.

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[17] Equation 1 is based upon mass balance theory, and is referenced in Section 3.10.2, "Calculation of Estimated Building Concentrations" of the California Department of Health "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers," see also California Department of Public Health (CDPH), (January 2017), "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/CDPH%20Document%20Library/CDPH-IAQ_StandardMethod_V1_2_2017_ADA.pdf.

[18] OEHHA (February 2015) Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments, https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

NOTE: Mitigating the formaldehyde emissions through use of less material/furnishings, or use of lower emitting materials/furnishings, is the preferred mitigation option. This is because mitigation with increased outdoor air ventilation increases initial and operating costs associated with the heating/cooling systems. Furthermore, we are not asking that the builder to "speculate" upon what and how much composite materials will be used, but rather at the design stage to select composite wood materials based on the formaldehyde emission rates that manufacturers routinely conduct using the California Department of Health "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers,"[19] and use the procedure described (i.e. Building Material/Furnishing Formaldehyde Emissions Assessment). This will ensure that the materials selected achieve acceptable cancer risks from material off gassing of formaldehyde.

Feasible Mitigation Measures Available to Reduce Indoor Air Quality Impacts

We recommend the following mitigation measures to minimize the impacts of the proposed Project on indoor air quality, specifically relating to formaldehyde:

- Use only composite wood materials (e.g., hardwood plywood, medium density fiberboard, particleboard, etc.) for all interior finish systems that are made with CARB-approved no-added formaldehyde ("NAF") resins or ultra-low emitting formaldehyde ("ULEF") resins.[20] Other projects such as the AC by Marriott Hotel – West San Jose Project (Asset Gas SC Inc.) and 2525 North Main Street, Santa Ana (AC 2525 Main LLC, 2019) have entered into settlement agreements stipulating the use of composite wood materials only containing NAF or ULEF resins.
- Conduct the previously described Building Material/Furnishing Chemical Emissions Assessment, to determine that the combination of formaldehyde emissions from building materials and furnishings do not create indoor formaldehyde concentrations that exceed thresholds.

Note: We are not asking that the building "speculate" upon what and how much composite materials will be used. Rather, we are asking to select composite wood materials during the design state based on the formaldehyde emissions rates that manufacturers routinely conduct using the CDPH "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions for Indoor Sources Using Environmental Chambers,"[21] and the procedure previously described.[22]

Furthermore, we recommend the following mitigation measure to minimize the impacts of the proposed Project on indoor air quality, specifically relating to outdoor air ventilation:

- Provide *each* habitable room with a continuous mechanical supply of outdoor air that meets or exceeds the California 2016 Building Energy Efficiency Standards requirements of the greater of 15 cfm/occupant or 0.15 cfm/ft^2 of floor area. Following installation of the system, conduct regular testing and balancing to ensure that the required amount of outdoor air is entering each habitable room. Also provide a written report documenting the outdoor airflow rates. Do not

[19] (CDPH, 2017),
[20] CARB 2009
[21] CDPH, 2017
[22] See Building Material/Furnishing Formaldehyde Emissions Assessment, located on page 4 of this document.

use exhaust only mechanical outdoor air systems; use only balanced outdoor air supply and exhaust systems or outdoor air supply only systems. Provide a manual for occupants and maintenance personnel describing the purpose of the mechanical outdoor air system and the operation and maintenance requirements of the system.

These measures offer a cost-effective, feasible way to incorporate lower-emitting design features into the proposed Project, which subsequently, reduce impacts resulting from Project construction and operation due to formaldehyde and outdoor air ventilation. A revised CEQA evaluation should be prepared to include all feasible mitigation measures, as well as include an updated air quality analysis to ensure that the necessary mitigation measures are implemented to reduce emissions to below thresholds. The revised CEQA evaluation should also demonstrate 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.

Unsubstantiated Input Parameters Used to Estimate Project Emissions

The Addendum's air quality analysis relies on emissions calculated with CalEEMod.2016.3.2.[23] CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act ("CEQA") requires that such changes be justified by substantial evidence.[24] 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 were utilized in calculating the Project's air pollutant emissions and make known which default values were changed as well as provide justification for the values selected.[25]

Review of the Project's air modeling demonstrates that the Addendum underestimates emissions associated with Project activities. As previously stated, the Addendum's air quality analysis relies on air pollutant emissions calculated using CalEEMod. When reviewing the Project's CalEEMod output files, provided in the Air Quality and Greenhouse Gas Technical Assessment as Appendix C to the Addendum, we found that several model inputs were not consistent with information disclosed in the Addendum. As a result, the Project's construction and operational emissions are underestimated. An updated CEQA evaluation should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

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[23] CAPCOA (November 2017) CalEEMod User's Guide, http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4.
[24] CAPCOA (November 2017) CalEEMod User's Guide, http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 1, 9.
[25] CAPCOA (November 2017) CalEEMod User's Guide, http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, fn 1, p. 11, 12 – 13. A key feature of the CalEEMod program is the "remarks" feature, where the user explains why a default setting was replaced by a "user defined" value. These remarks are included in the report.

Unsubstantiated Changes to Construction Schedule

Review of the Project's CalEEMod output files demonstrates that the model included several changes to the Project's anticipated construction schedule (see excerpt below) (Appendix C, pp. 33, 34).

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	108.00
tblConstructionPhase	NumDays	370.00	392.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	35.00	110.00
tblConstructionPhase	NumDays	35.00	45.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	10.00	44.00
tblConstructionPhase	NumDays	10.00	88.00
tblConstructionPhase	NumDays	10.00	45.00

As you can see in the excerpt above, each phase of the construction period was increased from the default. Specifically, the architectural coating phase was increased by 440%, from the default value of 20 days to 108 days; the first grading phase was increased by approximately 214%, from the default value of 35 days to 110 days; and the "Utilities 1" site preparation phase was increased by 780%, from the default value of 10 days to 88 days. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[26] According to the "User Entered Comments & Non-Default Data" table, the justification provided for this change is: "schedule per the Project Applicant" (Appendix C, pp. 32). However, while the Air Quality and Greenhouse Gas Technical Assessment indicates that construction will last approximately 700 days, the Addendum and associated documents failed to provide a construction schedule or address each phase whatsoever. Thus, the Addendum and associated documents fail to justify the significant changes in length to each construction phase included in the model. This presents an issue, as spreading out construction emissions over a longer period than is expected results in an underestimation of the maximum daily emissions associated with construction. Thus, the construction schedule assumed by the model is incorrect, and as a result, the model may underestimate the Project's construction-related emissions.

Failure to Evaluate the Feasibility of Obtaining Tier 4 Equipment

Review of the Project's CalEEMod output files demonstrates that the Project's emissions were modeled assuming that construction equipment would be equipped with Tier 4 Interim engines (see excerpt below) (Appendix C, pp. 32, 33).

Table Name	Column Name	Default Value	New Value

[26] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 2, 9

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	13.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	19.00
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
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

As you can see in the excerpt above, the model assumed that 65 pieces of off-road construction equipment would be equipped with Tier 4 Interim mitigation. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[27] According to the Addendum, MM AQ-2a requires the use of Tier 4 construction equipment (p. 42). Specifically, MM AQ-21 states:

> "The construction contractor shall use construction equipment rated by the United States Environmental Protection Agency as having Tier 4 (model year 2008 or newer) emission limits for engines between 50 and 750 horsepower. A list of construction equipment by type and model year shall be maintained by the construction contractor on-site" (p. 42).

However, due to the limited amount of Tier 4 Interim equipment available, the Addendum should have assessed the feasibility in obtaining equipment with Tier 4 Interim engines (see excerpt below).[28]

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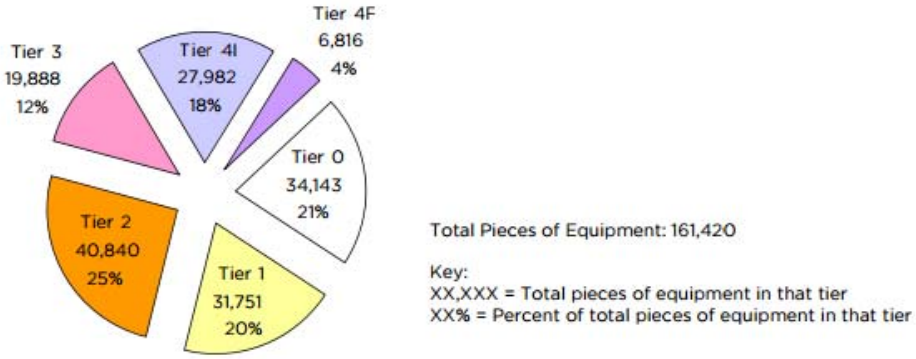
[27] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 2, 9
[28] *Ibid*.

Figure 4: 2014 Statewide All Fleet Sizes (Pieces of Equipment)



As demonstrated in the figure above, the Tier 4 Interim equipment only accounts for 18% of all off-road equipment currently available in California. Thus, emissions are modeled assuming that the Project will be able to obtain Tier 4 Interim equipment even though this equipment only accounts for 18% of available off-road equipment currently available in California. As a result, the model represents the best-case scenario even though obtaining this type of equipment may not be feasible. This is incorrect, as CEQA requires the most conservative analysis. Thus, by failing to evaluate the feasibility in obtaining Tier 4 Interim equipment, the Addendum may underestimate the Project's construction-related emissions and should not be relied upon.

Unsubstantiated Application of Construction-Related Mitigation Measures

Review of the Project's CalEEMod output files demonstrates that the model included the following unsubstantiated construction-related mitigation measures: "Use Soil Stabilizer," "Replace Ground Cover," "Water Exposed Area," and "Water Unpaved Roads" (see excerpt below) (Appendix C, pp. 68).

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

As you can see in the excerpt above, the model included several construction-related mitigation measures. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[29] According to the Addendum, Revised MM AQ-1 requires that the Project "Pave, apply water three times daily, **or** apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites" (emphasis added) (p. 41). Thus, the Addendum requires that the

[29] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 2, 9

Project use soil stabilizer, water exposed areas/unpaved roads, *or* replace ground cover. As a result, the inclusion of all four of these measures is unsubstantiated, and the model may underestimate the Project's construction-related emissions.

Unsubstantiated Application of Energy- and Water-Related Operational Mitigation Measures

Review of the Project's CalEEMod output files demonstrates that the model incorrectly includes several energy- and water-related operational mitigation measures. As a result, the Project's operational emissions may be underestimated, and the model should not be relied upon to determine Project significance.

First, the Project's CalEEMod output files reveal that the model included the following unsubstantiated energy-related mitigation measures: "Exceed Title 24," "Percent of Electricity Use Generated with Renewable Energy," and "Install Energy Efficient Appliances" (see excerpt below) (Appendix C, pp. 68).

5.1 Mitigation Measures Energy

Exceed Title 24

Percent of Electricity Use Generated with Renewable Energy

Install Energy Efficient Appliances

Second, the Project's CalEEMod output files reveal that the model included the following unsubstantiated water-related mitigation measures: "Install Low Flow Bathroom Faucet," "Install Low Flow Kitchen Faucet," "Install Low Flow Toilet," and "Install Low Flow Shower" (see excerpt below) (Appendix C, pp. 72).

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

However, the inclusion of the above-mentioned energy- and water-related operational mitigation measures is unsubstantiated. According to the CalEEMod User's Guide,

> "The mitigation measures included in CalEEMod are largely based on the CAPCOA Quantifying Greenhouse Gas Mitigation Measures (http://www.capcoa.org/wp-content/uploads/downloads/2010/09/CAPCOA-Quantification-Report-9-14-Final.pdf) document. The CAPCOA measure numbers are provided next to the mitigation measures in

CalEEMod to assist the user in understanding each measure by referencing back to the CAPCOA document."[30]

Review of CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* document demonstrates that the Addendum fails to substantiate several of the mitigation measures included in the model (see table below).

Measure	Consistency
CAPCOA's Quantifying Greenhouse Gas Mitigation Measures[31]	
Energy Measures	
Measure BE-1 Buildings Exceed Title 24 Building Envelope Energy Efficiency Standards By X% *"By committing to a percent improvement over Title 24, a development reduces its energy use and resulting GHG emissions."* The following information needs to be provided by the Project Applicant: • Square footage of non-residential buildings • Number of dwelling units • Building/Housing Type • Climate Zone • Total electricity demand (KWh) per dwelling unit or per square feet • % reduction commitment (over 2008 Title 24 standards)	Here, the "User Entered Comments & Non-Default Data" table states: "Per the Addendum, 'Build the residential units to achieve a 25 percent reduction in building energy efficiency compared to the 2008 Building and Energy Efficiency Standards, which is equivalent to the new 2013 Building and Energy Efficiency Standards'" (Appendix C, pp. 32). However, the Addendum fails to provide or address the total electricity demand per dwelling unit. In addition, the Addendum fails to provide calculations or any justification for the 25 percent reduction stated. As such, we cannot verify that this measure will be implemented, monitored, and enforced on the Project site. Thus, the Addendum fails to demonstrate consistency with this measure and its inclusion in the model is unsubstantiated.

[30] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.caleemod.com/, p. 53.
[31] "Quantifying Greenhouse Gas Mitigation Measures." CAPCOA, August 2010, *available at:* http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.

Measure AE-2 Establish Onsite Renewable Energy Systems-Solar Power *"Using electricity generated from photovoltaic (PV) systems displaces electricity demand which would ordinarily be supplied by the local utility."* The following information needs to be provided by the Project Applicant: • Total electricity demand (kWh) • Amount of electricity to be provided by the PV system (kWh) or percent of total electricity demand to be provided by the PV system (%)	Here, the "User Entered Comments & Non-Default Data" table states: "The Project is anticipated to install solar panels that will exceed 50% of the project's energy use" (Appendix C, pp. 32). In addition, MM GHG-6 states that "[t]he project shall install solar panels on the carports and fourteen residential buildings that shall generate over half the energy required by the project" (p. 91). However, the Addendum and associated documents fail to address the Project's total electricity demand or any specifics regarding the solar panels. In addition, the Addendum fails to evaluate the feasibility of achieving this amount of energy on the Project site. As such, without substantial evidence, we are unable to verify that this measure would actually be implemented, monitored, and enforced on the Project site. Thus, the Addendum fails to demonstrate consistency with this measure and its inclusion in the model is unsubstantiated.
Measure BE-4 Install Energy Efficient Appliances *"Using energy-efficient appliances reduces a building's energy consumption as well as the associated GHG emissions from natural gas combustion and electricity production. To take credit for this mitigation measure, the Project Applicant (or contracted builder) would need to ensure that energy efficient appliances are installed. For residential dwellings, typical builder-supplied appliances include refrigerators and dishwashers. Clothes washers and ceiling fans would be applicable if the builder supplied them. For commercial land uses, energy-efficient refrigerators have been evaluated for grocery stores. See Mitigation Method section on how project applicant may quantify additional building types and appliances."* The following information needs to be provided by the	Here, the "User Entered Comments & Non-Default Data" table fails to justify the installation of energy efficient appliances. According to MM GHG-2, "[t]he project shall install ENERGY STAR rated appliances including clothes washers, dishwashers, fans, and refrigerators" (p. 91). However, the Addendum and associated documents fail to address the Project's total natural gas demand per dwelling unit. The Addendum also fails to discuss the feasibility of achieving this measure on the Project site. As such, without substantial evidence, we are unable to verify that this measure would actually be implemented, monitored, and enforced on the Project site. Thus, the Addendum fails to

Project Applicant: • Number of dwelling units and/or size of grocery store • Climate Zone • Housing Type (if residential) • Utility provider • Total natural gas demand (kBTU or therms) per dwelling unit or per square foot • Types of energy efficient appliances to be installed (refrigerator, dishwasher, or clothes washer for residential land uses and refrigerators for grocery stores)	demonstrate consistency with this measure and its inclusion in the model is unsubstantiated.
Water Measures	
Measure WUW-1 Install Low-Flow Water Fixtures *"Installing low-flow or high-efficiency water fixtures in buildings reduces water demand, energy demand, and associated indirect GHG emissions."* The following information needs to be provided by the Project Applicant: • Total expected indoor water demand, without installation of low-flow or high-efficiency fixtures (million gallons), AND • Total expected indoor water demand, after installation of low-flow or high-efficiency fixtures (million gallons), OR • Commitment to low-flow or high-efficiency water fixtures (toilets, showerheads, sink faucets, dishwashers, clothes washers, or all of the above)	No justification was provided in the "User Entered Comments & Non-Default Data" table. According to MM GHG-3, "[t]he project will install low-flow water fixtures including faucets, toilets, and showers, in order to reduce water demand, energy demand, and associated indirect GHG emissions" (Appendix C, p. 26). However, the Addendum fails to provide the total expected indoor water demand, with and without the installation of low-flow water fixtures, or demonstrate how the measure would be implemented, monitored, and enforced on the Project site. Thus, the Addendum fails to demonstrate consistency with the measure, and its inclusion in the model is unsubstantiated.

As you can see in the table above, the Addendum fails to justify several of the mitigation measures utilized in the Project's CalEEMod model. As a result, the inclusion of these measures in the model are unsubstantiated and the model should not be relied upon to determine Project significance.

Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated

The Air Quality and Greenhouse Gas Technical Assessment concludes that the Project would have a less than significant health risk impact, after mitigation, based on a construction health risk assessment ("HRA") (Appendix C, p. 15). However, the Project failed to evaluate the health risk posed to nearby, existing receptors as a result of Project operation, stating:

> "The proposed project does not include any stationary sources of TAC emissions and the vast majority of project vehicles would operate on gasoline and not diesel, which is the primary source of TACs and DPM. Therefore, operation of the proposed project would not generate TAC or PM2.5 emissions that could affect the health of the community near the project site. As such, the proposed project would not contribute to human health risk to nearby receptors during operation, and the project would also not contribute to any cumulative human health risk impact" (Appendix C, p. 15).

However, this claim and the Addendum's health risk analysis is incorrect for several reasons.

First, as discussed above, the Addendum's analysis relies upon an incorrect and unsubstantiated air model. This is incorrect, as the Addendum's air model underestimates emissions. Because the construction HRA is based on the exhaust PM_{10} and fugitive dust $PM_{2.5}$ estimates from the annual CalEEMod model, as indicated by the Addendum, the construction HRA may underestimate the Project's health risk impact and should not be relied upon to determine Project significance (Appendix C, p. 12).

Second, simply because the Addendum states that the proposed Project would "not include any stationary sources of TAC emissions and the vast majority of project vehicles would operate on gasoline and not diesel," does not justify the omission of an operational HRA. Once construction is complete, the Project will operate for a long period of time. During operation, the Project will generate vehicle and truck trips, which will produce additional exhaust emissions, thus continuing to expose nearby sensitive receptors to emissions. By failing to prepare an operational HRA for existing sensitive receptors, the Project is inconsistent with recommendations set forth by the Office of Environmental Health Hazard Assessment ("OEHHA"), the organization responsible for providing recommendations for health risk assessments in California. In February of 2015, OEHHA released its most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments*, which was formally adopted in March of 2015, as referenced by the Addendum (Appendix C, p. 12-13).[32] This guidance document describes the types of projects that warrant the preparation of an HRA. The OEHHA document recommends that exposure from projects lasting more than six months should be evaluated for the duration of the project, and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident ("MEIR").[33] Even though the Project documents fail to provide the expected lifetime of the Project, we can reasonably assume that the Project will operate for at least 30 years, if not more. Therefore, we recommend that health risks from

[32] OEHHA (February 2015) Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments, https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.
[33] OEHHA (February 2015) Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments, https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 8-6, 8-15

Project operation also be evaluated, as a 30-year exposure duration vastly exceeds the 2-month and 6-month requirements set forth by OEHHA. These recommendations reflect the most recent health risk policy, and as such, we recommend that an assessment of health risks to nearby sensitive receptors from both construction and operation be included in an updated air quality impact evaluation for the Project.

Third, the Addendum fails to sum the cancer risk calculated for each age group for both Project construction and operation. This is incorrect and, as a result, the Addendum's evaluation and significance conclusion should not be relied upon. According to OEHHA guidance, as relied upon in the Addendum, "the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk at the receptor location."[34] However, review of the Addendum demonstrates that, while the health risk was conducted to nearby, existing third trimester, infant, child, and adult receptors for construction-related emissions, the HRA fails to evaluate the cumulative lifetime cancer risk to nearby, existing receptors as a result of Project construction *and* operation together. Therefore, the HRA should have quantified the Project's *entire* construction and operational health risk.

Fourth, by claiming a less than significant impact without conducting a quantified HRA for nearby, existing sensitive receptors as a result of Project construction and operation, the Addendum fails to compare the excess health risk to the BAAQMD's specific numeric threshold of ten in one million.[35] Thus, the Project cannot conclude less than significant air quality impacts resulting from Project construction and operation without quantifying emissions to compare to the proper threshold.

Screening-Level Analysis Demonstrates Significant Impacts

In an effort to demonstrate the potential health risk posed by Project construction and operation to nearby, existing sensitive receptors utilizing a site-specific emissions estimates, we prepared a simple screening-level HRA. The results of our assessment, as described below, demonstrate that the proposed Project may result in a significant impact not previously identified or addressed in the Addendum.

In order to conduct our screening-level risk assessment we relied upon AERSCREEN, which is a screening level air quality dispersion model.[36] The model replaced SCREEN3, and AERSCREEN is included in the OEHHA[37] and the California Air Pollution Control Officers Associated ("CAPCOA")[38] guidance as the appropriate air dispersion model for Level 2 health risk screening assessments ("HRSAs"). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an

[34] "Guidance Manual for preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf p. 8-4
[35] "California Environmental Quality Act Air Quality Guidelines." BAAQMD, May 2017, *available at:* http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en
[36] U.S. EPA (April 2011) AERSCREEN Released as the EPA Recommended Screening Model, http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf
[37] OEHHA (February 2015) Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments, https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.
[38] CAPCOA (July 2009) Health Risk Assessments for Proposed Land Use Projects, http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf.

unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

We prepared a preliminary HRA of the Project's construction and operational health-related impact to residential sensitive receptors using the annual $PM_{2.5}$ exhaust estimates from the SWAPE CalEEMod output files. Consistent with recommendations set forth by OEHHA, we assumed residential exposure begins during the third trimester stage of life. SWAPE's CalEEMod model indicates that construction activities will generate approximately 300 pounds of DPM over the 664-day construction period. The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from point, area, and volume emission sources. To account for the variability in equipment usage and truck trips over Project construction, we calculated an average DPM emission rate by the following equation:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{299.8\ lbs}{664\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.00237\ g/s}$$

Using this equation, we estimated a construction emission rate of 0.00237 grams per second ("g/s"). Subtracting the 664-day construction period from the total residential duration of 30 years, we assumed that after Project construction, the sensitive receptor would be exposed to the Project's operational DPM for an additional 28.18 years, approximately. The Project's operational CalEEMod emissions, calculated by subtracting the existing emissions from the proposed Project, indicate that operational activities will generate approximately 368 pounds of DPM per year throughout operation. Applying the same equation used to estimate the construction DPM rate, we estimated the following emission rate for Project operation:

$$Emission\ Rate\ \left(\frac{grams}{second}\right) = \frac{367.6\ lbs}{365\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = \mathbf{0.005287\ g/s}$$

Using this equation, we estimated an operational emission rate of 0.005287 g/s. Construction and operational activity was simulated as a 22.3-acre rectangular area source in AERSCREEN with dimensions of 361 by 250 meters. A release height of three meters was selected to represent the height of exhaust stacks on operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution.

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project site. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant be estimated by multiplying the single-hour concentration by 10%.[39] According to the Addendum, the nearest sensitive receptor is located approximately 140 feet, or 43

[39] "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised." EPA, 1992, *available at*: http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf; *see also* "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf p. 4-36.

meters, east of the Project site. However, review of the AERSCREEN output files demonstrates that the *maximally* exposed receptor is located approximately 200 meters from the Project site. The single-hour concentration estimated by AERSCREEN for Project construction is approximately 1.207 µg/m^3 DPM at approximately 200 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.1207 µg/m^3 for Project construction at the MEIR. For Project operation, the single-hour concentration estimated by AERSCREEN is 2.693 µg/m^3 DPM at approximately 200 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.2693µg/m^3 for Project operation at the MEIR.

We calculated the excess cancer risk to the MEIR using applicable HRA methodologies prescribed by OEHHA. Consistent with the default CalEEMod construction schedule, the annualized average concentration for construction was used for the entire third trimester of pregnancy (0.25 years) and the first 1.57 years of the infantile stage of life (0 – 2 years). The annualized averaged concentration for operation was used for the remainder of the 30-year exposure period, which makes up the remainder of the infantile stage of life, and the entire child and adult stages of life (2 – 16 years) and (16 – 30 years), respectively.

Consistent with OEHHA, as recommended by SCAQMD, BAAQMD, and SJVAPCD guidance, and referenced by the Addendum, we used Age Sensitivity Factors ("ASF") to account for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution (Appendix C, p. 13).[40, 41, 42, 43] According to this guidance, as referenced by the Addendum, the quantified cancer risk should be multiplied by a factor of ten during the third trimester of pregnancy and during the first two years of life (infant) as well as multiplied by a factor of three during the child stage of life (2 – 16 years) (Appendix Cc p. 12). Furthermore, in accordance with the guidance set forth by OEHHA, we used the 95th percentile breathing rates for infants.[44] Finally, according to BAAQMD guidance, we used a Fraction of Time At Home ("FAH") value of 0.85 for the 3rd trimester and infant receptors, 0.72 for child receptors, and 0.73

[40] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.
[41] "Draft Environmental Impact Report (DEIR) for the Proposed The Exchange (SCH No. 2018071058)." SCAQMD, March 2019, *available at:* http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2019/march/RVC190115-03.pdf?sfvrsn=8, p. 4.
[42] "California Environmental Quality Act Air Quality Guidelines." BAAQMD, May 2017, *available at:* http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, p. 56; see also "Recommended Methods for Screening and Modeling Local Risks and Hazards." BAAQMD, May 2011, *available at:* http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD%20Modeling%20Approach.ashx, p. 65, 86.
[43] "Update to District's Risk Management Policy to Address OEHHA's Revised Risk Assessment Guidance Document." SJVAPCD, May 2015, *available at:* https://www.valleyair.org/busind/pto/staff-report-5-28-15.pdf, p. 8, 20, 24.
[44] "Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics 'Hot Spots' Information and Assessment Act," June 5, 2015, *available at:* http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588-risk-assessment-guidelines.pdf?sfvrsn=6, p. 19.
"Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

for the adult receptors.[45] We used a cancer potency factor of 1.1 (mg/kg-day)$^{-1}$ and an averaging time of 25,550 days. The results of our calculations are shown below.

The Maximally Exposed Individual at an Existing Residential Receptor					
Activity	**Duration (years)**	**Concentration (ug/m3)**	**Breathing Rate (L/kg-day)**	**ASF**	**Cancer Risk**
Construction	0.25	0.1207	361	10	1.4E-06
3rd Trimester Duration	***0.25***			***3rd Trimester Exposure***	***1.4E-06***
Construction	1.57	0.1207	1090	10	2.6E-05
Operation	0.43	0.2693	1090	10	1.6E-05
Infant Exposure Duration	***2.00***			***Infant Exposure***	***4.3E-05***
Operation	14.00	0.2693	572	3	7.0E-05
Child Exposure Duration	***14.00***			***Child Exposure***	***7.0E-05***
Operation	14.00	0.2693	261	1	1.1E-05
Adult Exposure Duration	***14.00***			***Adult Exposure***	***1.1E-05***
Lifetime Exposure Duration	**30.00**			**Lifetime Exposure**	**1.3E-04**

As demonstrated in the table above, the excess cancer risk to adults, children, infants, and during the 3rd trimester of pregnancy at the MEIR located roughly 200 meters away, over the course of Project construction and operation, are approximately 11, 70, 43, and 1.4 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years), utilizing age sensitivity factors, is approximately 130 in one million. The infant, child, adult, and lifetime cancer risks all exceed the BAAQMD threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the Addendum.

An agency must include an analysis of health risks that connects the Project's air emissions with the health risk posed by those emissions. Our analysis represents a screening-level HRA, which is known to be conservative and tends to err on the side of health protection. [46] The purpose of the screening-level construction and operational HRA shown above is to demonstrate the link between the proposed Project's emissions and the potential health risk. Our screening-level HRA demonstrates that construction and operation of the Project could result in a potentially significant health risk impact, when correct exposure assumptions and up-to-date, applicable guidance are used. Therefore, since our

[45] "Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines." BAAQMD, January 2016, *available at:* http://www.baaqmd.gov/~/media/files/planning-and-research/rules-and-regs/workshops/2016/reg-2-5/hra-guidelines_clean_jan_2016-pdf.pdf?la=en

[46] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 1-5

screening-level HRA indicates a potentially significant impact, the City should prepare an EIR with an HRA which makes a reasonable effort to connect the Project's air quality emissions and the potential health risks posed to nearby receptors. Thus, the City should prepare an updated, quantified air pollution model as well as an updated, quantified refined HRA which adequately and accurately evaluates health risk impacts associated with both Project construction and operation.

Failure to Evaluate Mobile Source Health Risk Impacts

The 2020 Addendum failed to evaluate the health risk posed from mobile sources in the vicinity of the Project site and as a result, the Addendum failed to identify potentially significant impacts.

According to the 2018 Addendum,

> "[T]he cancer risk and PM2.5 screening levels from SR-24 exceed the project-level thresholds of 10 in one million and 0.3 µg/m^3, respectively and would potentially significantly impact the future residents of the Project site without the implementation of mitigation" (p. 44).

As such, review of the 2018 Addendum demonstrates significant impacts not identified or addressed in the 2020 Addendum (see excerpt below) (p. 43, Table 8).

Source	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index[(2)]	Annual $PM_{2.5}$ Concentration (µg/m^3)
State Highway 24	**51.4**	0.05	**0.48**
Pleasant Hill Road	3.5	<1.0	0.13
Deer Hill Road	2.3	<1.0	0.09
Svensson Automotive	0	0	0
Shell Gas Station	3.1	0.004	NSR
BAAQMD Project-Level Threshold	10	1.0	0.3
Exceeds Project-Level Thresholds	**Yes**	No	**Yes**

As you can see in the table above, the proposed Project may result in significant impacts not previously evaluated, identified, or addressed in the 2020 Addendum. According to the most recent guidance from the BAAQMD, "BAAQMD recommends that a Lead Agency identify all TAC and $PM_{2.5}$ sources located within a 1,000 foot radius of the proposed project."[47] However, the 2020 Addendum fails to mention or evaluate these impacts and as such, the 2020 Addendum fails to compare the excess health risk to the BAAQMD's specific numeric threshold of ten in one million.[48] Thus, the Project cannot conclude less than significant air quality impacts resulting from Project construction and operation without

[47] "CEQA Guidelines." BAAQMD, May 2017, *available at:* https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, p. 5-8.
[48] "California Environmental Quality Act Air Quality Guidelines." BAAQMD, May 2017, *available at:* http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

quantifying emissions to compare to the proper threshold and implementing mitigation to reduce impacts to a less than significant level.

Greenhouse Gas

Failure to Adequately Evaluate Greenhouse Gas Impacts

The Addendum estimates that the proposed Project would generate mitigated greenhouse gas ("GHG") emissions of 2.54 metric tons of CO_2 equivalents per service population per year ("MT CO_2e/SP/year"), which would be less than the BAAQMD's efficiency threshold of 4.6 MT CO_2e/SP/year and estimated SB 32-based target of 2.77 MT CO_2e/SP/year (Appendix C, p. 25, Table 14). As a result, the Addendum concludes that the proposed Project's GHG impact would be less than significant. However, this is incorrect for three reasons:

(1) The Addendum's GHG analysis relies upon an incorrect and unsubstantiated air model;
(2) The Addendum's GHG analysis relies upon an incorrect and unsubstantiated threshold; and
(3) Updated analysis indicates a potentially significant GHG impact.

1) Incorrect and Unsubstantiated Air Model

The Addendum's GHG analysis relies upon an incorrect and unsubstantiated air model, as discussed above. This is incorrect, as the Addendum's air model underestimates the Project's GHG emissions. As a result, the Addendum's GHG analysis and subsequent significance determination should not be relied upon.

2) Incorrect and Unsubstantiated Threshold

As discussed above, the Addendum evaluates the proposed Project's GHG emissions using the BAAQMD's 2020 efficiency threshold of 4.6 MT CO_2e/SP/year and an unsupported SB 32-based 2030 target of 2.77 MT CO_2e/SP/year that was made-up by the Addendum itself. Specifically, the Addendum states,

> "[T]he thresholds were designed for compliance with AB 32 target date of 2020. In 2016, California approved Senate Bill (SB) 32, which requires the state emissions to be 40 percent below 1990 levels by 2030. As such, BAAQMD has recommended that for projects that would become operational after 2020, lead agencies should consider developing additional thresholds to evaluate a project's GHG impact. In establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, as long as any threshold chosen is supported by substantial evidence (See CEQA Guidelines Section 15064.7(c)) (BAAQMD 2017). In the case of the proposed project, the City of Lafayette is using the Bay Area's SB 32 target of 2.77 MT CO2e per service population per year (MT CO2e/sp/year), as calculated below, as the threshold to assess GHG emissions impact of project operation" (Appendix C, p. 20).

However, this is incorrect. While we agree that the BAAQMD's 2020 efficiency threshold may not be appropriate for evaluating the significance of the proposed Project, which will be operational after 2020, the Addendum cannot simply calculate its own adjusted threshold with which to compare emissions.

Rather, the Association of Environmental Professionals' ("AEP") *Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California* recommends a "Substantial Progress" efficiency threshold of 2.6 MT CO_2e/SP/year,[49] which has been widely utilized throughout the BAAQMD.[50] As such, the Addendum should have compared the proposed Project's emissions to the 2030 "Substantial Progress" 2.6 MT CO_2e/SP/year efficiency threshold.

3) Updated Analysis Indicates a Potentially Significant GHG Impact

Applicable thresholds and modeling demonstrate that the proposed Project may result in a potentially significant GHG impact not previously identified or addressed by the Addendum. The CalEEMod output files, modeled by SWAPE utilizing Project-specific information as disclosed in the Addendum, disclose the Project's mitigated emissions, which include approximately 3,728 MT CO_2e of total construction emissions (sum of 2020, 2021, and 2022) and approximately 2,588 MT CO_2e/year of annual operational emissions (sum of area, energy, mobile, waste, and water-related emissions). When we compare the Project's amortized construction and operational GHG emissions to the "Substantial Progress" efficiency threshold of 2.6 MT CO_2e/SP/year, we find that the Project's GHG emissions exceed the threshold (see table below).

SWAPE Service Population Efficiency	
Project Phase	**Proposed Project (MT CO_2e/year)**
Construction (amortized over 30 years)	124.26
Area	25.04
Energy	595.71
Mobile	1820.99
Waste	72.87
Water	73.6

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

[50] See "Solar4America Ice Facility Expansion Air Quality and Greenhouse Gas Emission Assessment," September 2019, *available at:* https://www.sanjoseca.gov/Home/ShowDocument?id=45200, p. 15; See also "Facebook Campus Expansion Project Draft Environmental Impact Report," May 2016, *available at:* https://www.menlopark.org/DocumentCenter/View/10286/Ch03-05_GHG_Draft-EIR?bidId=, p. 3.5-18, See also "City of San Jose Downtown Strategy 2040 – Air Quality and Greenhouse Gas Emissions Assessment," May 2018, *available at:* https://www.sanjoseca.gov/Home/ShowDocument?id=44036, p. 3; See also "Vallco Special Area Specific Plan Air Quality and Greenhouse Gas Emissions Assessment," May 2018, *available at:* https://www.cupertino.org/home/showdocument?id=20886, p. 23; See also "3625 Peterson Way Office Development Air Quality and GHG Assessment," July 2019, *available at:* https://www.santaclaraca.gov/home/showdocument?id=66628, p. 18; See also "Heritage House & Valle Verde Air Quality and Greenhouse Gas Assessment," March 2019, *available at:* https://www.cityofnapa.org/DocumentCenter/View/5644/Appendix-B---Air-Quality-and-GHG-Assessment-PDF, p. 15; See also "First and Kelton Commercial Development Air Quality & Greenhouse Gas Emissions Assessment," July 2018, *available at:* http://www.ci.gilroy.ca.us/DocumentCenter/View/7882/Appendix-A-1st-and-Kelton-Air-Quality-Study, p. 4.

Reduction from MM-GHG-4	-120
Total	**2,592.47**
Service Population	901
Service Population Efficiency	2.88
2030 Efficiency Threshold ***Exceed?***	2.6 ***Yes***

As the above table demonstrates, when correct input parameters are used to model Project emissions and emissions are compared to the correct threshold, the proposed Project's total GHG emissions exceed the BAAQMD "Substantial Progress" efficiency threshold of 2.6 MT CO_2e/SP/year, thus resulting in a significant impact not previously assessed or identified in the Addendum. As a result, an updated GHG analysis should be prepared in an EIR and additional mitigation should be incorporated into the Project, such as those listed below.

Feasible Mitigation Measures Available to Reduce Emissions

In an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the Project from NEDC's *Diesel Emission Controls in Construction Projects.*[51] Therefore, to reduce the Project's emissions, consideration of the following measures should be made:

NEDC's *Diesel Emission Controls in Construction Projects*[52]
Measures – Diesel Emission Control Technology
a. Diesel Onroad Vehicles All diesel nonroad vehicles on site for more than 10 total days must have either (1) engines that meet EPA onroad emissions standards or (2) emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%.
b. Diesel Generators All diesel generators on site for more than 10 total days must be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%.
c. Diesel Nonroad Construction Equipment i. All nonroad diesel engines on site must be Tier 2 or higher. Tier 0 and Tier 1 engines are not allowed on site ii. All diesel nonroad construction equipment on site for more than 10 total days must have either (1) engines meeting EPA Tier 4 nonroad emission 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 50hp and greater and by a minimum of 20% for engines less than 50hp.
d. Upon confirming that the diesel vehicle, construction equipment, or generator has either an engine meeting Tier 4 non road emission standards or emission control technology, as specified above,

[51] "Diesel Emission Controls in Construction Projects." Northeast Diesel Collaborative (NEDC), December 2010, *available at:* https://www.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf.

[52] "Diesel Emission Controls in Construction Projects." Northeast Diesel Collaborative (NEDC), December 2010, *available at:* https://www.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf.

installed and functioning, the developer will issue a compliance sticker. All diesel vehicles, construction equipment, and generators on site shall display the compliance sticker in a visible, external location as designated by the developer.
e. Emission control technology shall be operated, maintained, and serviced as recommended by the emission control technology manufacturer.
f. All diesel vehicles, construction equipment, and generators on site shall be fueled with ultra-low sulfur diesel fuel (ULSD) or a biodiesel blend[53] approved by the original engine manufacturer with sulfur content of 15 ppm or less.
Measures – Idling Requirements
During periods of inactivity, idling of diesel onroad vehicles and nonroad equipment shall be minimized and shall not exceed the time allowed under state and local laws.
Measures – Additional Diesel Requirements
a. Construction shall not proceed until the contractor submits a certified 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.
b. If the contractor subsequently needs to bring on site equipment not on the list, the contractor shall submit written notification within 24 hours that attests the equipment complies with all contract conditions and provide information.
c. All diesel equipment shall comply with all pertinent local, state, and federal regulations relative to exhaust emission controls and safety.
d. 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.
Reporting
a. For each onroad diesel vehicle, nonroad construction equipment, or generator, the contractor shall submit to the developer's representative a report prior to bringing said equipment on site that includes: i. Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, and engine serial number. ii. The type of emission control technology installed, serial number, make, model, manufacturer, and EPA/CARB verification number/level. iii. The Certification Statement signed and printed on the contractor's letterhead.
b. The contractor shall submit to the developer's representative a monthly report that, for each onroad 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.

[53] Biodiesel blends are only to be used in conjunction with the technologies which have been verified for use with biodiesel blends and are subject to the following requirements: http://www.arb.ca.gov/diesel/verdev/reg/biodieselcompliance.pdf.

iii. Certified copies of fuel deliveries for the time period that identify:
1. Source of supply
2. Quantity of fuel
3. Quality of fuel, including sulfur content (percent by weight)

Furthermore, in an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the Project from CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures,* which attempt to reduce emissions.[54] Therefore, to reduce the Project's emissions, consideration of the following measures should be made:

CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*[55]
Measures – Energy
Building Energy Use
BE-1 Exceed Title-24 Building Envelope Energy Efficiency Standards (California Building Standards Code) by X% *Range of Effectiveness:* See document for specific improvement desired.
BE-2 Install Programmable Thermostat Timers *Range of Effectiveness:* Best Management Practice – Influences building energy use for heating and cooling.
BE-3 Obtain Third-party HVAC Commissioning and Verification of Energy Savings (to be grouped with BE-1) *Range of Effectiveness:* Not applicable on its own. This measure enhances the effectiveness of BE-1.
BE-4 Install Energy Efficient Appliances *Range of Effectiveness:* Residential 2-4% GHG emissions from electricity use. Grocery Stores: 17-22% of GHG emissions from electricity use. See document for other land use types.
BE-5 Install Energy Efficient Boilers *Range of Effectiveness:* 1.2-18.4% of boiler GHG emissions.
Lighting
LE-1 Install Higher Efficacy Public Street and Area Lighting *Range of Effectiveness:* 16-40% of outdoor lighting.
LE-2 Limit Outdoor Lighting Requirements *Range of Effectiveness:* Best Management Practice, but may be quantified.
LE-3 Replace Traffic Lights with LED Traffic Lights *Range of Effectiveness:* 90% of emissions associated with existing traffic lights.
Alternative Energy Generation
AE-1 Establish Onsite Renewable or Carbon-Neutral Energy Systems – Generic *Range of Effectiveness:* 0-100% of GHG emissions associated with electricity use.
AE-2 Establish Onsite Renewable Energy System – Solar Power *Range of Effectiveness:* 0-100% of GHG emissions associated with electricity use.
AE-3 Establish Onsite Renewable Energy System – Wind Power

[54] http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf
[55] "Quantifying Greenhouse Gas Mitigation Measures." California Air Pollution Control Officers Association (CAPCOA), August 2010, *available at:* http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf, p.

Range of Effectiveness: 0-100% of GHG emissions associated with electricity use.
AE-4 Utilize a Combined Heat and Power System *Range of Effectiveness:* 0-46% of GHG emissions associated with electricity use.
AE-5 Establish Methane Recovery in Landfills *Range of Effectiveness:* 73-77% reduction in GHG emissions from landfills without methane recovery.
AE-6 Establish Methane Recovery in Wastewater Treatment Plants *Range of Effectiveness:* 95-97% reduction in GHG emissions from wastewater treatment plants without recovery.
Measures – Transportation
Land Use/Location
LUT-1 Increase Density *Range of Effectiveness:* 0.8-30% vehicle miles traveled (VMT) reduction and therefore a 0.8-30% reduction in GHG emissions.
LUT-2 Increase Location Efficiency *Range of Effectiveness:* 10% vehicle miles traveled (VMT) reduction and therefore 10-65% reduction in GHG emissions.
LUT-3 Increase Diversity of Urban and Suburban Developments (Mixed Use) *Range of Effectiveness:* 9-30% vehicle miles traveled (VMT) and therefore 9-30% reduction in GHG emissions.
LUT-4 Increase Destination Accessibility *Range of Effectiveness:* 6.7-20% vehicle miles traveled (VMT) reduction and therefore 6.7-20% reduction in GHG emissions.
LUT-5 Increase Transit Accessibility *Range of Effectiveness:* 0.5-24.6% VMT reduction and therefore 0.5-24.6% reduction in GHG emissions.
LUT-6 Integrate Affordable and Below Market Rate Housing *Range of Effectiveness:* 0.04-1.20% vehicle miles traveled (VMT) reduction and therefore 0.04-1.20% reduction in GHG emissions.
LUT-7 Orient Project Toward Non-Auto Corridor *Range of Effectiveness:* Grouped strategy (see LUT-3).
LUT-8 Locate Project near Bike Path/Bike Lane *Range of Effectiveness:* Grouped strategy (see LUT-4).
Neighborhood/Site Enhancements
SDT-1 Provide Pedestrian Network Improvements, such as: • Compact, mixed-use communities • Interconnected street network • Narrower roadways and shorter block lengths • Sidewalks • Accessibility to transit and transit shelters • Traffic calming measures and street trees • Parks and public spaces • Minimize pedestrian barriers *Range of Effectiveness:* 0-2% vehicle miles traveled (VMT) reduction and therefore 0-2% reduction in GHG

emissions.

SDT-2 Provide Traffic Calming Measures, such as:

- Marked crosswalks
- Count-down signal timers
- Curb extensions
- Speed tables
- Raised crosswalks
- Raised intersections
- Median islands
- Tight corner radii
- Roundabouts or mini-circles
- On-street parking
- Planter strips with trees
- Chicanes/chokers

Range of Effectiveness: 0.25-1% vehicle miles traveled (VMT) reduction and therefore 0.25-1% reduction in GHG emissions.

SDT-3 Implement a Neighborhood Electric Vehicle (NEV) Network.

Range of Effectiveness: 0.5-12.7% vehicle miles traveled (VMT) reduction since NEVs would result in a mode shift and therefore reduce the traditional vehicle VMT and GHG emissions. Range depends on the available NEV network and support facilities, NEV ownership levels, and the degree of shift from traditional.

SDT-4 Create Urban Non-Motorized Zones

Range of Effectiveness: Grouped strategy (see SDT-1).

SDT-5 Incorporate Bike Lane Street Design (on-site)

Range of Effectiveness: Grouped strategy (see LUT-9).

SDT-6 Provide Bike Parking in Non-Residential Projects

Range of Effectiveness: Grouped strategy (see LUT-9).

SDT-7 Provide Bike Parking with Multi-Unit Residential Projects

Range of Effectiveness: Grouped strategy (see SDT-3).

SDT-8 Provide Electric Vehicle Parking

Range of Effectiveness: Grouped strategy (see SDT-3).

SDT-9 Dedicate Land for Bike Trails

Range of Effectiveness: Grouped strategy (see LUT-9).

Parking Policy/Pricing

PDT-1 Limit Parking Supply through:

- Elimination (or reduction) of minimum parking requirements
- Creation of maximum parking requirements
- Provision of shared parking

Range of Effectiveness: 5-12.5% vehicle miles traveled (VMT) reduction and therefore 5-12.5% reduction in GHG emissions.

PDT-2 Unbundle Parking Costs from Property Cost

Range of Effectiveness: 2.6-13% vehicle miles traveled (VMT) reduction and therefore 2.6-13% reduction in GHG emissions.

PDT-3 Implement Market Price Public Parking (On-Street)

Range of Effectiveness: 2.8-5.5% vehicle miles traveled (VMT) reduction and therefore 2.8-5.5% reduction in GHG emissions.

PDT-4 Require Residential Area Parking Permits

Range of Effectiveness: Grouped strategy (see PPT-1, PPT-2, and PPT-3).

Commute Trip Reduction Programs

TRT-1 Implement Commute Trip Reduction (CTR) Program – Voluntary

- Carpooling encouragement
- Ride-matching assistance
- Preferential carpool parking
- Flexible work schedules for carpools
- Half time transportation coordinator
- Vanpool assistance
- Bicycle end-trip facilities (parking, showers and lockers)
- New employee orientation of trip reduction and alternative mode options
- Event promotions and publications
- Flexible work schedule for employees
- Transit subsidies
- Parking cash-out or priced parking
- Shuttles
- Emergency ride home

Range of Effectiveness: 1-6.2% commute vehicle miles traveled (VMT) reduction and therefore 1-6.2% reduction in commute trip GHG emissions.

TRT-2 Implement Commute Trip Reduction (CTR) Program – Required Implementation/Monitoring

- Established performance standards (e.g. trip reduction requirements)
- Required implementation
- Regular monitoring and reporting

Range of Effectiveness: 4.2-21% commute vehicle miles traveled (VMT) reduction and therefore 4.2-21% reduction in commute trip GHG emissions.

TRT-3 Provide Ride-Sharing Programs

- Designate a certain percentage of parking spaces for ride sharing vehicles
- Designating adequate passenger loading and unloading and waiting areas for ride-sharing vehicles
- Providing a web site or messaging board for coordinating rides
- Permanent transportation management association membership and funding requirement.

Range of Effectiveness: 1-15% commute vehicle miles traveled (VMT) reduction and therefore 1-15% reduction in

commute trip GHG emissions.
TRT-4 Implement Subsidized or Discounted Transit Program *Range of Effectiveness:* 0.3-20% commute vehicle miles traveled (VMT) reduction and therefore a 0.3-20% reduction in commute trip GHG emissions.
TRT-5 Provide Ent of Trip Facilities, including: • Showers • Secure bicycle lockers • Changing spaces *Range of Effectiveness:* Grouped strategy (see TRT-1 through TRT-3).
TRT-6 Encourage Telecommuting and Alternative Work Schedules, such as: • Staggered starting times • Flexible schedules • Compressed work weeks *Range of Effectiveness:* 0.07-5.5% commute vehicle miles traveled (VMT) reduction and therefore 0.07-5.5% reduction in commute trip GHG emissions.
TRT-7 Implement Commute Trip Reduction Marketing, such as: • New employee orientation of trip reduction and alternative mode options • Event promotions • Publications *Range of Effectiveness:* 0.8-4% commute vehicle miles traveled (VMT) reduction and therefore 0.8-4% reduction in commute trip GHG emissions.
TRT-8 Implement Preferential Parking Permit Program *Range of Effectiveness:* Grouped strategy (see TRT-1 through TRT-3).
TRT-9 Implement Car-Sharing Program *Range of Effectiveness:* 0.4-0.7% vehicle miles traveled (VMT) reduction and therefore 0.4-0.7% reduction in GHG emissions.
TRT-10 Implement School Pool Program *Range of Effectiveness:* 7.2-15.8% in school vehicle miles traveled (VMT) reduction and therefore 7.2-15.8% reduction in school trip GHG emissions.
TRT-11 Provide Employer-Sponsored Vanpool/Shuttle *Range of Effectiveness:* 0.3-13.4% commute vehicle miles traveled (VMT) reduction and therefore 0.3-13.4% reduction in commute trip GHG emissions.
TRT-12 Implement Bike-Sharing Programs *Range of Effectiveness:* Grouped strategy (see SDT-5 and LUT-9).
TRT-13 Implement School Bus Program *Range of Effectiveness:* 38-63% School VMT reduction and therefore 38-63% reduction in school trip GHG emissions.
TRT-14 Price Workplace Parking, such as: • Explicitly charging for parking for its employees; • Implementing above market rate pricing;

- Validating parking only for invited guests;
- Not providing employee parking and transportation allowances; and
- Educating employees about available alternatives.

Range of Effectiveness: 0.1-19.7% commute vehicle miles traveled (VMT) reduction and therefore 0.1-19.7% reduction in commute trip GHG emissions.

TRT-15 Implement Employee Parking "Cash-Out"

Range of Effectiveness: 0.06-7.7% commute vehicle miles traveled (VMT) reduction and therefore 0.6-7.7% reduction in commute trip GHG emissions.

Transit System Improvements

TST-1 Transit System Improvements, including:

- Grade-separated right-of-way, including bus only lanes (for buses, emergency vehicles, and sometimes taxis), and other Transit Priority measures. Some systems use guideways which automatically steer the bus on portions of the route.
- Frequent, high-capacity service
- High-quality vehicles that are easy to board, quiet, clean, and comfortable to ride.
- Pre-paid fare collection to minimize boarding delays.
- Integrated fare systems, allowing free or discounted transfers between routes and modes.
- Convenient user information and marketing programs.
- High quality bus stations with Transit Oriented Development in nearby areas.
- Modal integration, with BRT service coordinated with walking and cycling facilities, taxi services, intercity bus, rail transit, and other transportation services.

Range of Effectiveness: 0.02-3.2% vehicle miles traveled (VMT) reduction and therefore 0.02-3% reduction in GHG emissions.

TST-2 Implement Transit Access Improvements, such as:

- Sidewalk/crosswalk safety enhancements
- Bus shelter improvements

Range of Effectiveness: Grouped strategy (see TST-3 and TST-4)

TST-3 Expand Transit Network

Range of Effectiveness: 0.1-8.2% vehicle miles traveled (VMT) reduction and therefore 0.1-8.2% reduction in GHG emissions.

TST-4 Increase Transit Service Frequency/Speed

Range of Effectiveness: 0.02-2.5% vehicle miles traveled (VMT) reduction and therefore 0.02-2.5% reduction in GHG emissions.

TST-5 Provide Bike Parking Near Transit

Range of Effectiveness: Grouped strategy (see TST-3 and TST-4).

TST-6 Provide Local Shuttles

Range of Effectiveness: Grouped strategy (see TST-4 and TST-5).

Road Pricing/Management

RPT-1 Implement Area or Cordon Pricing

Range of Effectiveness: 7.9-22% vehicle miles traveled (VMT) reduction and therefore 7.9-22% reduction in GHG

emissions.
RPT-2 Improve Traffic Flow, such as: • Signalization improvements to reduce delay; • Incident management to increase response time to breakdowns and collisions; • Intelligent Transportation Systems (ITS) to provide real-time information regarding road conditions and directions; and • Speed management to reduce high free-flow speeds. *Range of Effectiveness:* 0-45% reduction in GHG emissions.
RTP-3 Required Project Contributions to Transportation Infrastructure Improvement Projects *Range of Effectiveness:* Grouped strategy (see RPT-2 and TST-1 through 7).
RTP-4 Install Park-and-Ride Lots *Range of Effectiveness:* Grouped strategy (see RPT-1, TRT-11, TRT-3, and TST-1 through 6).
Vehicles
VT-1 Electrify Loading Docs and/or Require Idling-Reduction Systems *Range of Effectiveness:* 26-71% reduction in TRU idling GHG emissions.
VT-2 Utilize Alternative Fueled Vehicles, such as: • Biodiesel (B20) • Liquefied Natural Gas (LNG) • Compressed Natural Gas (CNG) *Range of Effectiveness:* Reduction in GHG emissions varies depending on vehicle type, year, and associated fuel economy.
VT-3 Utilize Electric or Hybrid Vehicles *Range of Effectiveness:* 0.4-20.3% reduction in GHG emissions.
Measures – Water
Water Supply
WSW-1 Use Reclaimed Water *Range of Effectiveness:* Up to 40% in Northern California and up to 81% in Southern California.
WSW-2 Use Gray Water *Range of Effectiveness:* Up to 100% of outdoor water GHG emissions if outdoor water use is replaced completely with graywater.
WSW-3 Use Locally Sourced Water Supply *Range of Effectiveness:* 0-60% for Northern and Central California, 11-75% for Southern California.
Water Use
WUW-1 Install Low-Flow Water Fixtures *Range of Effectiveness:* 20% of GHG emissions associated with indoor Residential water use; 17-31% of GHGH emissions associated with Non-Residential indoor water use.
WUW-2 Adopt a Water Conservation strategy *Range of Effectiveness:* Varies depending on Project Applicant and strategies selected. It is equal to the Percent Reduction in water commitment.
WUW-3 Design Water-Efficient Landscapes (see California Department of Water Resources Model Water Efficient Landscape Ordinance), such as:

• Reducing lawn sizes; • Planting vegetation with minimal water needs, such as native species; • Choosing vegetation appropriate for the climate of the project site; • Choosing complimentary plants with similar water needs or which can provide each other with shade and/or water. *Range of Effectiveness:* 0-70% reduction in GHG emissions from outdoor water use.
WUW-4 Use Water-Efficient Landscape Irrigation Systems ("Smart" irrigation control systems) *Range of Effectiveness:* 6.1% reduction in GHG emissions from outdoor water.
WUW-5 Reduce Turf in Landscapes and Lawns *Range of Effectiveness:* Varies and is equal to the percent commitment to turf reduction, assuming no other outdoor water use.
WUW-6 Plant Native or Drought-Resistant Trees and Vegetation *Range of Effectiveness:* Best Management Practice; may be quantified if substantial evidence is available.
Measures – Area Landscaping
Landscaping Equipment
A-1 Prohibit Gas Powered Landscape Equipment *Range of Effectiveness:* Best Management Practice, influences Area GHG emissions from landscape equipment.
A-2 Implement Lawnmower Exchange Program *Range of Effectiveness:* Best Management Practice, influences Area GHG emissions from landscape equipment.
A-3 Electric Yard Equipment Compatibility *Range of Effectiveness:* Best Management Practice, influences Area GHG emissions from landscape equipment. Not applicable on its own. This measure enhances effectiveness of A-1 and A-2.
Measures – Solid Waste
Solid Waste
SW-1 Institute Recycling and Composting Services *Range of Effectiveness:* Varies depending on Project Applicant and strategies selected. Best Management Practice.
SW-2 Recycle Demolished Construction Material *Range of Effectiveness:* Varies depending on Project Applicant and strategies selected. Best Management Practice.
Measures – Vegetation
Vegetation
V-1 Urban Tree Planting *Range of Effectiveness:* CO_2 reduction varies by number of trees. VOC emissions may increase.
V-2 Create New Vegetated Open Space *Range of Effectiveness: Varies based on amount and type of land vegetated.*
Measures – Construction
Construction
C-1 Use Alternative Fuels for Construction Equipment *Range of Effectiveness:* 0-22% reduction in GHG emissions.
C-1 Urban Tree Planting *Range of Effectiveness:* CO_2 reduction varies by number of trees. VOC emissions may increase.

C-2 Use Electric and Hybrid Construction Equipment

Range of Effectiveness: 2.5-80% of GHG emissions from equipment that is electric or hybrid if used 100% of the time.

C-3 Limit Construction Equipment Idling Beyond Regulation Requirements

Range of Effectiveness: Varies with the amount of Project Idling occurring and the amount reduced.

C-4 Institute a Heavy-Duty Off-Road Vehicle Plan, including:

- Construction vehicle inventory tracking system;
- Requiring hour meters on equipment;
- Document the serial number, horsepower, manufacture age, fuel, etc. of all onsite equipment; and
- Daily logging of the operating hours of the equipment.

Range of Effectiveness: Not applicable on its own. This measure ensures compliance with other mitigation measures.

C-5 Implement a Construction Vehicle Inventory Tracking System

Range of Effectiveness: Not applicable on its own. This measure ensures compliance with other mitigation measures.

Measures – Miscellaneous

Miscellaneous

Misc-1 Establish a Carbon Sequestration Project, such as:

- Geologic sequestration or carbon capture and storage techniques, in which CO_2 from point sources is captured and injected underground;
- Terrestrial sequestration in which ecosystems are established or preserved to serve as CO_2 sinks;
- Novel techniques involving advanced chemical or biological pathways; or
- Technologies yet to be discovered.

Range of Effectiveness: Varies depending on Project Applicant and projects selected. The GHG emissions reduction is subtracted from the overall baseline project emissions inventory.

Misc-2 Establish Off-Site Mitigation

Range of Effectiveness: Varies depending on Project Applicant and projects selected. The GHG emissions reduction is subtracted from the overall baseline project emissions inventory.

Misc-3 Use Local and Sustainable Building Materials

Range of Effectiveness: Varies depending on Project Applicant and strategies selected. Best Management Practice.

Misc-4 Require best Management Practices in Agriculture and Animal Operations

Misc-5 Require Environmentally Responsible Purchasing, such as:

- Purchasing products with sustainable packaging;
- Purchasing post-consumer recycled copier paper, paper towels, and stationary;
- Purchasing and stocking communal kitchens with reusable dishes and utensils;
- Choosing sustainable cleaning supplies;
- Leasing equipment from manufacturers who will recycle the components at their end of life;
- Choosing ENERGY STAR appliances and Water Sense-certified water fixtures;

• Choosing electronic appliances with built in sleep-mode timers; • Purchasing 'green power' (e.g. electricity generated from renewable or hydropower) from the utility; and • Choosing locally-made and distributed products. *Range of Effectiveness:* Varies depending on Project Applicant and strategies selected. Best Management Practice.
Misc-6 Implement an Innovative Strategy for GHG Mitigation *Range of Effectiveness:* Varies depending on Project Applicant and strategies selected. Best Management Practice.
Measures – General Plans
General Plans
GP-1 Fund Incentives for Energy Efficiency, such as: • Retrofitting or designing new buildings, parking lots, streets, and public areas with energy-efficient lighting; • Retrofitting or designing new buildings with low-flow water fixtures and high-efficiency appliances; • Retrofitting or purchasing new low-emissions equipment; • Purchasing electric or hybrid vehicles; • Investing in renewable energy systems *Range of Effectiveness:* Varies depending on Project Applicant and strategies selected. Best Management Practice.
GP-2 Establish a Local Farmer's Market *Range of Effectiveness:* Varies depending on Project Applicant and strategies selected. Best Management Practice.
GP-3 Establish Community Gardens *Range of Effectiveness:* Varies depending on Project Applicant and strategies selected. Best Management Practice.
GP-4 Plant Urban Shade Trees *Range of Effectiveness:* The reduction in GHG emissions is not quantifiable at this time, therefore this mitigation measure should be implemented as a Best Management Practice. If the study data were updated to account for Title 24 standards, the GHG emissions reductions could be quantified, but would vary based on location, building type, and building size.
GP-5 Implement Strategies to Reduce Urban Heat-Island Effect, such as: • Planting urban shade trees; • Installing reflective roofs; and • Using light-colored or high-albedo pavements and surfaces. *Range of Effectiveness:* The reduction in GHG emissions is not quantifiable at this time, therefore this mitigation measure should be implemented as a Best Management Practice. If the study data were updated to account for Title 24 standards, the GHG emissions reductions could be quantified, but would vary based on location, building type, and building size.

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 CEQA evaluation should be prepared to include all feasible mitigation measures, as well as include an updated air quality analysis to ensure that the necessary mitigation measures are implemented to reduce emissions to below thresholds. The revised CEQA evaluation should also

demonstrate 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.

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

Sincerely,

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

Paul E. Rosenfeld, Ph.D.

Lafayette

Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	567.00	Space	5.10	226,800.00	0
Apartments Low Rise	315.00	Dwelling Unit	19.69	346,645.00	901

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Consistent with Addendum's model.

Construction Phase - See SWAPE comment about construction schedule.

Grading -

Vehicle Trips - Consistent with Addendum's model.

Sequestration -

Construction Off-road Equipment Mitigation - See SWAPE comment about construction-related mitigation measures.

Energy Mitigation - See SWAPE comment about energy-related operational mitigation measures.

Water Mitigation - See SWAPE comment about water-related operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	300,000.00
tblGrading	MaterialExported	0.00	100,000.00
tblGrading	MaterialImported	0.00	75,000.00
tblGrading	MaterialImported	0.00	25,000.00
tblLandUse	LandUseSquareFeet	315,000.00	346,645.00
tblSequestration	NumberOfNewTrees	0.00	700.00
tblVehicleTrips	ST_TR	7.16	6.45
tblVehicleTrips	SU_TR	6.07	6.45
tblVehicleTrips	WD_TR	6.59	6.45

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					
2020	0.5830	12.0403	4.0930	0.0302	0.9706	0.1602	1.1308	0.3084	0.1499	0.4584	0.0000	2,872.2618	2,872.2618	0.1905	0.0000	2,877.0236
2021	0.4080	3.3173	3.3633	9.1100e-003	0.3928	0.1293	0.5220	0.1059	0.1215	0.2274	0.0000	821.7122	821.7122	0.0904	0.0000	823.9730
2022	2.5086	0.1213	0.1731	3.0000e-004	6.2100e-003	6.2500e-003	0.0125	1.6500e-003	5.8200e-003	7.4700e-003	0.0000	26.6360	26.6360	6.4300e-003	0.0000	26.7967
Maximum	**2.5086**	**12.0403**	**4.0930**	**0.0302**	**0.9706**	**0.1602**	**1.1308**	**0.3084**	**0.1499**	**0.4584**	**0.0000**	**2,872.2618**	**2,872.2618**	**0.1905**	**0.0000**	**2,877.0236**

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					
2020	0.5830	12.0403	4.0930	0.0302	0.9706	0.1602	1.1308	0.3084	0.1499	0.4584	0.0000	2,872.2615	2,872.2615	0.1905	0.0000	2,877.0233
2021	0.4080	3.3173	3.3633	9.1100e-003	0.3928	0.1293	0.5220	0.1059	0.1215	0.2274	0.0000	821.7118	821.7118	0.0904	0.0000	823.9727
2022	2.5086	0.1213	0.1731	3.0000e-004	6.2100e-003	6.2500e-003	0.0125	1.6500e-003	5.8200e-003	7.4700e-003	0.0000	26.6360	26.6360	6.4300e-003	0.0000	26.7966
Maximum	**2.5086**	**12.0403**	**4.0930**	**0.0302**	**0.9706**	**0.1602**	**1.1308**	**0.3084**	**0.1499**	**0.4584**	**0.0000**	**2,872.2615**	**2,872.2615**	**0.1905**	**0.0000**	**2,877.0233**

Lafayette - Contra Costa County, Annual

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**5-1-2020**	**7-31-2020**	10.7169	10.7169
2	**8-1-2020**	**10-31-2020**	1.0382	1.0382
3	**11-1-2020**	**1-31-2021**	1.0109	1.0109
4	**2-1-2021**	**4-30-2021**	0.9118	0.9118
5	**5-1-2021**	**7-31-2021**	0.9374	0.9374
6	**8-1-2021**	**10-31-2021**	0.9400	0.9400
7	**11-1-2021**	**1-31-2022**	1.1050	1.1050
8	**2-1-2022**	**4-30-2022**	2.1489	2.1489
		Highest	10.7169	10.7169

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.4152	0.0438	3.3475	2.1200e-003		0.1560	0.1560		0.1560	0.1560	14.3608	9.7294	24.0901	0.0268	9.4000e-004	25.0406
Energy	0.0173	0.1480	0.0630	9.4000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	593.0426	593.0426	0.0224	7.0900e-003	595.7134
Mobile	0.5040	2.3149	5.6837	0.0199	1.7524	0.0169	1.7693	0.4702	0.0158	0.4860	0.0000	1,819.3529	1,819.3529	0.0656	0.0000	1,820.9920
Waste						0.0000	0.0000		0.0000	0.0000	29.4134	0.0000	29.4134	1.7383	0.0000	72.8704
Water						0.0000	0.0000		0.0000	0.0000	6.5112	45.4806	51.9918	0.6708	0.0162	73.5946
Total	**2.9366**	**2.5067**	**9.0941**	**0.0229**	**1.7524**	**0.1849**	**1.9373**	**0.4702**	**0.1838**	**0.6540**	**50.2853**	**2,467.6055**	**2,517.8908**	**2.5238**	**0.0243**	**2,588.2110**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.4152	0.0438	3.3475	2.1200e-003		0.1560	0.1560		0.1560	0.1560	14.3608	9.7294	24.0901	0.0268	9.4000e-004	25.0406
Energy	0.0173	0.1480	0.0630	9.4000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	593.0426	593.0426	0.0224	7.0900e-003	595.7134
Mobile	0.5040	2.3149	5.6837	0.0199	1.7524	0.0169	1.7693	0.4702	0.0158	0.4860	0.0000	1,819.3529	1,819.3529	0.0656	0.0000	1,820.9920
Waste						0.0000	0.0000		0.0000	0.0000	29.4134	0.0000	29.4134	1.7383	0.0000	72.8704
Water						0.0000	0.0000		0.0000	0.0000	6.5112	45.4806	51.9918	0.6708	0.0162	73.5946
Total	**2.9366**	**2.5067**	**9.0941**	**0.0229**	**1.7524**	**0.1849**	**1.9373**	**0.4702**	**0.1838**	**0.6540**	**50.2853**	**2,467.6055**	**2,517.8908**	**2.5238**	**0.0243**	**2,588.2110**

	ROG	NOx	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**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	495.6000
Total	**495.6000**

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	5/1/2020	5/28/2020	5	20	
2	Site Preparation	Site Preparation	5/29/2020	6/11/2020	5	10	
3	Grading	Grading	6/12/2020	7/30/2020	5	35	
4	Building Construction	Building Construction	7/31/2020	12/30/2021	5	370	
5	Paving	Paving	12/31/2021	1/27/2022	5	20	
6	Architectural Coating	Architectural Coating	1/28/2022	2/24/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 5.1

Residential Indoor: 701,956; Residential Outdoor: 233,985; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 13,608 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	2	8.00	158	0.38
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
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	46,875.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	15,625.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	322.00	71.00	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	64.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2020

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	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386
Total	**0.0331**	**0.3320**	**0.2175**	**3.9000e-004**		**0.0166**	**0.0166**		**0.0154**	**0.0154**	**0.0000**	**33.9986**	**33.9986**	**9.6000e-003**	**0.0000**	**34.2386**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	3.6000e-004	3.7700e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0437	1.0437	3.0000e-005	0.0000	1.0443
Total	**5.0000e-004**	**3.6000e-004**	**3.7700e-003**	**1.0000e-005**	**1.1900e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**1.0437**	**1.0437**	**3.0000e-005**	**0.0000**	**1.0443**

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	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385
Total	**0.0331**	**0.3320**	**0.2175**	**3.9000e-004**		**0.0166**	**0.0166**		**0.0154**	**0.0154**	**0.0000**	**33.9986**	**33.9986**	**9.6000e-003**	**0.0000**	**34.2385**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	3.6000e-004	3.7700e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.2000e-004	0.0000	1.0437	1.0437	3.0000e-005	0.0000	1.0443
Total	**5.0000e-004**	**3.6000e-004**	**3.7700e-003**	**1.0000e-005**	**1.1900e-003**	**1.0000e-005**	**1.2000e-003**	**3.2000e-004**	**1.0000e-005**	**3.2000e-004**	**0.0000**	**1.0437**	**1.0437**	**3.0000e-005**	**0.0000**	**1.0443**

3.3 Site Preparation - 2020

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					0.0974	0.0000	0.0974	0.0507	0.0000	0.0507	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	**0.0204**	**0.2121**	**0.1076**	**1.9000e-004**	**0.0974**	**0.0110**	**0.1084**	**0.0507**	**0.0101**	**0.0608**	**0.0000**	**16.7153**	**16.7153**	**5.4100e-003**	**0.0000**	**16.8505**

3.3 Site Preparation - 2020

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	0.1935	6.8026	1.2804	0.0184	0.3971	0.0224	0.4194	0.1092	0.0214	0.1306	0.0000	1,777.2167	1,777.2167	0.0791	0.0000	1,779.1935
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.2000e-004	2.2600e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6262	0.6262	2.0000e-005	0.0000	0.6266
Total	**0.1938**	**6.8028**	**1.2826**	**0.0184**	**0.3978**	**0.0224**	**0.4202**	**0.1093**	**0.0214**	**0.1308**	**0.0000**	**1,777.8429**	**1,777.8429**	**0.0791**	**0.0000**	**1,779.8201**

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					0.0974	0.0000	0.0974	0.0507	0.0000	0.0507	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	**0.0204**	**0.2121**	**0.1076**	**1.9000e-004**	**0.0974**	**0.0110**	**0.1084**	**0.0507**	**0.0101**	**0.0608**	**0.0000**	**16.7153**	**16.7153**	**5.4100e-003**	**0.0000**	**16.8505**

3.3 Site Preparation - 2020

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	0.1935	6.8026	1.2804	0.0184	0.3971	0.0224	0.4194	0.1092	0.0214	0.1306	0.0000	1,777.2167	1,777.2167	0.0791	0.0000	1,779.1935
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.2000e-004	2.2600e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6262	0.6262	2.0000e-005	0.0000	0.6266
Total	**0.1938**	**6.8028**	**1.2826**	**0.0184**	**0.3978**	**0.0224**	**0.4202**	**0.1093**	**0.0214**	**0.1308**	**0.0000**	**1,777.8429**	**1,777.8429**	**0.0791**	**0.0000**	**1,779.8201**

3.4 Grading - 2020

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					0.1730	0.0000	0.1730	0.0662	0.0000	0.0662	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0779	0.8785	0.5593	1.0900e-003		0.0380	0.0380		0.0350	0.0350	0.0000	95.3475	95.3475	0.0308	0.0000	96.1185
Total	**0.0779**	**0.8785**	**0.5593**	**1.0900e-003**	**0.1730**	**0.0380**	**0.2110**	**0.0662**	**0.0350**	**0.1012**	**0.0000**	**95.3475**	**95.3475**	**0.0308**	**0.0000**	**96.1185**

3.4 Grading - 2020

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	0.0645	2.2675	0.4268	6.1400e-003	0.1324	7.4600e-003	0.1398	0.0364	7.1400e-003	0.0435	0.0000	592.4056	592.4056	0.0264	0.0000	593.0645
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	1.1700e-003	8.5000e-004	8.7900e-003	3.0000e-005	2.7800e-003	2.0000e-005	2.7900e-003	7.4000e-004	2.0000e-005	7.6000e-004	0.0000	2.4353	2.4353	6.0000e-005	0.0000	2.4368
Total	**0.0657**	**2.2684**	**0.4356**	**6.1700e-003**	**0.1351**	**7.4800e-003**	**0.1426**	**0.0371**	**7.1600e-003**	**0.0443**	**0.0000**	**594.8408**	**594.8408**	**0.0264**	**0.0000**	**595.5013**

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					0.1730	0.0000	0.1730	0.0662	0.0000	0.0662	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0779	0.8785	0.5593	1.0900e-003		0.0380	0.0380		0.0350	0.0350	0.0000	95.3474	95.3474	0.0308	0.0000	96.1183
Total	**0.0779**	**0.8785**	**0.5593**	**1.0900e-003**	**0.1730**	**0.0380**	**0.2110**	**0.0662**	**0.0350**	**0.1012**	**0.0000**	**95.3474**	**95.3474**	**0.0308**	**0.0000**	**96.1183**

3.4 Grading - 2020

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	0.0645	2.2675	0.4268	6.1400e-003	0.1324	7.4600e-003	0.1398	0.0364	7.1400e-003	0.0435	0.0000	592.4056	592.4056	0.0264	0.0000	593.0645
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	1.1700e-003	8.5000e-004	8.7900e-003	3.0000e-005	2.7800e-003	2.0000e-005	2.7900e-003	7.4000e-004	2.0000e-005	7.6000e-004	0.0000	2.4353	2.4353	6.0000e-005	0.0000	2.4368
Total	**0.0657**	**2.2684**	**0.4356**	**6.1700e-003**	**0.1351**	**7.4800e-003**	**0.1426**	**0.0371**	**7.1600e-003**	**0.0443**	**0.0000**	**594.8408**	**594.8408**	**0.0264**	**0.0000**	**595.5013**

3.5 Building Construction - 2020

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	0.1166	1.0552	0.9267	1.4800e-003		0.0614	0.0614		0.0578	0.0578	0.0000	127.3855	127.3855	0.0311	0.0000	128.1624
Total	**0.1166**	**1.0552**	**0.9267**	**1.4800e-003**		**0.0614**	**0.0614**		**0.0578**	**0.0578**	**0.0000**	**127.3855**	**127.3855**	**0.0311**	**0.0000**	**128.1624**

3.5 Building Construction - 2020

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	0.0157	0.4480	0.1151	1.0700e-003	0.0257	2.2900e-003	0.0280	7.4200e-003	2.1900e-003	9.6100e-003	0.0000	101.8629	101.8629	4.9900e-003	0.0000	101.9877
Worker	0.0594	0.0430	0.4449	1.3600e-003	0.1405	9.4000e-004	0.1414	0.0374	8.6000e-004	0.0382	0.0000	123.2246	123.2246	3.0300e-003	0.0000	123.3003
Total	**0.0751**	**0.4909**	**0.5600**	**2.4300e-003**	**0.1661**	**3.2300e-003**	**0.1694**	**0.0448**	**3.0500e-003**	**0.0478**	**0.0000**	**225.0875**	**225.0875**	**8.0200e-003**	**0.0000**	**225.2880**

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	0.1166	1.0552	0.9267	1.4800e-003		0.0614	0.0614		0.0578	0.0578	0.0000	127.3853	127.3853	0.0311	0.0000	128.1623
Total	**0.1166**	**1.0552**	**0.9267**	**1.4800e-003**		**0.0614**	**0.0614**		**0.0578**	**0.0578**	**0.0000**	**127.3853**	**127.3853**	**0.0311**	**0.0000**	**128.1623**

3.5 Building Construction - 2020

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	0.0157	0.4480	0.1151	1.0700e-003	0.0257	2.2900e-003	0.0280	7.4200e-003	2.1900e-003	9.6100e-003	0.0000	101.8629	101.8629	4.9900e-003	0.0000	101.9877
Worker	0.0594	0.0430	0.4449	1.3600e-003	0.1405	9.4000e-004	0.1414	0.0374	8.6000e-004	0.0382	0.0000	123.2246	123.2246	3.0300e-003	0.0000	123.3003
Total	**0.0751**	**0.4909**	**0.5600**	**2.4300e-003**	**0.1661**	**3.2300e-003**	**0.1694**	**0.0448**	**3.0500e-003**	**0.0478**	**0.0000**	**225.0875**	**225.0875**	**8.0200e-003**	**0.0000**	**225.2880**

3.5 Building Construction - 2021

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	0.2471	2.2662	2.1548	3.5000e-003		0.1246	0.1246		0.1172	0.1172	0.0000	301.1285	301.1285	0.0727	0.0000	302.9447
Total	**0.2471**	**2.2662**	**2.1548**	**3.5000e-003**		**0.1246**	**0.1246**		**0.1172**	**0.1172**	**0.0000**	**301.1285**	**301.1285**	**0.0727**	**0.0000**	**302.9447**

3.5 Building Construction - 2021

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	0.0302	0.9541	0.2424	2.4900e-003	0.0607	2.1400e-003	0.0628	0.0176	2.0500e-003	0.0196	0.0000	238.5997	238.5997	0.0111	0.0000	238.8767
Worker	0.1297	0.0906	0.9586	3.1100e-003	0.3320	2.1600e-003	0.3342	0.0883	1.9900e-003	0.0903	0.0000	280.9325	280.9325	6.3800e-003	0.0000	281.0921
Total	**0.1599**	**1.0447**	**1.2010**	**5.6000e-003**	**0.3927**	**4.3000e-003**	**0.3970**	**0.1059**	**4.0400e-003**	**0.1099**	**0.0000**	**519.5322**	**519.5322**	**0.0175**	**0.0000**	**519.9687**

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	0.2471	2.2662	2.1548	3.5000e-003		0.1246	0.1246		0.1172	0.1172	0.0000	301.1281	301.1281	0.0727	0.0000	302.9443
Total	**0.2471**	**2.2662**	**2.1548**	**3.5000e-003**		**0.1246**	**0.1246**		**0.1172**	**0.1172**	**0.0000**	**301.1281**	**301.1281**	**0.0727**	**0.0000**	**302.9443**

3.5 Building Construction - 2021

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	0.0302	0.9541	0.2424	2.4900e-003	0.0607	2.1400e-003	0.0628	0.0176	2.0500e-003	0.0196	0.0000	238.5997	238.5997	0.0111	0.0000	238.8767
Worker	0.1297	0.0906	0.9586	3.1100e-003	0.3320	2.1600e-003	0.3342	0.0883	1.9900e-003	0.0903	0.0000	280.9325	280.9325	6.3800e-003	0.0000	281.0921
Total	**0.1599**	**1.0447**	**1.2010**	**5.6000e-003**	**0.3927**	**4.3000e-003**	**0.3970**	**0.1059**	**4.0400e-003**	**0.1099**	**0.0000**	**519.5322**	**519.5322**	**0.0175**	**0.0000**	**519.9687**

3.6 Paving - 2021

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	6.3000e-004	6.4600e-003	7.3300e-003	1.0000e-005		3.4000e-004	3.4000e-004		3.1000e-004	3.1000e-004	0.0000	1.0012	1.0012	3.2000e-004	0.0000	1.0093
Paving	3.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.6000e-004**	**6.4600e-003**	**7.3300e-003**	**1.0000e-005**		**3.4000e-004**	**3.4000e-004**		**3.1000e-004**	**3.1000e-004**	**0.0000**	**1.0012**	**1.0012**	**3.2000e-004**	**0.0000**	**1.0093**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.7000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0503	0.0503	0.0000	0.0000	0.0504
Total	**2.0000e-005**	**2.0000e-005**	**1.7000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0503**	**0.0503**	**0.0000**	**0.0000**	**0.0504**

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	6.3000e-004	6.4600e-003	7.3300e-003	1.0000e-005		3.4000e-004	3.4000e-004		3.1000e-004	3.1000e-004	0.0000	1.0012	1.0012	3.2000e-004	0.0000	1.0093
Paving	3.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.6000e-004**	**6.4600e-003**	**7.3300e-003**	**1.0000e-005**		**3.4000e-004**	**3.4000e-004**		**3.1000e-004**	**3.1000e-004**	**0.0000**	**1.0012**	**1.0012**	**3.2000e-004**	**0.0000**	**1.0093**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.7000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0503	0.0503	0.0000	0.0000	0.0504
Total	**2.0000e-005**	**2.0000e-005**	**1.7000e-004**	**0.0000**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.0503**	**0.0503**	**0.0000**	**0.0000**	**0.0504**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0105	0.1057	0.1385	2.2000e-004		5.4000e-003	5.4000e-003		4.9600e-003	4.9600e-003	0.0000	19.0262	19.0262	6.1500e-003	0.0000	19.1800
Paving	6.3500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0168**	**0.1057**	**0.1385**	**2.2000e-004**		**5.4000e-003**	**5.4000e-003**		**4.9600e-003**	**4.9600e-003**	**0.0000**	**19.0262**	**19.0262**	**6.1500e-003**	**0.0000**	**19.1800**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	2.8000e-004	3.0000e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.9208	0.9208	2.0000e-005	0.0000	0.9213
Total	**4.1000e-004**	**2.8000e-004**	**3.0000e-003**	**1.0000e-005**	**1.1300e-003**	**1.0000e-005**	**1.1400e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**0.9208**	**0.9208**	**2.0000e-005**	**0.0000**	**0.9213**

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	0.0105	0.1057	0.1385	2.2000e-004		5.4000e-003	5.4000e-003		4.9600e-003	4.9600e-003	0.0000	19.0262	19.0262	6.1500e-003	0.0000	19.1800
Paving	6.3500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0168**	**0.1057**	**0.1385**	**2.2000e-004**		**5.4000e-003**	**5.4000e-003**		**4.9600e-003**	**4.9600e-003**	**0.0000**	**19.0262**	**19.0262**	**6.1500e-003**	**0.0000**	**19.1800**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	2.8000e-004	3.0000e-003	1.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	0.9208	0.9208	2.0000e-005	0.0000	0.9213
Total	**4.1000e-004**	**2.8000e-004**	**3.0000e-003**	**1.0000e-005**	**1.1300e-003**	**1.0000e-005**	**1.1400e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**0.9208**	**0.9208**	**2.0000e-005**	**0.0000**	**0.9213**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.4875					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**2.4895**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8400e-003	1.2400e-003	0.0135	5.0000e-005	5.0800e-003	3.0000e-005	5.1100e-003	1.3500e-003	3.0000e-005	1.3800e-003	0.0000	4.1357	4.1357	9.0000e-005	0.0000	4.1379
Total	**1.8400e-003**	**1.2400e-003**	**0.0135**	**5.0000e-005**	**5.0800e-003**	**3.0000e-005**	**5.1100e-003**	**1.3500e-003**	**3.0000e-005**	**1.3800e-003**	**0.0000**	**4.1357**	**4.1357**	**9.0000e-005**	**0.0000**	**4.1379**

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	2.4875					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**2.4895**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8400e-003	1.2400e-003	0.0135	5.0000e-005	5.0800e-003	3.0000e-005	5.1100e-003	1.3500e-003	3.0000e-005	1.3800e-003	0.0000	4.1357	4.1357	9.0000e-005	0.0000	4.1379
Total	**1.8400e-003**	**1.2400e-003**	**0.0135**	**5.0000e-005**	**5.0800e-003**	**3.0000e-005**	**5.1100e-003**	**1.3500e-003**	**3.0000e-005**	**1.3800e-003**	**0.0000**	**4.1357**	**4.1357**	**9.0000e-005**	**0.0000**	**4.1379**

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	0.5040	2.3149	5.6837	0.0199	1.7524	0.0169	1.7693	0.4702	0.0158	0.4860	0.0000	1,819.3529	1,819.3529	0.0656	0.0000	1,820.9920
Unmitigated	0.5040	2.3149	5.6837	0.0199	1.7524	0.0169	1.7693	0.4702	0.0158	0.4860	0.0000	1,819.3529	1,819.3529	0.0656	0.0000	1,820.9920

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,031.75	2,031.75	2031.75	4,692,545	4,692,545
Parking Lot	0.00	0.00	0.00		
Total	2,031.75	2,031.75	2,031.75	4,692,545	4,692,545

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 Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.586711	0.038259	0.185486	0.120728	0.016377	0.005053	0.010699	0.024311	0.001622	0.001773	0.005406	0.002738	0.000835
Parking Lot	0.586711	0.038259	0.185486	0.120728	0.016377	0.005053	0.010699	0.024311	0.001622	0.001773	0.005406	0.002738	0.000835

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	421.6040	421.6040	0.0191	3.9400e-003	423.2560
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	421.6040	421.6040	0.0191	3.9400e-003	423.2560
NaturalGas Mitigated	0.0173	0.1480	0.0630	9.4000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	171.4386	171.4386	3.2900e-003	3.1400e-003	172.4574
NaturalGas Unmitigated	0.0173	0.1480	0.0630	9.4000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	171.4386	171.4386	3.2900e-003	3.1400e-003	172.4574

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 Low Rise	3.21264e+006	0.0173	0.1480	0.0630	9.4000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	171.4386	171.4386	3.2900e-003	3.1400e-003	172.4574
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0173**	**0.1480**	**0.0630**	**9.4000e-004**		**0.0120**	**0.0120**		**0.0120**	**0.0120**	**0.0000**	**171.4386**	**171.4386**	**3.2900e-003**	**3.1400e-003**	**172.4574**

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 Low Rise	3.21264e+006	0.0173	0.1480	0.0630	9.4000e-004		0.0120	0.0120		0.0120	0.0120	0.0000	171.4386	171.4386	3.2900e-003	3.1400e-003	172.4574
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0173**	**0.1480**	**0.0630**	**9.4000e-004**		**0.0120**	**0.0120**		**0.0120**	**0.0120**	**0.0000**	**171.4386**	**171.4386**	**3.2900e-003**	**3.1400e-003**	**172.4574**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.36987e+006	398.5115	0.0180	3.7300e-003	400.0730
Parking Lot	79380	23.0926	1.0400e-003	2.2000e-004	23.1830
Total		**421.6040**	**0.0191**	**3.9500e-003**	**423.2560**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.36987e+006	398.5115	0.0180	3.7300e-003	400.0730
Parking Lot	79380	23.0926	1.0400e-003	2.2000e-004	23.1830
Total		**421.6040**	**0.0191**	**3.9500e-003**	**423.2560**

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	2.4152	0.0438	3.3475	2.1200e-003		0.1560	0.1560		0.1560	0.1560	14.3608	9.7294	24.0901	0.0268	9.4000e-004	25.0406
Unmitigated	2.4152	0.0438	3.3475	2.1200e-003		0.1560	0.1560		0.1560	0.1560	14.3608	9.7294	24.0901	0.0268	9.4000e-004	25.0406

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	0.2488					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3685					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.7268	0.0167	1.0008	1.9900e-003		0.1431	0.1431		0.1431	0.1431	14.3608	5.8987	20.2594	0.0231	9.4000e-004	21.1171
Landscaping	0.0712	0.0271	2.3467	1.2000e-004		0.0130	0.0130		0.0130	0.0130	0.0000	3.8307	3.8307	3.7100e-003	0.0000	3.9235
Total	**2.4152**	**0.0438**	**3.3475**	**2.1100e-003**		**0.1560**	**0.1560**		**0.1560**	**0.1560**	**14.3608**	**9.7294**	**24.0901**	**0.0268**	**9.4000e-004**	**25.0406**

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	0.2488					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3685					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.7268	0.0167	1.0008	1.9900e-003		0.1431	0.1431		0.1431	0.1431	14.3608	5.8987	20.2594	0.0231	9.4000e-004	21.1171
Landscaping	0.0712	0.0271	2.3467	1.2000e-004		0.0130	0.0130		0.0130	0.0130	0.0000	3.8307	3.8307	3.7100e-003	0.0000	3.9235
Total	**2.4152**	**0.0438**	**3.3475**	**2.1100e-003**		**0.1560**	**0.1560**		**0.1560**	**0.1560**	**14.3608**	**9.7294**	**24.0901**	**0.0268**	**9.4000e-004**	**25.0406**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	51.9918	0.6708	0.0162	73.5946
Unmitigated	51.9918	0.6708	0.0162	73.5946

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	20.5235 / 12.9387	51.9918	0.6708	0.0162	73.5946
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**51.9918**	**0.6708**	**0.0162**	**73.5946**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	20.5235 / 12.9387	51.9918	0.6708	0.0162	73.5946
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**51.9918**	**0.6708**	**0.0162**	**73.5946**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	29.4134	1.7383	0.0000	72.8704
Unmitigated	29.4134	1.7383	0.0000	72.8704

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	144.9	29.4134	1.7383	0.0000	72.8704
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**29.4134**	**1.7383**	**0.0000**	**72.8704**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	144.9	29.4134	1.7383	0.0000	72.8704
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**29.4134**	**1.7383**	**0.0000**	**72.8704**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	495.6000	0.0000	0.0000	495.6000

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	700	495.6000	0.0000	0.0000	495.6000
Total		**495.6000**	**0.0000**	**0.0000**	**495.6000**

Lafayette

Contra Costa County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	567.00	Space	5.10	226,800.00	0
Apartments Low Rise	315.00	Dwelling Unit	19.69	346,645.00	901

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Consistent with Addendum's model.

Construction Phase - See SWAPE comment about construction schedule.

Grading -

Vehicle Trips - Consistent with Addendum's model.

Sequestration -

Construction Off-road Equipment Mitigation - See SWAPE comment about construction-related mitigation measures.

Energy Mitigation - See SWAPE comment about energy-related operational mitigation measures.

Water Mitigation - See SWAPE comment about water-related operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblGrading	MaterialExported	0.00	300,000.00
tblGrading	MaterialExported	0.00	100,000.00
tblGrading	MaterialImported	0.00	75,000.00
tblGrading	MaterialImported	0.00	25,000.00
tblLandUse	LandUseSquareFeet	315,000.00	346,645.00
tblSequestration	NumberOfNewTrees	0.00	700.00
tblTripsAndVMT	HaulingTripNumber	15,625.00	46,875.00
tblTripsAndVMT	HaulingTripNumber	46,875.00	15,625.00
tblVehicleTrips	ST_TR	7.16	6.45
tblVehicleTrips	SU_TR	6.07	6.45
tblVehicleTrips	WD_TR	6.59	6.45

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					
2020	43.4744	1,407.7577	290.1846	3.6885	101.5005	6.7173	108.2178	32.6180	6.3458	38.9638	0.0000	391,714.8649	391,714.8649	19.2309	0.0000	392,195.6373
2021	3.2382	25.5257	26.1363	0.0694	3.1257	0.9920	4.1177	0.8400	0.9326	1.7726	0.0000	6,898.8805	6,898.8805	0.7686	0.0000	6,918.0955
2022	249.1551	11.1570	14.9031	0.0239	0.5257	0.5687	0.6919	0.1395	0.5232	0.5559	0.0000	2,313.1899	2,313.1899	0.7163	0.0000	2,331.0963
Maximum	**249.1551**	**1,407.7577**	**290.1846**	**3.6885**	**101.5005**	**6.7173**	**108.2178**	**32.6180**	**6.3458**	**38.9638**	**0.0000**	**391,714.8649**	**391,714.8649**	**19.2309**	**0.0000**	**392,195.6373**

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					
2020	43.4744	1,407.7577	290.1846	3.6885	101.5005	6.7173	108.2178	32.6180	6.3458	38.9638	0.0000	391,714.8649	391,714.8649	19.2309	0.0000	392,195.6373
2021	3.2382	25.5257	26.1363	0.0694	3.1257	0.9920	4.1177	0.8400	0.9326	1.7726	0.0000	6,898.8805	6,898.8805	0.7686	0.0000	6,918.0955
2022	249.1551	11.1570	14.9031	0.0239	0.5257	0.5687	0.6919	0.1395	0.5232	0.5559	0.0000	2,313.1899	2,313.1899	0.7163	0.0000	2,331.0963
Maximum	**249.1551**	**1,407.7577**	**290.1846**	**3.6885**	**101.5005**	**6.7173**	**108.2178**	**32.6180**	**6.3458**	**38.9638**	**0.0000**	**391,714.8649**	**391,714.8649**	**19.2309**	**0.0000**	**392,195.6373**

Lafayette - Contra Costa County, Winter

	ROG	NOx	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**

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	139.1997	3.1645	197.2310	0.3311		24.4422	24.4422		24.4422	24.4422	2,636.8166	1,214.2710	3,851.0876	3.6538	0.1864	3,997.9735
Energy	0.0949	0.8111	0.3452	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.4997	1,035.4997	0.0199	0.0190	1,041.6531
Mobile	2.7069	12.9773	32.7925	0.1079	9.9671	0.0935	10.0606	2.6666	0.0874	2.7540		10,888.7360	10,888.7360	0.4083		10,898.9440
Total	**142.0015**	**16.9529**	**230.3687**	**0.4442**	**9.9671**	**24.6013**	**34.5684**	**2.6666**	**24.5952**	**27.2618**	**2,636.8166**	**13,138.5067**	**15,775.3233**	**4.0820**	**0.2054**	**15,938.5706**

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	139.1997	3.1645	197.2310	0.3311		24.4422	24.4422		24.4422	24.4422	2,636.8166	1,214.2710	3,851.0876	3.6538	0.1864	3,997.9735
Energy	0.0949	0.8111	0.3452	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.4997	1,035.4997	0.0199	0.0190	1,041.6531
Mobile	2.7069	12.9773	32.7925	0.1079	9.9671	0.0935	10.0606	2.6666	0.0874	2.7540		10,888.7360	10,888.7360	0.4083		10,898.9440
Total	**142.0015**	**16.9529**	**230.3687**	**0.4442**	**9.9671**	**24.6013**	**34.5684**	**2.6666**	**24.5952**	**27.2618**	**2,636.8166**	**13,138.5067**	**15,775.3233**	**4.0820**	**0.2054**	**15,938.5706**

	ROG	NOx	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	5/1/2020	5/28/2020	5	20	
2	Site Preparation	Site Preparation	5/29/2020	6/11/2020	5	10	
3	Grading	Grading	6/12/2020	7/30/2020	5	35	
4	Building Construction	Building Construction	7/31/2020	12/30/2021	5	370	
5	Paving	Paving	12/31/2021	1/27/2022	5	20	
6	Architectural Coating	Architectural Coating	1/28/2022	2/24/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 5.1

Residential Indoor: 701,956; Residential Outdoor: 233,985; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 13,608 (Architectural Coating – sqft)

OffRoad Equipment

Lafayette - Contra Costa County, Winter

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
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	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	46,875.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	15,625.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	322.00	71.00	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	64.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2020

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	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**		**1.6587**	**1.6587**		**1.5419**	**1.5419**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

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
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
Worker	0.0553	0.0402	0.3864	1.1400e-003	0.1232	7.9000e-004	0.1240	0.0327	7.3000e-004	0.0334		113.6264	113.6264	2.8200e-003		113.6970
Total	**0.0553**	**0.0402**	**0.3864**	**1.1400e-003**	**0.1232**	**7.9000e-004**	**0.1240**	**0.0327**	**7.3000e-004**	**0.0334**		**113.6264**	**113.6264**	**2.8200e-003**		**113.6970**

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	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**		**1.6587**	**1.6587**		**1.5419**	**1.5419**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

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
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
Worker	0.0553	0.0402	0.3864	1.1400e-003	0.1232	7.9000e-004	0.1240	0.0327	7.3000e-004	0.0334		113.6264	113.6264	2.8200e-003		113.6970
Total	**0.0553**	**0.0402**	**0.3864**	**1.1400e-003**	**0.1232**	**7.9000e-004**	**0.1240**	**0.0327**	**7.3000e-004**	**0.0334**		**113.6264**	**113.6264**	**2.8200e-003**		**113.6970**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.4799	0.0000	19.4799	10.1447	0.0000	10.1447			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**19.4799**	**2.1974**	**21.6773**	**10.1447**	**2.0216**	**12.1664**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

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	39.3316	1,365.2922	268.2074	3.6491	81.8728	4.5189	86.3917	22.4340	4.3233	26.7574		387,893.4117	387,893.4117	18.0357		388,344.3035
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
Worker	0.0664	0.0482	0.4637	1.3700e-003	0.1479	9.5000e-004	0.1488	0.0392	8.8000e-004	0.0401		136.3517	136.3517	3.3900e-003		136.4364
Total	**39.3980**	**1,365.3404**	**268.6710**	**3.6504**	**82.0206**	**4.5199**	**86.5405**	**22.4733**	**4.3242**	**26.7975**		**388,029.7634**	**388,029.7634**	**18.0391**		**388,480.7398**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.4799	0.0000	19.4799	10.1447	0.0000	10.1447			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**19.4799**	**2.1974**	**21.6773**	**10.1447**	**2.0216**	**12.1664**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

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	39.3316	1,365.2922	268.2074	3.6491	81.8728	4.5189	86.3917	22.4340	4.3233	26.7574		387,893.4117	387,893.4117	18.0357		388,344.3035
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
Worker	0.0664	0.0482	0.4637	1.3700e-003	0.1479	9.5000e-004	0.1488	0.0392	8.8000e-004	0.0401		136.3517	136.3517	3.3900e-003		136.4364
Total	**39.3980**	**1,365.3404**	**268.6710**	**3.6504**	**82.0206**	**4.5199**	**86.5405**	**22.4733**	**4.3242**	**26.7975**		**388,029.7634**	**388,029.7634**	**18.0391**		**388,480.7398**

3.4 Grading - 2020

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					9.8850	0.0000	9.8850	3.7800	0.0000	3.7800			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**9.8850**	**2.1739**	**12.0589**	**3.7800**	**2.0000**	**5.7800**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

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	3.7459	130.0278	25.5436	0.3475	7.7974	0.4304	8.2278	2.1366	0.4117	2.5483		36,942.2297	36,942.2297	1.7177		36,985.1718
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
Worker	0.0737	0.0536	0.5152	1.5200e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		151.5019	151.5019	3.7600e-003		151.5960
Total	**3.8196**	**130.0814**	**26.0587**	**0.3491**	**7.9617**	**0.4314**	**8.3931**	**2.1802**	**0.4127**	**2.5929**		**37,093.7316**	**37,093.7316**	**1.7214**		**37,136.7677**

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					9.8850	0.0000	9.8850	3.7800	0.0000	3.7800			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**9.8850**	**2.1739**	**12.0589**	**3.7800**	**2.0000**	**5.7800**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

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	3.7459	130.0278	25.5436	0.3475	7.7974	0.4304	8.2278	2.1366	0.4117	2.5483		36,942.2297	36,942.2297	1.7177		36,985.1718
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
Worker	0.0737	0.0536	0.5152	1.5200e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		151.5019	151.5019	3.7600e-003		151.5960
Total	**3.8196**	**130.0814**	**26.0587**	**0.3491**	**7.9617**	**0.4314**	**8.3931**	**2.1802**	**0.4127**	**2.5929**		**37,093.7316**	**37,093.7316**	**1.7214**		**37,136.7677**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Building Construction - 2020

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
Vendor	0.2941	8.1361	2.2515	0.0191	0.4805	0.0420	0.5225	0.1383	0.0402	0.1785		2,010.9905	2,010.9905	0.1050		2,013.6157
Worker	1.1870	0.8626	8.2942	0.0245	2.6452	0.0171	2.6622	0.7016	0.0157	0.7173		2,439.1801	2,439.1801	0.0606		2,440.6950
Total	**1.4810**	**8.9987**	**10.5457**	**0.0436**	**3.1257**	**0.0591**	**3.1848**	**0.8399**	**0.0559**	**0.8958**		**4,450.1707**	**4,450.1707**	**0.1656**		**4,454.3107**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Building Construction - 2020

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
Vendor	0.2941	8.1361	2.2515	0.0191	0.4805	0.0420	0.5225	0.1383	0.0402	0.1785		2,010.9905	2,010.9905	0.1050		2,013.6157
Worker	1.1870	0.8626	8.2942	0.0245	2.6452	0.0171	2.6622	0.7016	0.0157	0.7173		2,439.1801	2,439.1801	0.0606		2,440.6950
Total	**1.4810**	**8.9987**	**10.5457**	**0.0436**	**3.1257**	**0.0591**	**3.1848**	**0.8399**	**0.0559**	**0.8958**		**4,450.1707**	**4,450.1707**	**0.1656**		**4,454.3107**

3.5 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

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
Vendor	0.2409	7.3242	2.0108	0.0189	0.4806	0.0168	0.4973	0.1383	0.0160	0.1544		1,992.8058	1,992.8058	0.0986		1,995.2703
Worker	1.0964	0.7694	7.5503	0.0236	2.6452	0.0166	2.6618	0.7016	0.0153	0.7169		2,352.7108	2,352.7108	0.0540		2,354.0609
Total	**1.3373**	**8.0936**	**9.5611**	**0.0425**	**3.1257**	**0.0334**	**3.1591**	**0.8400**	**0.0313**	**0.8713**		**4,345.5166**	**4,345.5166**	**0.1526**		**4,349.3313**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

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
Vendor	0.2409	7.3242	2.0108	0.0189	0.4806	0.0168	0.4973	0.1383	0.0160	0.1544		1,992.8058	1,992.8058	0.0986		1,995.2703
Worker	1.0964	0.7694	7.5503	0.0236	2.6452	0.0166	2.6618	0.7016	0.0153	0.7169		2,352.7108	2,352.7108	0.0540		2,354.0609
Total	**1.3373**	**8.0936**	**9.5611**	**0.0425**	**3.1257**	**0.0334**	**3.1591**	**0.8400**	**0.0313**	**0.8713**		**4,345.5166**	**4,345.5166**	**0.1526**		**4,349.3313**

3.6 Paving - 2021

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.6681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9237**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

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
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
Worker	0.0511	0.0358	0.3517	1.1000e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		109.5983	109.5983	2.5200e-003		109.6612
Total	**0.0511**	**0.0358**	**0.3517**	**1.1000e-003**	**0.1232**	**7.7000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**109.5983**	**109.5983**	**2.5200e-003**		**109.6612**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.6681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9237**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

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
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
Worker	0.0511	0.0358	0.3517	1.1000e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		109.5983	109.5983	2.5200e-003		109.6612
Total	**0.0511**	**0.0358**	**0.3517**	**1.1000e-003**	**0.1232**	**7.7000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**109.5983**	**109.5983**	**2.5200e-003**		**109.6612**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.6681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7709**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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
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
Worker	0.0475	0.0321	0.3226	1.0600e-003	0.1232	7.5000e-004	0.1240	0.0327	7.0000e-004	0.0334		105.5296	105.5296	2.2500e-003		105.5859
Total	**0.0475**	**0.0321**	**0.3226**	**1.0600e-003**	**0.1232**	**7.5000e-004**	**0.1240**	**0.0327**	**7.0000e-004**	**0.0334**		**105.5296**	**105.5296**	**2.2500e-003**		**105.5859**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.6681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7709**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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
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
Worker	0.0475	0.0321	0.3226	1.0600e-003	0.1232	7.5000e-004	0.1240	0.0327	7.0000e-004	0.0334		105.5296	105.5296	2.2500e-003		105.5859
Total	**0.0475**	**0.0321**	**0.3226**	**1.0600e-003**	**0.1232**	**7.5000e-004**	**0.1240**	**0.0327**	**7.0000e-004**	**0.0334**		**105.5296**	**105.5296**	**2.2500e-003**		**105.5859**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	248.7478					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**248.9524**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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
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
Worker	0.2027	0.1371	1.3765	4.5200e-003	0.5257	3.2200e-003	0.5290	0.1395	2.9700e-003	0.1424		450.2598	450.2598	9.6100e-003		450.5000
Total	**0.2027**	**0.1371**	**1.3765**	**4.5200e-003**	**0.5257**	**3.2200e-003**	**0.5290**	**0.1395**	**2.9700e-003**	**0.1424**		**450.2598**	**450.2598**	**9.6100e-003**		**450.5000**

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	248.7478					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**248.9524**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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
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
Worker	0.2027	0.1371	1.3765	4.5200e-003	0.5257	3.2200e-003	0.5290	0.1395	2.9700e-003	0.1424		450.2598	450.2598	9.6100e-003		450.5000
Total	**0.2027**	**0.1371**	**1.3765**	**4.5200e-003**	**0.5257**	**3.2200e-003**	**0.5290**	**0.1395**	**2.9700e-003**	**0.1424**		**450.2598**	**450.2598**	**9.6100e-003**		**450.5000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7069	12.9773	32.7925	0.1079	9.9671	0.0935	10.0606	2.6666	0.0874	2.7540		10,888.7360	10,888.7360	0.4083		10,898.9440
Unmitigated	2.7069	12.9773	32.7925	0.1079	9.9671	0.0935	10.0606	2.6666	0.0874	2.7540		10,888.7360	10,888.7360	0.4083		10,898.9440

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,031.75	2,031.75	2031.75	4,692,545	4,692,545
Parking Lot	0.00	0.00	0.00		
Total	2,031.75	2,031.75	2,031.75	4,692,545	4,692,545

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 Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.586711	0.038259	0.185486	0.120728	0.016377	0.005053	0.010699	0.024311	0.001622	0.001773	0.005406	0.002738	0.000835
Parking Lot	0.586711	0.038259	0.185486	0.120728	0.016377	0.005053	0.010699	0.024311	0.001622	0.001773	0.005406	0.002738	0.000835

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0949	0.8111	0.3452	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.4997	1,035.4997	0.0199	0.0190	1,041.6531
NaturalGas Unmitigated	0.0949	0.8111	0.3452	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.4997	1,035.4997	0.0199	0.0190	1,041.6531

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 Low Rise	8801.75	0.0949	0.8111	0.3452	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.4997	1,035.4997	0.0199	0.0190	1,041.6531
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0949**	**0.8111**	**0.3452**	**5.1800e-003**		**0.0656**	**0.0656**		**0.0656**	**0.0656**		**1,035.4997**	**1,035.4997**	**0.0199**	**0.0190**	**1,041.6531**

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 Low Rise	8.80175	0.0949	0.8111	0.3452	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.4997	1,035.4997	0.0199	0.0190	1,041.6531
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0949**	**0.8111**	**0.3452**	**5.1800e-003**		**0.0656**	**0.0656**		**0.0656**	**0.0656**		**1,035.4997**	**1,035.4997**	**0.0199**	**0.0190**	**1,041.6531**

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	139.1997	3.1645	197.2310	0.3311		24.4422	24.4422		24.4422	24.4422	2,636.8166	1,214.2710	3,851.0876	3.6538	0.1864	3,997.9735
Unmitigated	139.1997	3.1645	197.2310	0.3311		24.4422	24.4422		24.4422	24.4422	2,636.8166	1,214.2710	3,851.0876	3.6538	0.1864	3,997.9735

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	1.3630					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.4985					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	129.5469	2.8639	171.1571	0.3298		24.2983	24.2983		24.2983	24.2983	2,636.8166	1,167.3529	3,804.1695	3.6083	0.1864	3,949.9186
Landscaping	0.7912	0.3006	26.0739	1.3800e-003		0.1440	0.1440		0.1440	0.1440		46.9181	46.9181	0.0455		48.0549
Total	**139.1997**	**3.1645**	**197.2310**	**0.3311**		**24.4422**	**24.4422**		**24.4422**	**24.4422**	**2,636.8166**	**1,214.2710**	**3,851.0876**	**3.6538**	**0.1864**	**3,997.9735**

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	1.3630					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.4985					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	129.5469	2.8639	171.1571	0.3298		24.2983	24.2983		24.2983	24.2983	2,636.8166	1,167.3529	3,804.1695	3.6083	0.1864	3,949.9186
Landscaping	0.7912	0.3006	26.0739	1.3800e-003		0.1440	0.1440		0.1440	0.1440		46.9181	46.9181	0.0455		48.0549
Total	**139.1997**	**3.1645**	**197.2310**	**0.3311**		**24.4422**	**24.4422**		**24.4422**	**24.4422**	**2,636.8166**	**1,214.2710**	**3,851.0876**	**3.6538**	**0.1864**	**3,997.9735**

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Lafayette

Contra Costa County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	567.00	Space	5.10	226,800.00	0
Apartments Low Rise	315.00	Dwelling Unit	19.69	346,645.00	901

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Consistent with Addendum's model.

Construction Phase - See SWAPE comment about construction schedule.

Grading -

Vehicle Trips - Consistent with Addendum's model.

Sequestration -

Construction Off-road Equipment Mitigation - See SWAPE comment about construction-related mitigation measures.

Energy Mitigation - See SWAPE comment about energy-related operational mitigation measures.

Water Mitigation - See SWAPE comment about water-related operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblGrading	MaterialExported	0.00	300,000.00
tblGrading	MaterialExported	0.00	100,000.00
tblGrading	MaterialImported	0.00	75,000.00
tblGrading	MaterialImported	0.00	25,000.00
tblLandUse	LandUseSquareFeet	315,000.00	346,645.00
tblSequestration	NumberOfNewTrees	0.00	700.00
tblTripsAndVMT	HaulingTripNumber	15,625.00	46,875.00
tblTripsAndVMT	HaulingTripNumber	46,875.00	15,625.00
tblVehicleTrips	ST_TR	7.16	6.45
tblVehicleTrips	SU_TR	6.07	6.45
tblVehicleTrips	WD_TR	6.59	6.45

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					
2020	42.3838	1,376.4574	269.4357	3.7521	101.5005	6.6417	108.1422	32.6180	6.2735	38.8915	0.0000	398,480.3802	398,480.3802	18.1655	0.0000	398,934.5184
2021	3.2094	25.3187	26.5860	0.0724	3.1257	0.9914	4.1172	0.8400	0.9321	1.7720	0.0000	7,195.2575	7,195.2575	0.7652	0.0000	7,214.3871
2022	249.1519	11.1510	14.9354	0.0240	0.5257	0.5687	0.6919	0.1395	0.5232	0.5559	0.0000	2,324.1303	2,324.1303	0.7165	0.0000	2,342.0419
Maximum	**249.1519**	**1,376.4574**	**269.4357**	**3.7521**	**101.5005**	**6.6417**	**108.1422**	**32.6180**	**6.2735**	**38.8915**	**0.0000**	**398,480.3802**	**398,480.3802**	**18.1655**	**0.0000**	**398,934.5184**

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					
2020	42.3838	1,376.4574	269.4357	3.7521	101.5005	6.6417	108.1422	32.6180	6.2735	38.8915	0.0000	398,480.3802	398,480.3802	18.1655	0.0000	398,934.5184
2021	3.2094	25.3187	26.5860	0.0724	3.1257	0.9914	4.1172	0.8400	0.9321	1.7720	0.0000	7,195.2575	7,195.2575	0.7652	0.0000	7,214.3871
2022	249.1519	11.1510	14.9354	0.0240	0.5257	0.5687	0.6919	0.1395	0.5232	0.5559	0.0000	2,324.1303	2,324.1303	0.7165	0.0000	2,342.0419
Maximum	**249.1519**	**1,376.4574**	**269.4357**	**3.7521**	**101.5005**	**6.6417**	**108.1422**	**32.6180**	**6.2735**	**38.8915**	**0.0000**	**398,480.3802**	**398,480.3802**	**18.1655**	**0.0000**	**398,934.5184**

Lafayette - Contra Costa County, Summer

	ROG	NOx	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**

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	139.1997	3.1645	197.2310	0.3311		24.4422	24.4422		24.4422	24.4422	2,636.8166	1,214.2710	3,851.0876	3.6538	0.1864	3,997.9735
Energy	0.0949	0.8111	0.3452	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.4997	1,035.4997	0.0199	0.0190	1,041.6531
Mobile	3.3046	12.3467	33.1216	0.1169	9.9671	0.0928	10.0599	2.6666	0.0867	2.7533		11,798.3887	11,798.3887	0.4021		11,808.4401
Total	**142.5992**	**16.3223**	**230.6978**	**0.4532**	**9.9671**	**24.6006**	**34.5677**	**2.6666**	**24.5945**	**27.2611**	**2,636.8166**	**14,048.1594**	**16,684.9759**	**4.0757**	**0.2054**	**16,848.0668**

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	139.1997	3.1645	197.2310	0.3311		24.4422	24.4422		24.4422	24.4422	2,636.8166	1,214.2710	3,851.0876	3.6538	0.1864	3,997.9735
Energy	0.0949	0.8111	0.3452	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.4997	1,035.4997	0.0199	0.0190	1,041.6531
Mobile	3.3046	12.3467	33.1216	0.1169	9.9671	0.0928	10.0599	2.6666	0.0867	2.7533		11,798.3887	11,798.3887	0.4021		11,808.4401
Total	**142.5992**	**16.3223**	**230.6978**	**0.4532**	**9.9671**	**24.6006**	**34.5677**	**2.6666**	**24.5945**	**27.2611**	**2,636.8166**	**14,048.1594**	**16,684.9759**	**4.0757**	**0.2054**	**16,848.0668**

	ROG	NOx	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	5/1/2020	5/28/2020	5	20	
2	Site Preparation	Site Preparation	5/29/2020	6/11/2020	5	10	
3	Grading	Grading	6/12/2020	7/30/2020	5	35	
4	Building Construction	Building Construction	7/31/2020	12/30/2021	5	370	
5	Paving	Paving	12/31/2021	1/27/2022	5	20	
6	Architectural Coating	Architectural Coating	1/28/2022	2/24/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 5.1

Residential Indoor: 701,956; Residential Outdoor: 233,985; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 13,608 (Architectural Coating – sqft)

OffRoad Equipment

Lafayette - Contra Costa County, Summer

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
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	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	46,875.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	15,625.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	322.00	71.00	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	64.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2020

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	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**		**1.6587**	**1.6587**		**1.5419**	**1.5419**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

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
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
Worker	0.0546	0.0326	0.4216	1.2600e-003	0.1232	7.9000e-004	0.1240	0.0327	7.3000e-004	0.0334		125.4133	125.4133	3.0700e-003		125.4901
Total	**0.0546**	**0.0326**	**0.4216**	**1.2600e-003**	**0.1232**	**7.9000e-004**	**0.1240**	**0.0327**	**7.3000e-004**	**0.0334**		**125.4133**	**125.4133**	**3.0700e-003**		**125.4901**

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	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**		**1.6587**	**1.6587**		**1.5419**	**1.5419**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

3.2 Demolition - 2020

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
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
Worker	0.0546	0.0326	0.4216	1.2600e-003	0.1232	7.9000e-004	0.1240	0.0327	7.3000e-004	0.0334		125.4133	125.4133	3.0700e-003		125.4901
Total	**0.0546**	**0.0326**	**0.4216**	**1.2600e-003**	**0.1232**	**7.9000e-004**	**0.1240**	**0.0327**	**7.3000e-004**	**0.0334**		**125.4133**	**125.4133**	**3.0700e-003**		**125.4901**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.4799	0.0000	19.4799	10.1447	0.0000	10.1447			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**19.4799**	**2.1974**	**21.6773**	**10.1447**	**2.0216**	**12.1664**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

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	38.2418	1,334.0010	247.4162	3.7126	81.8728	4.4433	86.3161	22.4340	4.2510	26.6851		394,644.7826	394,644.7826	16.9700		395,069.0329
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
Worker	0.0655	0.0391	0.5059	1.5100e-003	0.1479	9.5000e-004	0.1488	0.0392	8.8000e-004	0.0401		150.4960	150.4960	3.6800e-003		150.5881
Total	**38.3073**	**1,334.0401**	**247.9220**	**3.7141**	**82.0206**	**4.4443**	**86.4649**	**22.4733**	**4.2519**	**26.7252**		**394,795.2786**	**394,795.2786**	**16.9737**		**395,219.6210**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.4799	0.0000	19.4799	10.1447	0.0000	10.1447			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**19.4799**	**2.1974**	**21.6773**	**10.1447**	**2.0216**	**12.1664**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

3.3 Site Preparation - 2020

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	38.2418	1,334.0010	247.4162	3.7126	81.8728	4.4433	86.3161	22.4340	4.2510	26.6851		394,644.7826	394,644.7826	16.9700		395,069.0329
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
Worker	0.0655	0.0391	0.5059	1.5100e-003	0.1479	9.5000e-004	0.1488	0.0392	8.8000e-004	0.0401		150.4960	150.4960	3.6800e-003		150.5881
Total	**38.3073**	**1,334.0401**	**247.9220**	**3.7141**	**82.0206**	**4.4443**	**86.4649**	**22.4733**	**4.2519**	**26.7252**		**394,795.2786**	**394,795.2786**	**16.9737**		**395,219.6210**

3.4 Grading - 2020

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					9.8850	0.0000	9.8850	3.7800	0.0000	3.7800			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**9.8850**	**2.1739**	**12.0589**	**3.7800**	**2.0000**	**5.7800**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

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	3.6421	127.0477	23.5634	0.3536	7.7974	0.4232	8.2206	2.1366	0.4049	2.5414		37,585.2174	37,585.2174	1.6162		37,625.6222
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
Worker	0.0728	0.0434	0.5621	1.6800e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		167.2177	167.2177	4.0900e-003		167.3201
Total	**3.7148**	**127.0912**	**24.1255**	**0.3553**	**7.9617**	**0.4242**	**8.3859**	**2.1802**	**0.4058**	**2.5860**		**37,752.4351**	**37,752.4351**	**1.6203**		**37,792.9423**

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					9.8850	0.0000	9.8850	3.7800	0.0000	3.7800			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**9.8850**	**2.1739**	**12.0589**	**3.7800**	**2.0000**	**5.7800**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.4 Grading - 2020

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	3.6421	127.0477	23.5634	0.3536	7.7974	0.4232	8.2206	2.1366	0.4049	2.5414		37,585.2174	37,585.2174	1.6162		37,625.6222
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
Worker	0.0728	0.0434	0.5621	1.6800e-003	0.1643	1.0600e-003	0.1654	0.0436	9.8000e-004	0.0446		167.2177	167.2177	4.0900e-003		167.3201
Total	**3.7148**	**127.0912**	**24.1255**	**0.3553**	**7.9617**	**0.4242**	**8.3859**	**2.1802**	**0.4058**	**2.5860**		**37,752.4351**	**37,752.4351**	**1.6203**		**37,792.9423**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Building Construction - 2020

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
Vendor	0.2793	8.0461	1.9596	0.0196	0.4805	0.0413	0.5219	0.1383	0.0395	0.1779		2,063.6792	2,063.6792	0.0962		2,066.0849
Worker	1.1714	0.6994	9.0495	0.0270	2.6452	0.0171	2.6622	0.7016	0.0157	0.7173		2,692.2056	2,692.2056	0.0659		2,693.8533
Total	**1.4506**	**8.7454**	**11.0090**	**0.0466**	**3.1257**	**0.0584**	**3.1841**	**0.8399**	**0.0553**	**0.8952**		**4,755.8847**	**4,755.8847**	**0.1621**		**4,759.9382**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Building Construction - 2020

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
Vendor	0.2793	8.0461	1.9596	0.0196	0.4805	0.0413	0.5219	0.1383	0.0395	0.1779		2,063.6792	2,063.6792	0.0962		2,066.0849
Worker	1.1714	0.6994	9.0495	0.0270	2.6452	0.0171	2.6622	0.7016	0.0157	0.7173		2,692.2056	2,692.2056	0.0659		2,693.8533
Total	**1.4506**	**8.7454**	**11.0090**	**0.0466**	**3.1257**	**0.0584**	**3.1841**	**0.8399**	**0.0553**	**0.8952**		**4,755.8847**	**4,755.8847**	**0.1621**		**4,759.9382**

3.5 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

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
Vendor	0.2272	7.2625	1.7391	0.0194	0.4806	0.0162	0.4968	0.1383	0.0155	0.1539		2,045.1665	2,045.1665	0.0903		2,047.4231
Worker	1.0813	0.6241	8.2718	0.0261	2.6452	0.0166	2.6618	0.7016	0.0153	0.7169		2,596.7271	2,596.7271	0.0589		2,598.1998
Total	**1.3085**	**7.8866**	**10.0108**	**0.0454**	**3.1257**	**0.0328**	**3.1585**	**0.8400**	**0.0308**	**0.8708**		**4,641.8936**	**4,641.8936**	**0.1492**		**4,645.6229**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

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
Vendor	0.2272	7.2625	1.7391	0.0194	0.4806	0.0162	0.4968	0.1383	0.0155	0.1539		2,045.1665	2,045.1665	0.0903		2,047.4231
Worker	1.0813	0.6241	8.2718	0.0261	2.6452	0.0166	2.6618	0.7016	0.0153	0.7169		2,596.7271	2,596.7271	0.0589		2,598.1998
Total	**1.3085**	**7.8866**	**10.0108**	**0.0454**	**3.1257**	**0.0328**	**3.1585**	**0.8400**	**0.0308**	**0.8708**		**4,641.8936**	**4,641.8936**	**0.1492**		**4,645.6229**

3.6 Paving - 2021

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.6681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9237**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

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
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
Worker	0.0504	0.0291	0.3853	1.2100e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		120.9656	120.9656	2.7400e-003		121.0342
Total	**0.0504**	**0.0291**	**0.3853**	**1.2100e-003**	**0.1232**	**7.7000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**120.9656**	**120.9656**	**2.7400e-003**		**121.0342**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.6681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9237**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

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
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
Worker	0.0504	0.0291	0.3853	1.2100e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		120.9656	120.9656	2.7400e-003		121.0342
Total	**0.0504**	**0.0291**	**0.3853**	**1.2100e-003**	**0.1232**	**7.7000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**120.9656**	**120.9656**	**2.7400e-003**		**121.0342**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.6681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7709**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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
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
Worker	0.0468	0.0261	0.3549	1.1700e-003	0.1232	7.5000e-004	0.1240	0.0327	7.0000e-004	0.0334		116.4700	116.4700	2.4600e-003		116.5316
Total	**0.0468**	**0.0261**	**0.3549**	**1.1700e-003**	**0.1232**	**7.5000e-004**	**0.1240**	**0.0327**	**7.0000e-004**	**0.0334**		**116.4700**	**116.4700**	**2.4600e-003**		**116.5316**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.6681					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7709**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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
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
Worker	0.0468	0.0261	0.3549	1.1700e-003	0.1232	7.5000e-004	0.1240	0.0327	7.0000e-004	0.0334		116.4700	116.4700	2.4600e-003		116.5316
Total	**0.0468**	**0.0261**	**0.3549**	**1.1700e-003**	**0.1232**	**7.5000e-004**	**0.1240**	**0.0327**	**7.0000e-004**	**0.0334**		**116.4700**	**116.4700**	**2.4600e-003**		**116.5316**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	248.7478					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**248.9524**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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
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
Worker	0.1996	0.1112	1.5144	4.9800e-003	0.5257	3.2200e-003	0.5290	0.1395	2.9700e-003	0.1424		496.9385	496.9385	0.0105		497.2013
Total	**0.1996**	**0.1112**	**1.5144**	**4.9800e-003**	**0.5257**	**3.2200e-003**	**0.5290**	**0.1395**	**2.9700e-003**	**0.1424**		**496.9385**	**496.9385**	**0.0105**		**497.2013**

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	248.7478					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**248.9524**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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
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
Worker	0.1996	0.1112	1.5144	4.9800e-003	0.5257	3.2200e-003	0.5290	0.1395	2.9700e-003	0.1424		496.9385	496.9385	0.0105		497.2013
Total	**0.1996**	**0.1112**	**1.5144**	**4.9800e-003**	**0.5257**	**3.2200e-003**	**0.5290**	**0.1395**	**2.9700e-003**	**0.1424**		**496.9385**	**496.9385**	**0.0105**		**497.2013**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.3046	12.3467	33.1216	0.1169	9.9671	0.0928	10.0599	2.6666	0.0867	2.7533		11,798.3887	11,798.3887	0.4021		11,808.4401
Unmitigated	3.3046	12.3467	33.1216	0.1169	9.9671	0.0928	10.0599	2.6666	0.0867	2.7533		11,798.3887	11,798.3887	0.4021		11,808.4401

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,031.75	2,031.75	2031.75	4,692,545	4,692,545
Parking Lot	0.00	0.00	0.00		
Total	2,031.75	2,031.75	2,031.75	4,692,545	4,692,545

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 Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.586711	0.038259	0.185486	0.120728	0.016377	0.005053	0.010699	0.024311	0.001622	0.001773	0.005406	0.002738	0.000835
Parking Lot	0.586711	0.038259	0.185486	0.120728	0.016377	0.005053	0.010699	0.024311	0.001622	0.001773	0.005406	0.002738	0.000835

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0949	0.8111	0.3452	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.4997	1,035.4997	0.0199	0.0190	1,041.6531
NaturalGas Unmitigated	0.0949	0.8111	0.3452	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.4997	1,035.4997	0.0199	0.0190	1,041.6531

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 Low Rise	8801.75	0.0949	0.8111	0.3452	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.4997	1,035.4997	0.0199	0.0190	1,041.6531
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0949**	**0.8111**	**0.3452**	**5.1800e-003**		**0.0656**	**0.0656**		**0.0656**	**0.0656**		**1,035.4997**	**1,035.4997**	**0.0199**	**0.0190**	**1,041.6531**

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 Low Rise	8.80175	0.0949	0.8111	0.3452	5.1800e-003		0.0656	0.0656		0.0656	0.0656		1,035.4997	1,035.4997	0.0199	0.0190	1,041.6531
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0949**	**0.8111**	**0.3452**	**5.1800e-003**		**0.0656**	**0.0656**		**0.0656**	**0.0656**		**1,035.4997**	**1,035.4997**	**0.0199**	**0.0190**	**1,041.6531**

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	139.1997	3.1645	197.2310	0.3311		24.4422	24.4422		24.4422	24.4422	2,636.8166	1,214.2710	3,851.0876	3.6538	0.1864	3,997.9735
Unmitigated	139.1997	3.1645	197.2310	0.3311		24.4422	24.4422		24.4422	24.4422	2,636.8166	1,214.2710	3,851.0876	3.6538	0.1864	3,997.9735

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	1.3630					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.4985					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	129.5469	2.8639	171.1571	0.3298		24.2983	24.2983		24.2983	24.2983	2,636.8166	1,167.3529	3,804.1695	3.6083	0.1864	3,949.9186
Landscaping	0.7912	0.3006	26.0739	1.3800e-003		0.1440	0.1440		0.1440	0.1440		46.9181	46.9181	0.0455		48.0549
Total	**139.1997**	**3.1645**	**197.2310**	**0.3311**		**24.4422**	**24.4422**		**24.4422**	**24.4422**	**2,636.8166**	**1,214.2710**	**3,851.0876**	**3.6538**	**0.1864**	**3,997.9735**

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	1.3630					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.4985					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	129.5469	2.8639	171.1571	0.3298		24.2983	24.2983		24.2983	24.2983	2,636.8166	1,167.3529	3,804.1695	3.6083	0.1864	3,949.9186
Landscaping	0.7912	0.3006	26.0739	1.3800e-003		0.1440	0.1440		0.1440	0.1440		46.9181	46.9181	0.0455		48.0549
Total	**139.1997**	**3.1645**	**197.2310**	**0.3311**		**24.4422**	**24.4422**		**24.4422**	**24.4422**	**2,636.8166**	**1,214.2710**	**3,851.0876**	**3.6538**	**0.1864**	**3,997.9735**

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

TITLE: Lafayette Terraces Construction

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

SOURCE EMISSION RATE:	0.237E-02	g/s	0.188E-01	lb/hr
AREA EMISSION RATE:	0.263E-07	g/(s-m2)	0.208E-06	lb/(hr-m2)
AREA HEIGHT:	3.00	meters	9.84	feet
AREA SOURCE LONG SIDE:	361.00	meters	1184.38	feet
AREA SOURCE SHORT SIDE:	250.00	meters	820.21	feet
INITIAL VERTICAL DIMENSION:	1.50	meters	4.92	feet
RURAL OR URBAN:	URBAN			
POPULATION:	126143			
INITIAL PROBE DISTANCE =	5000.	meters	16404.	feet

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

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

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

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

MAXIMUM IMPACT RECEPTOR

Zo SECTOR	SURFACE ROUGHNESS	1-HR CONC (ug/m3)	RADIAL (deg)	DIST (m)	TEMPORAL PERIOD
1*	1.000	1.207	30	200.0	WIN

* = worst case diagonal

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

MIN/MAX TEMPERATURE: 250.0 / 310.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

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

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

SURFACE FRICTION VELOCITY (U*) NOT ADUSTED

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR	MO	DY	JDY	HR
10	01	10	10	01

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

HT	REF TA	HT
10.0	310.0	2.0

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

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
1.00	0.9100	2525.00	0.4816E-01

25.00	0.9554	2550.00	0.4753E-01
50.00	0.9955	2575.00	0.4692E-01
75.00	1.037	2600.00	0.4633E-01
100.00	1.078	2625.00	0.4575E-01
125.00	1.116	2650.00	0.4517E-01
150.00	1.152	2675.00	0.4461E-01
175.00	1.185	2700.00	0.4407E-01
200.00	1.207	2725.00	0.4353E-01
225.00	1.078	2750.00	0.4300E-01
250.00	0.8443	2775.00	0.4249E-01
275.00	0.7210	2800.01	0.4198E-01
300.00	0.6459	2825.00	0.4149E-01
325.00	0.5810	2850.00	0.4101E-01
350.00	0.5280	2875.00	0.4054E-01
375.00	0.4845	2900.00	0.4008E-01
400.00	0.4482	2925.00	0.3962E-01
425.00	0.4182	2950.00	0.3918E-01
450.00	0.3926	2975.00	0.3874E-01
475.00	0.3713	3000.00	0.3832E-01
500.00	0.3517	3025.00	0.3790E-01
525.00	0.3338	3050.00	0.3749E-01
550.00	0.3176	3075.00	0.3708E-01
575.00	0.3025	3100.00	0.3668E-01
600.00	0.2885	3125.00	0.3629E-01
625.00	0.2757	3150.00	0.3591E-01
650.00	0.2637	3175.00	0.3553E-01
675.00	0.2526	3200.00	0.3516E-01
700.00	0.2423	3225.00	0.3480E-01
725.00	0.2326	3250.00	0.3444E-01
750.00	0.2237	3275.00	0.3409E-01
775.00	0.2152	3300.00	0.3374E-01
800.00	0.2072	3325.00	0.3340E-01
825.00	0.1998	3350.00	0.3307E-01
850.00	0.1929	3375.00	0.3274E-01
875.00	0.1863	3400.00	0.3241E-01
900.00	0.1800	3425.00	0.3209E-01
925.00	0.1741	3450.00	0.3178E-01
950.00	0.1686	3475.00	0.3147E-01
975.00	0.1633	3500.00	0.3117E-01
1000.00	0.1583	3525.00	0.3088E-01
1025.00	0.1536	3550.00	0.3058E-01
1050.00	0.1491	3575.00	0.3030E-01
1075.00	0.1449	3600.00	0.3002E-01
1100.00	0.1408	3625.00	0.2974E-01
1125.00	0.1369	3650.00	0.2946E-01
1150.00	0.1331	3675.00	0.2919E-01
1175.00	0.1296	3700.00	0.2893E-01
1200.00	0.1262	3725.00	0.2867E-01
1225.00	0.1230	3750.00	0.2841E-01
1250.00	0.1199	3775.00	0.2816E-01

1275.00	0.1170	3800.00	0.2791E-01
1300.00	0.1141	3825.00	0.2767E-01
1325.00	0.1114	3850.00	0.2743E-01
1350.00	0.1088	3875.00	0.2719E-01
1375.00	0.1062	3900.00	0.2695E-01
1400.00	0.1038	3925.00	0.2672E-01
1425.00	0.1015	3950.00	0.2649E-01
1450.00	0.9927E-01	3975.00	0.2627E-01
1475.00	0.9713E-01	4000.00	0.2605E-01
1500.00	0.9508E-01	4025.00	0.2583E-01
1525.00	0.9310E-01	4050.00	0.2562E-01
1550.00	0.9116E-01	4075.00	0.2541E-01
1575.00	0.8930E-01	4100.00	0.2520E-01
1600.00	0.8750E-01	4125.00	0.2500E-01
1625.00	0.8577E-01	4150.00	0.2479E-01
1650.00	0.8411E-01	4175.00	0.2459E-01
1675.00	0.8249E-01	4200.00	0.2440E-01
1700.00	0.8091E-01	4225.00	0.2420E-01
1725.00	0.7939E-01	4250.00	0.2401E-01
1750.00	0.7792E-01	4275.00	0.2382E-01
1775.00	0.7650E-01	4300.00	0.2364E-01
1800.00	0.7512E-01	4325.00	0.2345E-01
1825.00	0.7379E-01	4350.00	0.2327E-01
1850.00	0.7250E-01	4375.00	0.2310E-01
1875.00	0.7125E-01	4400.00	0.2292E-01
1900.00	0.7002E-01	4425.00	0.2312E-01
1925.00	0.6883E-01	4450.00	0.2294E-01
1950.00	0.6767E-01	4475.00	0.2277E-01
1975.00	0.6655E-01	4500.00	0.2259E-01
2000.00	0.6546E-01	4525.00	0.2242E-01
2025.00	0.6440E-01	4550.00	0.2225E-01
2050.00	0.6338E-01	4575.00	0.2209E-01
2075.00	0.6238E-01	4600.00	0.2192E-01
2100.00	0.6141E-01	4625.00	0.2176E-01
2125.00	0.6047E-01	4650.00	0.2160E-01
2150.00	0.5955E-01	4675.00	0.2144E-01
2175.00	0.5866E-01	4700.00	0.2129E-01
2200.00	0.5778E-01	4725.00	0.2114E-01
2225.00	0.5693E-01	4750.00	0.2098E-01
2250.00	0.5610E-01	4775.00	0.2083E-01
2275.00	0.5528E-01	4800.00	0.2068E-01
2300.00	0.5449E-01	4825.00	0.2054E-01
2325.00	0.5372E-01	4850.00	0.2039E-01
2350.00	0.5297E-01	4875.00	0.2025E-01
2375.00	0.5224E-01	4900.00	0.2011E-01
2400.00	0.5152E-01	4925.00	0.1997E-01
2425.00	0.5082E-01	4950.00	0.1983E-01
2450.00	0.5013E-01	4975.00	0.1970E-01
2475.00	0.4946E-01	5000.00	0.1956E-01
2500.00	0.4880E-01		

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

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

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	1.216	1.216	1.216	1.216	N/A

DISTANCE FROM SOURCE 207.00 meters

IMPACT AT THE AMBIENT BOUNDARY	0.9100	0.9100	0.9100	0.9100	N/A

DISTANCE FROM SOURCE 1.00 meters

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 Concentration     Distance Elevation  Diag  Season/Month   Zo sector       Date
  H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS     HT
REF TA     HT
   0.91005E+00         1.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.95538E+00        25.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.99552E+00        50.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10374E+01        75.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10783E+01       100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11163E+01       125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11517E+01       150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11850E+01       175.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12072E+01       200.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
*  0.12156E+01       207.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10779E+01       225.00      0.00  35.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.84426E+00       250.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.72097E+00       275.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.64589E+00       300.00      0.00  35.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.58102E+00       325.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.52798E+00       350.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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 310.0    2.0
   0.48449E+00       375.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.44824E+00       400.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.41820E+00       425.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.39256E+00       450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.37129E+00       475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.35173E+00       500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.33384E+00       525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.31758E+00       550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.30248E+00       575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.28850E+00       600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.27571E+00       625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26375E+00       650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25263E+00       675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24231E+00       700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23264E+00       725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22372E+00       750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21521E+00       775.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20723E+00       800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19982E+00       825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19290E+00       850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18627E+00       875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18003E+00       900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17414E+00       925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16861E+00       950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16332E+00       975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15830E+00      1000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15357E+00      1025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14911E+00      1050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14487E+00      1075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14079E+00      1100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13685E+00      1125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13312E+00      1150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12958E+00      1175.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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   0.12619E+00      1200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12298E+00      1225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11992E+00      1250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11699E+00      1275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11415E+00      1300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11141E+00      1325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10877E+00      1350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10624E+00      1375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10382E+00      1400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10150E+00      1425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.99271E-01      1450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.97133E-01      1475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.95078E-01      1500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.93099E-01      1525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.91163E-01      1550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.89299E-01      1575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.87504E-01      1600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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 310.0    2.0
   0.85774E-01      1625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.84105E-01      1650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.82485E-01      1675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.80910E-01      1700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.79389E-01      1725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.77919E-01      1750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.76498E-01      1775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.75123E-01      1800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.73792E-01      1825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.72503E-01      1850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.71253E-01      1875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.70022E-01      1900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.68829E-01      1925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.67673E-01      1950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.66551E-01      1975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.65461E-01      2000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.64404E-01      2025.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.63377E-01      2050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.62379E-01      2075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.61409E-01      2100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.60465E-01      2125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.59548E-01      2150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.58655E-01      2175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.57783E-01      2200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.56928E-01      2225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.56095E-01      2250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.55284E-01      2275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.54494E-01      2300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.53724E-01      2325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.52973E-01      2350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.52240E-01      2375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.51525E-01      2400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.50819E-01      2425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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   0.50129E-01      2450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.49457E-01      2475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.48800E-01      2500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.48158E-01      2525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.47531E-01      2550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.46923E-01      2575.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.46328E-01      2600.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.45746E-01      2625.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.45173E-01      2650.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.44614E-01      2675.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.44067E-01      2700.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.43529E-01      2725.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.43002E-01      2750.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.42487E-01      2775.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.41983E-01      2800.01      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.41490E-01      2825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.41009E-01      2850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
```

```
 310.0    2.0
   0.40537E-01      2875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.40075E-01      2900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.39623E-01      2925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.39179E-01      2950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.38744E-01      2975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.38317E-01      3000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.37899E-01      3025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.37489E-01      3050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.37083E-01      3075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.36684E-01      3100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.36293E-01      3125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.35909E-01      3150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.35533E-01      3175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.35163E-01      3200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.34800E-01      3225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.34444E-01      3250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.34091E-01      3275.00      0.00   0.0        Winter       0-360   10011001
```

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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.33743E-01      3300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.33402E-01      3325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.33066E-01      3350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.32736E-01      3375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.32413E-01      3400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.32094E-01      3425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.31781E-01      3450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.31474E-01      3475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.31172E-01      3500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.30875E-01      3525.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.30585E-01      3550.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.30298E-01      3575.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.30015E-01      3600.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.29737E-01      3625.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.29463E-01      3650.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.29194E-01      3675.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
```

```
   0.28929E-01      3700.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.28669E-01      3725.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.28413E-01      3750.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.28161E-01      3775.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.27913E-01      3800.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.27669E-01      3825.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.27427E-01      3850.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.27189E-01      3875.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26953E-01      3900.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26722E-01      3925.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26495E-01      3950.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26271E-01      3975.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26051E-01      4000.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25834E-01      4025.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25620E-01      4050.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25409E-01      4075.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25201E-01      4100.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
```

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 310.0    2.0
   0.24996E-01      4125.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24794E-01      4150.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24594E-01      4175.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24397E-01      4200.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24203E-01      4225.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24012E-01      4250.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23823E-01      4275.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23637E-01      4300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23454E-01      4325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23273E-01      4350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23095E-01      4375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22920E-01      4400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23119E-01      4425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22942E-01      4450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22767E-01      4475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22594E-01      4500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22423E-01      4525.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22255E-01      4550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22088E-01      4575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21924E-01      4600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21762E-01      4625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21603E-01      4650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21445E-01      4675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21289E-01      4700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21135E-01      4725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20983E-01      4750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20833E-01      4775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20685E-01      4800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20538E-01      4825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20394E-01      4850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20250E-01      4875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20109E-01      4900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19970E-01      4925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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   0.19832E-01      4950.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19696E-01      4975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19561E-01      5000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
```

TITLE: Lafayette Terraces Operational

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

SOURCE EMISSION RATE:	0.529E-02	g/s	0.420E-01	lb/hr
AREA EMISSION RATE:	0.586E-07	g/(s-m2)	0.465E-06	lb/(hr-m2)
AREA HEIGHT:	3.00	meters	9.84	feet
AREA SOURCE LONG SIDE:	361.00	meters	1184.38	feet
AREA SOURCE SHORT SIDE:	250.00	meters	820.21	feet
INITIAL VERTICAL DIMENSION:	1.50	meters	4.92	feet
RURAL OR URBAN:	URBAN			
POPULATION:	126143			
INITIAL PROBE DISTANCE =	5000.	meters	16404.	feet

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

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

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

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

MAXIMUM IMPACT RECEPTOR

Zo SECTOR	SURFACE ROUGHNESS	1-HR CONC (ug/m3)	RADIAL (deg)	DIST (m)	TEMPORAL PERIOD
1*	1.000	2.693	30	200.0	WIN

* = worst case diagonal

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

MIN/MAX TEMPERATURE: 250.0 / 310.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

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

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

SURFACE FRICTION VELOCITY (U*) NOT ADUSTED

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR	MO	DY	JDY	HR
10	01	10	10	01

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

HT	REF TA	HT
10.0	310.0	2.0

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

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
1.00	2.030	2525.00	0.1074

25.00	2.131	2550.00	0.1060
50.00	2.221	2575.00	0.1047
75.00	2.314	2600.00	0.1033
100.00	2.406	2625.00	0.1020
125.00	2.490	2650.00	0.1008
150.00	2.569	2675.00	0.9952E-01
175.00	2.643	2700.00	0.9830E-01
200.00	2.693	2725.00	0.9710E-01
225.00	2.404	2750.00	0.9593E-01
250.00	1.883	2775.00	0.9478E-01
275.00	1.608	2800.01	0.9365E-01
300.00	1.441	2825.00	0.9256E-01
325.00	1.296	2850.00	0.9148E-01
350.00	1.178	2875.00	0.9043E-01
375.00	1.081	2900.00	0.8940E-01
400.00	0.9999	2925.00	0.8839E-01
425.00	0.9329	2950.00	0.8740E-01
450.00	0.8757	2975.00	0.8643E-01
475.00	0.8283	3000.00	0.8548E-01
500.00	0.7846	3025.00	0.8454E-01
525.00	0.7447	3050.00	0.8363E-01
550.00	0.7084	3075.00	0.8272E-01
575.00	0.6748	3100.00	0.8183E-01
600.00	0.6436	3125.00	0.8096E-01
625.00	0.6151	3150.00	0.8011E-01
650.00	0.5884	3175.00	0.7927E-01
675.00	0.5636	3200.00	0.7844E-01
700.00	0.5405	3225.00	0.7763E-01
725.00	0.5190	3250.00	0.7684E-01
750.00	0.4991	3275.00	0.7605E-01
775.00	0.4801	3300.00	0.7527E-01
800.00	0.4623	3325.00	0.7451E-01
825.00	0.4457	3350.00	0.7376E-01
850.00	0.4303	3375.00	0.7303E-01
875.00	0.4155	3400.00	0.7231E-01
900.00	0.4016	3425.00	0.7159E-01
925.00	0.3885	3450.00	0.7090E-01
950.00	0.3761	3475.00	0.7021E-01
975.00	0.3643	3500.00	0.6954E-01
1000.00	0.3531	3525.00	0.6888E-01
1025.00	0.3426	3550.00	0.6823E-01
1050.00	0.3326	3575.00	0.6759E-01
1075.00	0.3232	3600.00	0.6696E-01
1100.00	0.3141	3625.00	0.6634E-01
1125.00	0.3053	3650.00	0.6573E-01
1150.00	0.2970	3675.00	0.6512E-01
1175.00	0.2891	3700.00	0.6453E-01
1200.00	0.2815	3725.00	0.6395E-01
1225.00	0.2743	3750.00	0.6338E-01
1250.00	0.2675	3775.00	0.6282E-01

1275.00	0.2610
1300.00	0.2546
1325.00	0.2485
1350.00	0.2426
1375.00	0.2370
1400.00	0.2316
1425.00	0.2264
1450.00	0.2215
1475.00	0.2167
1500.00	0.2121
1525.00	0.2077
1550.00	0.2034
1575.00	0.1992
1600.00	0.1952
1625.00	0.1913
1650.00	0.1876
1675.00	0.1840
1700.00	0.1805
1725.00	0.1771
1750.00	0.1738
1775.00	0.1706
1800.00	0.1676
1825.00	0.1646
1850.00	0.1617
1875.00	0.1589
1900.00	0.1562
1925.00	0.1535
1950.00	0.1510
1975.00	0.1485
2000.00	0.1460
2025.00	0.1437
2050.00	0.1414
2075.00	0.1392
2100.00	0.1370
2125.00	0.1349
2150.00	0.1328
2175.00	0.1308
2200.00	0.1289
2225.00	0.1270
2250.00	0.1251
2275.00	0.1233
2300.00	0.1216
2325.00	0.1198
2350.00	0.1182
2375.00	0.1165
2400.00	0.1149
2425.00	0.1134
2450.00	0.1118
2475.00	0.1103
2500.00	0.1089
3800.00	0.6227E-01
3825.00	0.6172E-01
3850.00	0.6118E-01
3875.00	0.6065E-01
3900.00	0.6013E-01
3925.00	0.5961E-01
3950.00	0.5910E-01
3975.00	0.5861E-01
4000.00	0.5811E-01
4025.00	0.5763E-01
4050.00	0.5715E-01
4075.00	0.5668E-01
4100.00	0.5622E-01
4125.00	0.5576E-01
4150.00	0.5531E-01
4175.00	0.5486E-01
4200.00	0.5443E-01
4225.00	0.5399E-01
4250.00	0.5357E-01
4275.00	0.5314E-01
4300.00	0.5273E-01
4325.00	0.5232E-01
4350.00	0.5192E-01
4375.00	0.5152E-01
4400.00	0.5113E-01
4425.00	0.5157E-01
4450.00	0.5118E-01
4475.00	0.5079E-01
4500.00	0.5040E-01
4525.00	0.5002E-01
4550.00	0.4965E-01
4575.00	0.4927E-01
4600.00	0.4891E-01
4625.00	0.4855E-01
4650.00	0.4819E-01
4675.00	0.4784E-01
4700.00	0.4749E-01
4725.00	0.4715E-01
4750.00	0.4681E-01
4775.00	0.4647E-01
4800.00	0.4614E-01
4825.00	0.4582E-01
4850.00	0.4549E-01
4875.00	0.4517E-01
4900.00	0.4486E-01
4925.00	0.4455E-01
4950.00	0.4424E-01
4975.00	0.4394E-01
5000.00	0.4364E-01

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

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

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	2.712	2.712	2.712	2.712	N/A
DISTANCE FROM SOURCE	207.00 meters				
IMPACT AT THE AMBIENT BOUNDARY	2.030	2.030	2.030	2.030	N/A
DISTANCE FROM SOURCE	1.00 meters				

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 Concentration     Distance Elevation  Diag  Season/Month   Zo sector       Date
  H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS     HT
REF TA     HT
   0.20301E+01         1.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21312E+01        25.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22208E+01        50.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23142E+01        75.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24055E+01       100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24903E+01       125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25692E+01       150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26434E+01       175.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26930E+01       200.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
*  0.27117E+01       207.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24045E+01       225.00      0.00  35.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18834E+01       250.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16083E+01       275.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14408E+01       300.00      0.00  35.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12961E+01       325.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11778E+01       350.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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 310.0    2.0
   0.10808E+01       375.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.99992E+00       400.00      0.00  30.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.93292E+00       425.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.87570E+00       450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.82825E+00       475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.78463E+00       500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.74473E+00       525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.70845E+00       550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.67475E+00       575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.64358E+00       600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.61506E+00       625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.58836E+00       650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.56355E+00       675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.54054E+00       700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.51897E+00       725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.49906E+00       750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.48009E+00       775.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.46228E+00       800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.44574E+00       825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.43031E+00       850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.41553E+00       875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.40161E+00       900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.38847E+00       925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.37614E+00       950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.36433E+00       975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.35314E+00      1000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.34258E+00      1025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.33262E+00      1050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.32316E+00      1075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.31407E+00      1100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.30529E+00      1125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.29695E+00      1150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.28907E+00      1175.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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   0.28151E+00      1200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.27434E+00      1225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26751E+00      1250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.26099E+00      1275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.25463E+00      1300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24852E+00      1325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.24263E+00      1350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23700E+00      1375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.23160E+00      1400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22642E+00      1425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.22145E+00      1450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21668E+00      1475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.21210E+00      1500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20768E+00      1525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.20336E+00      1550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19921E+00      1575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.19520E+00      1600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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 310.0    2.0
   0.19134E+00      1625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18762E+00      1650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18401E+00      1675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.18049E+00      1700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17710E+00      1725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17382E+00      1750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.17065E+00      1775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16758E+00      1800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16461E+00      1825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.16174E+00      1850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15895E+00      1875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15620E+00      1900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15354E+00      1925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.15096E+00      1950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14846E+00      1975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14603E+00      2000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14367E+00      2025.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.14138E+00      2050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13915E+00      2075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13699E+00      2100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13488E+00      2125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13284E+00      2150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.13085E+00      2175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12890E+00      2200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12699E+00      2225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12514E+00      2250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12333E+00      2275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.12156E+00      2300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11985E+00      2325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11817E+00      2350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11654E+00      2375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11494E+00      2400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11337E+00      2425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
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   0.11183E+00      2450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.11033E+00      2475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10886E+00      2500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10743E+00      2525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10603E+00      2550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10467E+00      2575.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10335E+00      2600.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10205E+00      2625.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.10077E+00      2650.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.99524E-01      2675.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.98303E-01      2700.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.97103E-01      2725.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.95928E-01      2750.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.94779E-01      2775.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.93654E-01      2800.01      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.92556E-01      2825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.91482E-01      2850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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 310.0    2.0
   0.90430E-01      2875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.89399E-01      2900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.88389E-01      2925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.87399E-01      2950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.86429E-01      2975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.85477E-01      3000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.84545E-01      3025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.83630E-01      3050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.82723E-01      3075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.81834E-01      3100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.80962E-01      3125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.80105E-01      3150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.79265E-01      3175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.78441E-01      3200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.77631E-01      3225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.76836E-01      3250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.76049E-01      3275.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.75273E-01      3300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.74511E-01      3325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.73763E-01      3350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.73028E-01      3375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.72305E-01      3400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.71595E-01      3425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.70897E-01      3450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.70211E-01      3475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.69536E-01      3500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.68875E-01      3525.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.68227E-01      3550.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.67588E-01      3575.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.66957E-01      3600.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.66336E-01      3625.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.65725E-01      3650.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.65125E-01      3675.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
```

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   0.64534E-01      3700.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.63953E-01      3725.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.63383E-01      3750.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.62821E-01      3775.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.62268E-01      3800.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.61724E-01      3825.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.61184E-01      3850.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.60651E-01      3875.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.60126E-01      3900.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.59610E-01      3925.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.59104E-01      3950.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.58605E-01      3975.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.58113E-01      4000.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.57629E-01      4025.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.57152E-01      4050.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.56682E-01      4075.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.56218E-01      4100.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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 310.0    2.0
   0.55761E-01      4125.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.55310E-01      4150.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.54864E-01      4175.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.54425E-01      4200.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.53992E-01      4225.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.53565E-01      4250.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.53144E-01      4275.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.52729E-01      4300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.52321E-01      4325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.51918E-01      4350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.51520E-01      4375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.51128E-01      4400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.51573E-01      4425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.51177E-01      4450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.50787E-01      4475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.50401E-01      4500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.50021E-01      4525.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.49645E-01      4550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.49274E-01      4575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.48908E-01      4600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.48547E-01      4625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.48191E-01      4650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.47838E-01      4675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.47491E-01      4700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.47147E-01      4725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.46808E-01      4750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.46473E-01      4775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.46142E-01      4800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.45816E-01      4825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.45493E-01      4850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.45174E-01      4875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.44859E-01      4900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.44548E-01      4925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
```

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   0.44241E-01      4950.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.43937E-01      4975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
   0.43637E-01      5000.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
 310.0    2.0
```