APPENDIX 5.2-1

RCH Group. Air Quality Technical Report for the Ontario International Airport Cargo Development Project. February 23, 2023.

Air Quality Technical Report for the Ontario International Airport Cargo Development Project

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1.0 INTRODUCTION

This document presents the Air Quality Technical Report associated with the proposed Ontario International Airport (Airport or ONT) Cargo Development (Proposed Project, South Airport Cargo Center, or SACC) in Ontario, California.

To support the Ontario International Airport Cargo Development Environmental Impact Report (EIR), three analyses were conducted: construction and operational emissions inventories, dispersion modeling to support an ambient air quality standards analysis, and a health risk assessment (HRA). The emission inventories, ambient air quality standards analysis, and HRA results are presented. The potential air quality and health impacts that would result from construction and operation of the Proposed Project have been identified.

To evaluate the potential impacts of the change in air quality conditions that would result from the Proposed Project, the following conditions were analyzed:

- No Project
- With Project

Three timeframes will be evaluated:

- Baseline Condition (2021)[1]
- Phase 1 (2025)
- Phase 2 (2029)[2]

1 The Baseline Condition accounts for aviation activity levels that are historically representative of operations at ONT and, as such, has been "normalized" to eliminate short-term depressions in activity levels attributable to the COVID-19 pandemic. To more accurately represent historically consistent existing conditions at ONT, and to avoid a potentially misleading comparison of project impacts, the air quality and GHG emissions are described and compared using a hybrid of 2019 and 2020 operations. The Baseline Conditions air quality impacts were developed using calendar year 2019 aircraft operations with modifications to reflect increased cargo operations experienced during 2020 and continuing into 2021. The existing/base year fleet mix is a hybrid of 2019 and 2020 operations and was based on the ONT ANOMS radar data from 2019 and 2020, and FAA Traffic Flow TFMSC and OSPNET. Specifically, passenger air carriers, air taxi, and GA operations were obtained from the 2019 ANOMS data and the all-cargo operations were obtained from the 2020 ANOMS data. The military operations were obtained from the FAA TFMSC data. This approach serves to normalize operations to represent Baseline Conditions recognizing that the temporary reduction in passenger air carrier and air taxi operations, due to the COVID-19 pandemic, is not indicative of baseline/existing conditions at ONT.

2 Operational conditions during Phase 2 include Proposed Project activities from both Phase 1 and 2.

The supporting information, methodology, and assumptions used in the construction air emissions inventory, operational air emissions inventory, air quality dispersion modeling, and health risk assessment (including supporting project data and assumptions) are provided in the following:

- **Attachment A: Emissions Inventory and Dispersion Modeling Methodology and Assumptions**
- **Attachment B: Construction and Operational Air Emissions Inventory**
- **Attachment C: Health Risk Assessment Methodology and Assumptions**

Air quality impacts were determined for United States Environmental Protection Agency (USEPA) criteria pollutants and their precursors such as carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 micrometers (coarse particulate or PM_{10}), and particulate matter less than 2.5 micrometers (fine particulate or $PM_{2.5}$). The air quality analysis was developed based on the South Coast Air Quality Management District (SCAQMD) Modeling Guidance for AERMOD,[3] the USEPA *Guideline on Air Quality Models,*[4] and the SCAQMD *Air Quality Handbook.*[5] The air quality analyses were conducted to determine the air quality impacts, in terms of air emissions and ambient pollutant concentrations, using the significance levels identified by SCAQMD.[6]

The HRA focuses on impacts on existing residences, offsite workers, and other sensitive populations (including onsite workers within the passenger terminal and other areas within the Airport) from emissions of air toxics or toxic air contaminants (TAC)[7] such as diesel particulate matter (DPM)[8] emissions from construction equipment and haul trucks associated with the Proposed Project construction activities and other air toxics emissions during aircraft operations. The HRA was conducted to determine the health impacts, in terms of excess cancer risk and noncancer hazards, using the significance levels identified by

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3 South Coast Air Quality Management District, SCAQMD Modeling Guidance for AERMOD, https://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance

4 United States Environmental Protection Agency, Guideline on Air Quality Models (Revised), 40 Code of Federal Regulations, Part 51, Appendix W, November 2005.

5 South Coast Air Quality Management District, CEQA Air Quality Handbook, http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook

6 South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, April 2019, http://www.aqmd.gov/ceqa/hdbk.html.

7 Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality. TAC are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., gasoline service stations, dry cleaners). TAC are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TAC are regulated at the regional, state, and Federal level.

8 In 1998, the California Air Resources Board classified diesel particulate matter as a toxic air contaminant, citing its potential to cause cancer and other health problems. The United States Environmental Protection Agency concluded that long-term exposure to diesel engine exhaust is likely to pose a lung cancer hazard to humans and can also contribute to other acute and chronic health effects.

the SCAQMD.[9] The HRA was prepared based on the California Office of Environmental Health Hazard Assessment (OEHHA)'s *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*[10] and SCAQMD's *Risk Assessment Procedures for Rule 1401, 1401.1* and *212.*[11]

2.0 PROJECT OVERVIEW

The City of Ontario and San Bernardino County formed the Ontario International Airport Authority (OIAA) in August 2012 by enacting a Joint Powers Agreement. The OIAA provides overall direction for the ownership, management, operations, development, and marketing of Ontario International airport (ONT or Airport) for the benefit of the Southern California economy and the residents of the airport's four-county catchment area.

ONT is located in San Bernardino County, approximately 35 miles east of Downtown Los Angeles in the center of Southern California and is considered part of the Inland Empire. The Airport resides on 1,757 acres of land with an established airport elevation of 944 feet above mean sea level. ONT is within the South Coast Air Basin.

Facilities on the Airport include two passenger terminals, general aviation facilities, air freight buildings, parking lots, and numerous airport and aircraft maintenance and support services. ONT has two parallel runways that are oriented in the east-west direction, Runways 8L-26R and 8R-26L. There are also two commercial terminal aprons, a general aviation apron and two primary air cargo ramps. UPS facilities are located in the southeast quadrant of the Airport (with most of their facilities outside of and adjacent to Airport property) and FedEx facilities are in the northwest quadrant of the Airport.

The three primary runway use configurations at ONT are (1) West Flow (depart and arrive on Runways 26L and 26R), (2) East Flow (depart and arrive on Runways 8L and 8R), and (3) Contra Flow (depart Runways 8L and 8R and arrive Runways 26L and 26R). Contra Flow is an operational noise mitigation strategy to minimize noise over residential areas to the west of the Airport at night and thus occurs daily between 10:00 PM and 7:00 AM when weather and wind conditions allow. The use of Contra Flow at ONT provides for noise abatement.

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9 South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, April 2019, http://www.aqmd.gov/ceqa/hdbk.html

10 Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, February 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html

11 South Coast Air Quality Management District, Risk Assessment Procedures for Rule 1401, 1401.1 and 212, September 1, 2017, http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12

The project site consists of approximately 97 acres located within the south-central portion of ONT. The proposed air cargo center, illustrated in **Figure 1: Project Location Map** and **Figure 2: Project Site Plan**, includes a Cargo Sorting Building, truckyard, parking facilities, aircraft parking apron improvements, ground service equipment (GSE) parking, and aviation support facilities. The Cargo Sorting Building, proposed north of East Avion Street, would contain a sorting facility and office spaces. The aircraft parking apron would surround the building to the west, north, and east. A ground-level visitor parking lot and truckyard are proposed on the south side of the cargo building, with access from East Avion Street. A parking garage for employees is proposed south of East Avion Street with a pedestrian bridge connecting the parking garage to the office building.

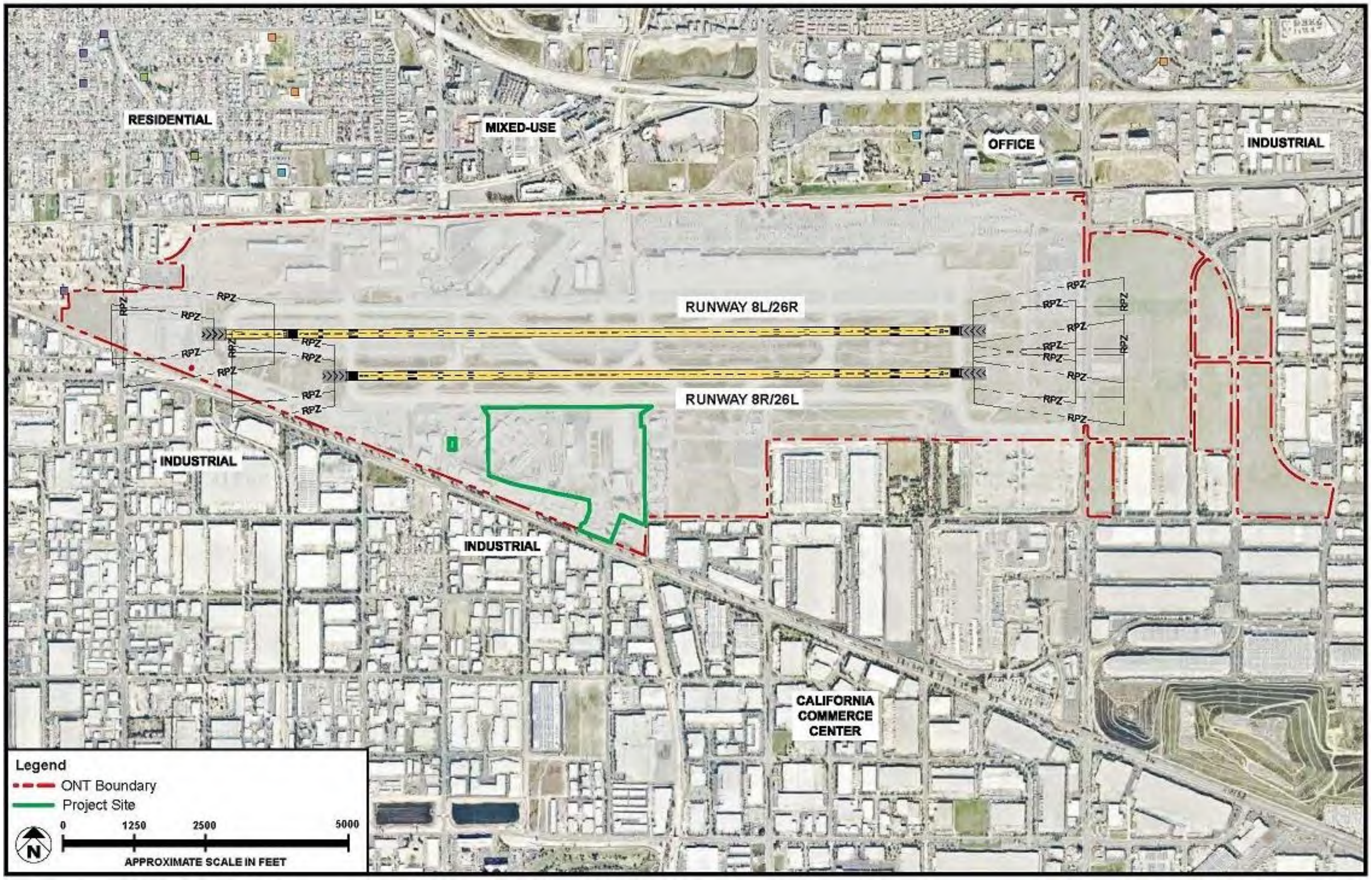
The Proposed Project would be implemented in two phases. Phase 1 construction would include the demolition of existing structures and site improvements in the Phase 1 area, site preparation, and construction of all proposed improvements on the eastern 60 acres of the Project site, including the Cargo Sorting Building, aircraft apron improvements, and parking garage. Phase 2 would occur on the western 30 acres of the Project Site and include the demolition of structures and site improvements in the Phase 2 area, site preparation, and construction of the remaining improvements, including the expansion of the Cargo Sorting Building and aircraft apron improvements.

The Proposed Project would include a 857,000-square-foot Cargo Sorting Building and office spaces. A 210,000 square-foot truckyard would be located between the Cargo Sorting Building and East Avion Street and service 150 truck trips per day at Phase 1 (plus 24 fuel truck trips per day) and 224 truck trips per day at Phase 2. The project would include 933 automobile parking stalls, including 900 employee stalls in a parking garage and 2,531 employee trips per day.

The Proposed Project would introduce new flights to the Airport. At its opening in 2025, the Proposed Project would operate 44 daily flights (22 arrivals and 22 departures) at the Airport (with an annual average of 38 flights per day). These flights would arrive and depart throughout the day, every day of the week. By 2029, 22 daily flights (11 arrivals and 11 departures) would be added (with an annual average of 18 flights per day). At the buildout of Phase 2, the Proposed Project would operate 66 daily flights (33 arrivals and 33 departures) (with an annual average of 56 flights per day).

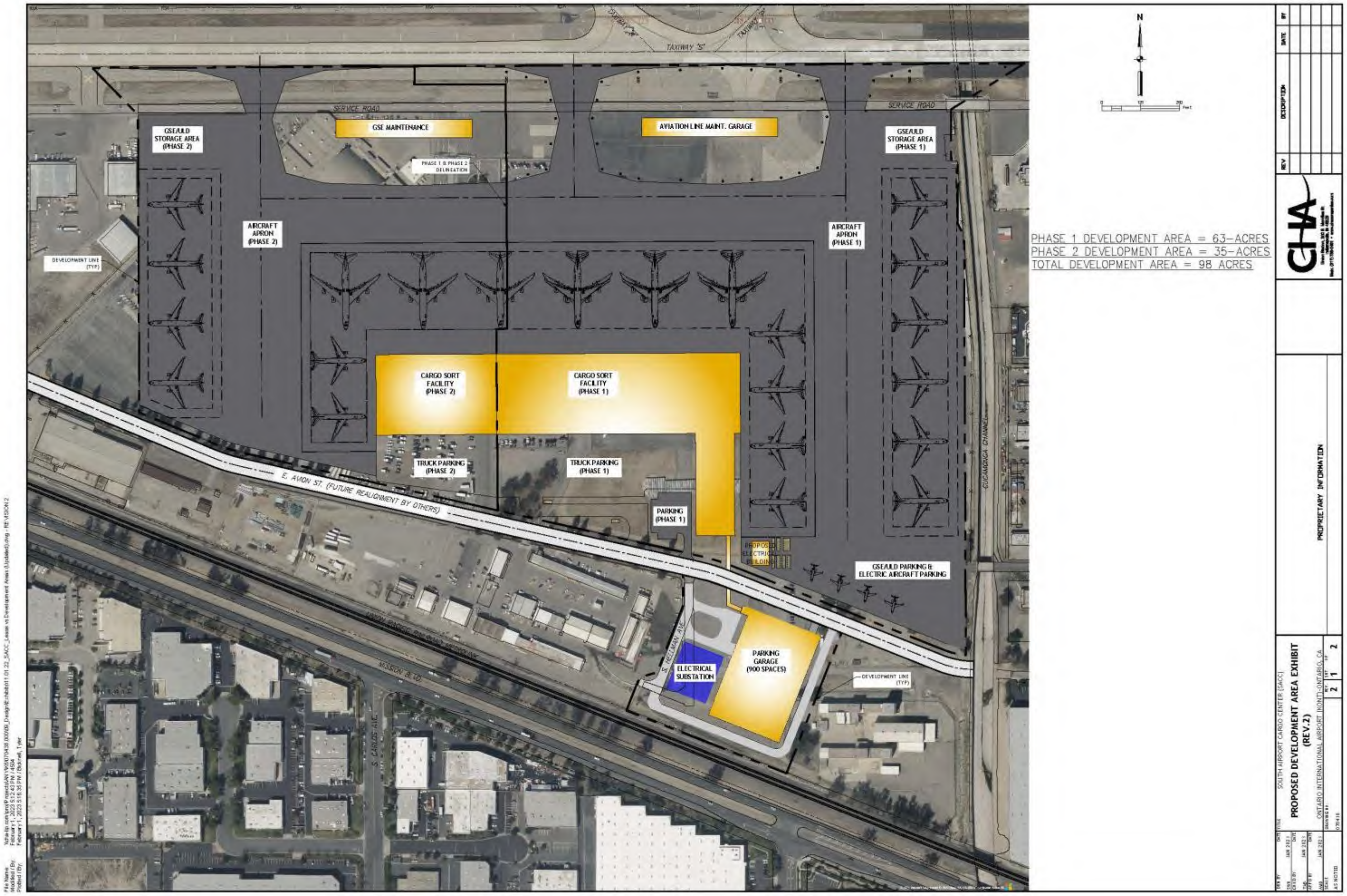
Construction of Phase 1 is projected to start in March of 2023 and be completed in December of 2024. Construction of Phase 2 is estimated to begin in September of 2025 (demolition), December of 2026 (site preparation), and August of 2027 (building construction), with completion in August of 2028, and would become operational in January of 2029. Typically, construction activities would occur between 5 a.m. and 3 p.m. (ten hours per day), on Monday through Friday.

Figure 1
Project Location Map



Source: Meridian Consultants, February 2023

Figure 2
Project Site Plan



Source: CHA, February 2023_________

The following project design feature (PDF) would be implemented during construction activities to reduce emissions and are quantified within the air quality analysis:

PDF AQ-1: The Applicant shall use equipment that meets the USEPA's Tier 4 emissions standards for offroad diesel-powered construction equipment with 50 horsepower (hp) or greater, for all phases of construction activity. To ensure that Tier 4 or the cleanest construction equipment available would be used during the Project's construction, the OIAA shall confirm that the Applicant includes this requirement in applicable bid documents, purchase orders, and contracts. Additionally, the OIAA shall confirm that the Applicant also requires periodic reporting and provision of written construction documents by construction contractor(s) and conducts regular inspections to the maximum extent feasible to ensure and enforce compliance.

This PDF results in the avoidance of 1.5 tons of VOC, 16.3 tons of NO_x, 0.8 tons of PM_{10}, and 0.7 tons of $PM_{2.5}$ during the entire construction period.

PDF AQ-2: The Applicant shall conduct concrete/asphalt demolition on-site to reuse concrete/asphalt generated during construction. During Phase 1, demolition would involve removal of approximately 2,047,320 square feet of asphalt/concrete, which would be recycled within the project site and not require offsite haul truck trips (i.e., avoiding 2,616 haul truck trips). During Phase 2, demolition would involve removal of approximately 1,045,440 square feet of asphalt/concrete, which would be recycled within the project site and not require offsite haul truck trips (i.e., avoiding 910 haul truck trips).

This PDF results in the avoidance of 0.1 tons of CO and 0.2 tons of NO_x during the entire construction period.

The following PDFs would be implemented during operation to reduce emissions and are quantified within the air quality analysis:

PDF AQ-3: The Ground Support Equipment (GSE), including (but not limited to) aircraft tugs, baggage tugs, belt loaders, cargo loaders, forklifts, and ground power units, ramp support carts/vans, servicing aircrafts shall be electric by Phase 2.

This PDF results in the avoidance of 0.7 tons of VOC, 1.7 tons of CO, 1.6 tons of NO_x, and 0.1 tons of PM_{10} and $PM_{2.5}$ compared to the use of diesel fueled ground support equipment.

PDF AQ-4: A portion of the proposed Project's aircraft fleet shall include electric cargo aircraft. (See **Table 3.4** in **Section 3.0: Project Description.**)

This PDF results in the avoidance of 3.8 tons of VOC, 23.0 tons of CO, 25.5 tons of NO_x, and 0.2 tons of PM_{10} and $PM_{2.5}$ compared to the use of jet-fueled aircraft similar to the project fleet.

PDF AQ-5: All new aircraft parking positions shall be equipped with ground power and pre-conditioned air, therefore reducing the need to operate auxiliary power units.

This PDF results in the avoidance of 0.2 tons of VOC, 2.7 tons of CO, 3.3 tons of NO_x, and 0.5 tons of PM_{10} and $PM_{2.5}$ compared to without the gate infrastructure.

PDF AQ-6: The Applicant shall conduct maintenance and/or testing on each of the seven standby generators on separate days to limit daily emissions from maintenance/testing activities.

This PDF results in the avoidance of 13.5 pounds of VOC, 185 pounds of CO, 35.5 pounds of NO_x, and 2.1 pounds of PM_{10} and $PM_{2.5}$ when compared to testing all seven generators on the same day.

Moreover, additional PDFs not quantified within the air quality analysis include:

PDF AQ-7: The Air Cargo Sort Building shall meet Leadership in Energy and Environmental Design (LEED) certification standards, shall include enhanced building automation systems, and shall utilize advanced low energy HVAC systems.

PDF AQ-8: The visitor parking lot shall include 29 parking stalls, 6 of which shall have access to electric charging points. The employee parking structure shall include 932 parking stalls, 300 of which shall have access to electric charging points.

It should be noted that, over time new technologies or systems will emerge, or will become more cost-effective or user-friendly, which will further reduce the reliance upon nonrenewable natural resources. For example, future implementation of the Clean Fuel Standard and the Renewable Portfolio Standard are expected to decrease the use of nonrenewable fossil fuels. Similarly, efforts made by the FAA and SFO to increase usage of alternative jet fuels are expected to occur during the lifetime of the Proposed Project.

As discussed above, air quality emissions from construction would not result in any significant impacts. However, the Proposed Project's operational emissions during Phase 1 and Phase 2 would exceed SCAQMD significance thresholds for CO, VOC, NO_x and SO_2 (Phase 2 only), primarily due to aircraft, followed by employee vehicles, delivery trucks, and emergency generators. There are no feasible mitigation measures that would reduce operational emissions to below significant thresholds. However, the Proposed Project would incorporate the following mitigation measures to reduce air quality emissions:

While not quantifiable, the following mitigation measures would reduce air quality emissions during construction.

MM AQ-1: The Applicant shall require that construction vendors, contractors, and/or haul truck operators commit to using 2010 model year trucks (e.g., material delivery trucks and soil import/export with a gross vehicle weight rating of at least 14,001 pounds), that meet CARB's 2010 engine emissions standards or newer, cleaner trucks. The OIAA shall confirm that the Applicant includes this requirement in applicable bid documents, purchase orders, and contracts. Operators shall maintain records of all trucks associated with Project construction to document that each truck used meets these emission standards and make the records available for inspection.

MM AQ-2: The Applicant shall require that construction equipment such as concrete/industrial saws, pumps, aerial lifts, light stands, air compressors, and forklifts be electric or alternative-fueled (i.e., non-diesel), where feasible. Pole power shall be utilized at the earliest feasible point in time and shall be used to the maximum extent feasible in lieu of generators.

MM AQ-3: The Applicant shall support and encourage ridesharing and transit incentives for the construction crew by providing crews with the resources needed to organize rideshares, such as bulletin boards or email announcements. The Applicant shall also partially subsidize transit fares or passes for the construction crew members who can feasibly use transit. The Applicant shall set a goal to achieve ten percent total construction worker participation in ridesharing programs and transit use.

While not quantifiable, the following mitigation measures as well as mitigation measures **TRANS-1** through **TRANS-5** in Section 5.12, Transportation of this Draft EIR would reduce air quality emissions during operation.

MM AQ-4: The Applicant shall require, in addition to the GSE noted within **PDF AQ-3**, all other on-site cargo-handling equipment, such as yard trucks, holsters, yard goats, pallet jacks, and similar equipment, to be electric, with the necessary electrical charging stations provided.

MM AQ-5: The Applicant shall require, where feasible, the use of zero-emission Project-related delivery trucks as part of business operations beginning in 2025 (within at least 25 percent of the Project fleet).

The Applicant also shall require, where feasible, the use of zero-emission Project-related delivery trucks as part of the business operations beginning in 2029 (within at least 50 percent of the Project fleet).

MM AQ-6: The Applicant shall include in the design requirements for the Project that a cool roof be installed at the parking structure to reduce energy use and urban heat island effects. This requirement shall not apply if solar panels are installed on the parking structure.

MM AQ-7: The Applicant shall encourage the use of single engine taxi operations for Project aircraft.

3.0 ANALYSIS METHODOLGY

Regulatory models used to estimate air quality and health impacts from construction and operations include:

- California Air Pollution Officers Association (CAPCOA) CalEEMod (California Emissions Estimator Model Version 2020.4.0)[12] land use emissions model estimates emissions due to demolition and construction activities and operations for land use development. A newer version of CalEEMod, Version 2022 was fully released in December 22 of 2022. CalEEMod Version 2020 was used for the air quality analysis, as it was the available model version on issue of the Notice of Preparation.

- California Air Resources Board's (CARB) EMFAC[13]emissions inventory model. EMFAC is the latest emission inventory model that calculates emission inventories and emission rates for motor vehicles operating on roads in California. This model reflects CARB's current understanding of how vehicles travel and how much they emit. EMFAC can be used to show how California motor vehicle emissions have changed over time and are projected to change in the future.

- CARB OFFROAD[14] emissions inventory model. OFFROAD is the latest emission inventory model that calculates emission inventories and emission rates for off-road equipment such as loaders, excavators, and off-road haul trucks operating in California. This model reflects CARB's current understanding of how equipment operates and how much they emit. OFFROAD can be used to show how California off-road equipment emissions have changed over time and are projected to change in the future.

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12 California Air Pollution Officers Association, *California Emissions Estimator Model User's Guide*, May 2021, http://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/01_user-39-s-guide2020-4-0.pdf?sfvrsn=6

13 California Air Resources Board, EMFAC2021 User's Guide, January 15, 2021, https://ww2.arb.ca.gov/sites/default/files/2021-01/EMFAC202x_Users_Guide_01112021_final.pdf

14 California Air Resources Board, OFFROAD Instructions, http://www.arb.ca.gov/msprog/ordiesel/info_1085/oei_write_up.pdf

- United States Environmental Protection Agency (USEPA) AP-42, Compilation of Air Pollutant Emission Factors, has been published since 1972 as the primary compilation of USEPA's emission factor information. It contains emission factors and process information for more than 200 air pollution source categories. A source category is a specific industry sector or group of similar emitting sources. The emission factors have been developed and compiled from source test data, material balance studies, and engineering estimates.[15] Fugitive dust emissions from project onsite asphalt/concrete recycling were based on AP-42.

  FAA's Aviation Environmental Design Tool (AEDT, Version 3d) was used to prepare airport operational emission estimates for aircraft, auxiliary power units (APU), GSE, and stationary sources.[16] [17] Since the Notice of Preparation, the FAA released an updated version of AEDT (Version 3e, released May 9 of 2022). A review of the new features of Version 3e indicates that the updated model would not provide aircraft air quality results that would differ greatly from those derived using Version 3d. AEDT uses airport-specific information and aircraft fleet databases. The aircraft fleet database contains more than 3,000 aircraft (airframe and engine combinations).

- American Meteorological Society/USEPA Regulatory Model (AERMOD). AERMOD (Version 21112, released April 22 of 2021) is an atmospheric dispersion model which can simulate point, area, volume, and line emissions sources and has the capability to include simple, intermediate, and complex terrain along with meteorological conditions and multiple receptor locations.[18] [19] AERMOD is commonly executed to yield 1-hour maximum and annual average concentrations (in parts per million or ppm and micrograms per cubic meter or $\mu g/m^3$) at each receptor. AERMOD is used to estimate air concentrations at nearby receptors resulting from the activities associated with an air emission source. Plot files from AERMOD using unitized emissions (one gram per second) for each air toxics source category were imported into CARB's Hotspots Analysis and Reporting Program (HARP), Risk Assessment Standalone Tool (RAST, Version 22118). Using the AERMOD plot files and the emissions

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15 US Environmental Protection Agency, AP 42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I, https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissions-factors

16 Federal Aviation Administration, Aviation Environmental Design Tool (AEDT) User's Manual, March 29, 2021, https://aedt.faa.gov/Documents/AEDT3d_UserManual.pdf

17 Federal Aviation Administration, Aviation Environmental Design Tool (AEDT) Version 3d Technical Manual, https://aedt.faa.gov/3d_information.aspx

18 United States Environmental Protection Agency Preferred/Recommended Models, AERMOD Modeling System, https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models#aermod

19 Title 40 CFR Part 51, Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions; Final Rule.

inventory, the ADMRT calculates ground-level concentrations of air toxics.[20] For this analysis, HARP2 equations and calculation methods were used to address project-specific impacts.

4.0 EXISTING CONDITIONS

The Proposed Project is in San Bernardino County within the South Coast Air Basin (SCAB or Basin). The Basin is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties.

Regional Meteorology

Air quality is affected by the rate, amount, and location of pollutant emissions and the associated meteorological conditions that influence pollutant movement and dispersal. Atmospheric conditions, including wind speed, wind direction, stability, and air temperature, in combination with local surface topography (i.e., geographic features such as mountains, valleys, and Pacific Ocean), determine the effect of air pollutant emissions on local air quality.

In general, Southern California has a warm, dry Mediterranean climate; hot in the summer and mild in the winter. Temperatures are cooler near the coast and hotter near inland areas. Most of the precipitation occurs as rain during the winter months, although rain showers are common during the summer in higher-elevation desert areas. Average annual precipitation is approximately 19 inches and temperatures reach 90 degrees Fahrenheit 100 days of the year on average. August daily highs average 95 degrees while daily lows average 64 degrees Fahrenheit. January typically exhibits average daily highs of 68 degrees and average daily lows of 43 degrees Fahrenheit. The predominant wind directions are either out of the southwest or northeast. Gusts greater than 15 miles per hour occur infrequently, approximately two percent of the time.

Basin climate increases the potential to create air pollution problems. Air quality within the Basin generally rates from fair to poor. Sinking or subsiding air from the Pacific High-Pressure System creates a temperature inversion (known as a subsidence inversion), which acts as a lid to vertical movement of air masses and dispersion of pollutants. The lower bound of this inversion at any given time is known as the "mixing height." Restricted maximum mixing heights are 3,500 feet above sea level or less. Weak summertime pressure gradients suppress winds and further limit horizontal dispersion of pollutants in the mixed layer below the subsidence inversion. Poorly dispersed anthropogenic (human-made) emissions, combined with strong sunshine, lead to photochemical reactions that create ozone (O_3) in this surface

20 California Air Resources Board, HARP Risk Assessment Standalone Tool, Released April 28, 2022, https://ww2.arb.ca.gov/resources/documents/harp-risk-assessment-standalone-tool

layer. Daytime onshore air flow (i.e., sea breeze) and nighttime offshore flow (i.e., land breeze) are quite common in Southern California. The sea breeze helps to moderate daytime temperatures and leads to air pollutants being blown out to sea at night and returning to land the following day. A mixing height of 2,402 feet was used for the air quality analysis.[21]

Sensitive Receptors

Land uses such as schools, children's daycare centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. The CARB and SCAQMD has identified the following people as most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and those with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive population groups.

Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions. Recreational uses are also considered sensitive, due to the greater exposure to ambient air quality conditions and because the presence of pollution detracts from the recreational experience. Offsite workers are also considered sensitive receptors by the SCAQMD.

Local Air Quality

The SCAQMD maintains a network of monitoring stations within the Air Basin that monitor air quality and compliance with applicable ambient standards. The nearest air monitoring station which measures CO, NO_2, and PM_{10} is located at 1350 San Bernardino Road in Upland (Northwest San Bernardino Valley, Station # 5175), four miles to the north of the project site. The nearest air monitoring station which measures SO_2 and $PM_{2.5}$ is located at 14360 Arrow Boulevard in Fontana (Central San Bernardino Valley 1, Station # 5197), seven miles to the northeast of the project site.

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21 2016 AQMP Draft Aircraft Emissions Inventory for South Coast Air Quality Management District, August 2016, https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp

Table 1: **Air Quality Data Summary** summarizes the most recent three years of data (2018 through 2020) from the nearby air monitoring stations; reported in parts per million (ppm) or micrograms per cubic meter (µg/m³). The ozone standard was exceeded in 2018, 2019, and 2020. The State annual PM_{10} standard was exceeded in 2018, 2019, and 2020 and the State 24-hour PM_{10} standard was exceeded in 2018, 2019, and 2020. CO, NO_2, and $PM_{2.5}$ standards were not exceeded during 2018, 2019, and 2020. As of July of 2022, the CARB had not published air monitoring results for 2021.

Table 1
Air Quality Data Summary (2018 - 2020)

Pollutant	Monitoring Data by Year			
	Standard	***2018***	***2019***	***2020***
Ozone				
Highest 1-Hour Average (ppm)	0.09	**0.141**	**0.131**	**0.158**
Days over State Standard	—	**38**	**41**	**82**
Highest 8-Hour Average (ppm)	0.070	**0.111/0.106**	**0.109/0.097**	**0.123/0.116**
Days over State/National Standard	—	**52**	**67**	**114**
Nitrogen Dioxide				
Highest 1-Hour Average (ppm)	0.180/0.100	0.063/0.056	0.076/0.058	0.066/0.058
Days over State Standard	—	0	0	0
Annual Average (ppm)	0.030/0.053	0.018	0.017	0.019
Carbon Monoxide				
Highest 1-Hour Average (ppm)	20.0	1.9	2.7	1.5
Days over State Standard	—	0	0	0
Highest 8-Hour Average (ppm)	9.0	1.2	1.1	1.1
Days over State Standard	—	0	0	0
Particulate Matter (PM10)				
Highest 24-Hour Average (µg/m³)	50/150	**73**	**125**	**63**
Days over State Standard	—	**14**	**7**	**12**
Days over National Standard		0	0	0
State Annual Average (µg/m³)	20	**34.1**	**34.8**	**30.5**
Particulate Matter (PM2.5)				
Highest 24-Hour Average (µg/m³)	35	29.2/26.8	46.5/29.7	46.1/27.4
Days over National Standard	—	0	0	0
State Annual Average (µg/m³)	12	14.3	12.7	14.4

*Notes: Values in **bold** are in excess of at least one applicable standard.*
Generally, State and national standards are not to be exceeded more than once per year.
ppm = parts per million; µg/m³ = micrograms per cubic meter.
PM_{10} is not measured every day of the year. Number of estimated days over the standard is based on 365 days per year.
Source: South Coast Air Quality Management District, Annual Air Quality Summaries, http://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year

The air monitoring data from 2018 through 2020 indicates as follows:

- CO: No exceedances of federal or state standards (1-hour and 8-hour).
- Ozone: On average between 2018 and 2020, the 2015 federal and state 8-hour standard is exceeded 20 percent of the time (14 to 31 percent). On average between 2018 and 2020, the state 1-hour standard is exceeded 13 percent of the time (7 to 22 percent). Exceedances of all ozone standards more than doubled in 2020 as compared to 2018 and 2019 (likely due to the extensive wildfires in San Bernardino and neighboring counties in 2020).
- NO_2: Exceedance of federal 1-hour standard (100 ppb) in 2020 and exceedance of state annual standard (30 ppb) in 2018.
- PM_{10}: No exceedances of the federal 24-hour standard. Exceedance of state annual standard (20 $\mu g/m^3$) each year and minimal exceedances of the state 24-hour standard each year.
- $PM_{2.5}$: Minimal exceedance of the federal 24-hour standard (35 $\mu g/m^3$), and exceedance of the federal and state annual standard (12 $\mu g/m^3$) each year.

5.0 REGULATORY CONTEXT

United States Environmental Protection Agency (USEPA) has established the National Ambient Air Quality Standards (NAAQS) under the Clean Air Act (CAA) for six common air pollutants known as "criteria pollutants."[22] These air pollutants consist of CO, NO_2, ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$), SO_2, and lead (Pb). An ambient air quality standard establishes the concentration above which the pollutant is known to cause adverse health effects to sensitive groups within the population such as children and the elderly. Ambient air quality standards are classified as either "primary" or "secondary" standards. Primary standards define levels of air quality, including an adequate margin of safety, necessary to protect public health. Secondary ambient air quality standards define levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. The ambient air quality standards are shown in **Table 2: State and National Criteria Air Pollutant Standards, Effects, and Sources**.

22 United States Environmental Protection Agency, Six Common Air Pollutants, https://www.epa.gov/criteria-air-pollutants

Table 2
State and National Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 Hour 8 Hour	0.09 ppm 0.07 ppm	– 0.070 ppm	High concentrations can directly affect lungs, causing irritation. Long–term exposure may cause damage to lung tissue.	Formed when reactive organic gases and nitrogen oxides react in the presence of sunlight. Major sources include on–road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
Carbon Monoxide (CO)	1 Hour 8 Hour	20 ppm 9.0 ppm	35 ppm 9.0 ppm	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline–powered motor vehicles.
Nitrogen Dioxide (NO_2)	1 Hour Annual	0.18 ppm 0.03 ppm	0.10 ppm 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish–brown.	Motor vehicles, petroleum–refining operations, industrial sources, aircraft, ships, and railroads.
Sulfur Dioxide (SO_2)	1 Hour 3 Hour 24 Hour Annual	0.25 ppm – 0.04 ppm –	0.075 ppm 0.5 ppm 0.14 ppm 0.030 ppm	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
Respirable Particulate Matter (PM_{10})	24 Hour Annual	50 µg/m^3 20 µg/m^3	150 µg/m^3 –	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume–producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind–raised dust and ocean sprays).
Fine Particulate Matter ($PM_{2.5}$)	24 Hour Annual	– 12 µg/m^3	35.0 µg/m^3 12.0 µg/m^3	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including nitrogen oxides, sulfur oxides, and organics.
Lead (Pb)	Month Rolling 3 Month	1.5 µg/m^3 –	– 0.15 µg/m^3	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction.	Present sources: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.

Source: Air Quality Standards, https://ww2.arb.ca.gov/resources/background-air-quality-standards

Under the federal CAA, USEPA designates air basins where NAAQS are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there are inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” Areas where air pollution levels persistently exceed the State or national ambient air quality standards are designated "nonattainment.” Federal nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. The South Coast Air Basin portion of San Bernardino County is in nonattainment status for the federal ozone and $PM_{2.5}$; and in attainment for the federal CO, lead, NO_2, SO_2, and PM_{10}.[23]

CARB manages air quality, regulates mobile emissions sources, and oversees the activities of county and regional Air Pollution Control Districts and Air Quality Management Districts. CARB regulates local air quality indirectly by establishing State ambient air quality standards and vehicle emissions and fuel standards; and by conducting research, as well as planning and coordinating activities. California has adopted ambient standards (known as California Ambient Air Quality Standards or CAAQS) that are more stringent than the federal standards for some criteria air pollutants. Under the California Clean Air Act patterned after the CAA, areas have been designated as attainment or nonattainment with respect to the State standards. The South Coast Air Basin portion of San Bernardino County is in nonattainment status for the State ozone, PM_{10}, and $PM_{2.5}$; and is in attainment status for CO, NO_2, and SO_2.[24, 25]

The SCAQMD has jurisdiction over an area of approximately 10,743 square miles. The South Coast Air Basin is a sub-region of the SCAQMD jurisdiction. While air quality in this area has improved, the Basin requires continued diligence to meet air quality standards. The SCAQMD has adopted a series of Air Quality Management Plans to meet the CAAQS and NAAQS. These plans require control technology for existing sources, control programs for area sources and indirect sources, a SCAQMD permitting system designed to allow no net increase in emissions from any new or modified permitted emission sources and transportation control measures.

On March 3, 2017, the SCAQMD adopted the 2016 Air Quality Management Plan (AQMP) which includes strategies and measures needed to meet the CAAQS and NAAQS. The AQMP demonstrates attainment of the ozone CAAQS and NAAQS as well as the latest $PM_{2.5}$ standards.[26] The SCAQMD also adopts rules and

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23 United States Environmental Protection Agency, The Green Book Nonattainment Areas for Criteria Pollutants, https://www.epa.gov/green-book

24 California Air Resources Board, Area Designations Maps/State and National, http://www.arb.ca.gov/desig/adm/adm.htm

25 South Coast Air Quality Management District, NAAQS and CAAQS Attainment Status for the South Coast Air Basin, February 2016, http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf

26 South Coast Air Quality Management District, 2016 Air Quality Management Plan, March 1, 2017, http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan

regulations to implement portions of the AQMP. The 2016 AQMP is the applicable State Implementation Plan. On October 1, 2015, the USEPA strengthened the NAAQS for ground-level ozone, lowering the primary and secondary ozone standard levels to 70 ppb. The South Coast Air Basin is classified as an "extreme" nonattainment area and the Coachella Valley is classified as a "severe-15" nonattainment area for the 2015 Ozone NAAQS. In May of 2022, the SCAQMD released the Draft 2022 AQMP to address the requirements for meeting this standard. In October of 2022, the SCAQMD released the Revised Draft 2022 AQMP.

In 2019, the Airport developed a voluntary Air Quality Improvement Plan (AQIP)[27] as part of a collaborative effort between SCAQMD and other airports in the South Coast Air Basin to minimize and reduce emissions from mobile source activities at the Airport. The AQIP was developed to address a measure presented in the 2016 AQMP, Facility- Based Measure for Mobile Sources Measure for the Emissions Reductions at Commercial Airports (MOB-04). MOB-04 requires Basin airports to reduce non-aircraft emission sources at their facilities. The Airport's AQIP identifies efforts related to MOB-04 and programs to address air quality at the Airport. As it relates to construction projects, the AQIP includes a Construction Equipment Policy (RM7), which requires contractors under contract with OIAA to utilize Tier 4 Final construction equipment. Use of Tier 4 Final construction equipment would result in a reduction in NOx and PM emissions from construction activities.

In December 2019, SCAQMD and the Airport signed a Memorandum of Understanding (MOU) which outlines how the Airport will quantify NOx emission reductions through implementation measures outlined in ONT's AQIP.

SCAQMD adopts rules and regulations to implement portions of the AQMP. For the Proposed Project, the relevant SCAQMD rules and regulations include:

- **Rules 201 and 203 (Permits to Construct and Operate**): These rules require that owners of applicable construction or operation equipment obtain written permits from the SCAQMD prior to construction and operation.
- **Rule 402 (Nuisance):** This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort,

27 Alta Environmental, Air Quality Improvement Plan, Ontario International Airport, September 17, 2019, https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/facility-based-mobile-source-measures/draft-aqip-ont.pdf?sfvrsn=7

repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

- **Rule 403 (Fugitive Dust):** This rule requires fugitive dust sources to implement Best Available Control Measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. A fugitive dust control program pursuant to the provisions of SCAQMD Rules 402 and 403 shall be implemented. This program shall include, but not be limited to the following:

  - Prior to start of the initial on-site construction, the City Engineer shall confirm that the proposed construction plan follows SCAQMD Rule 403, and fugitive dust shall be controlled by the applicable best available control measures listed in Table 1 of Rule 403.

  - Water or a stabilizing agent shall be applied at least three times daily, preferably in the mid-morning, afternoon, and after work is done for the day, to exposed surfaces including graded and disturbed areas in enough quantity to prevent generation of dust plumes.

  - Track-out shall not extend 25 feet or more from an active operation and track-out shall be removed at the conclusion of each workday. The contractor shall use a gravel apron, 25 feet long by road width, or a pipe-grid track-out control device to reduce mud/dirt track-out from active operations and unpaved truck exit routes.

  - A wheel washing system shall be installed and used to remove bulk material from tires and vehicle undercarriages before vehicles exit the project alignment.

  - All trucks hauling dirt, sand, soil, or other loose materials are to be covered (e.g., with fabric tarps or other enclosures that would reduce fugitive dust emissions) and maintain a freeboard height of 12 inches, in accordance with California Vehicle Code Section 23114 (freeboard means vertical space between the top of the load and top of the trailer).

  - Traffic speeds on unpaved roads shall be limited to 15 miles per hour.

  - Operations on unpaved surfaces shall be suspended when winds exceed 25 miles per hour.

  - On-site stockpiles shall be covered or watered at least twice per day.

  - A publicly visible sign shall be posted with the telephone number and person to contact at the City of Ontario regarding dust complaints. This person shall respond and take corrective action within 24 hours. The SCAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

- **Rule 1110.2 (Emissions from Gaseous- and Liquid-Fueled Engines):** This rule was adopted to reduce NO_x, VOC, and CO emissions from stationary and portable engines over 50 horsepower, including standby generators. All standby generators used for Project operations would be selected from the SCAQMD certified generators list and meet applicable federal standards for diesel emissions. For after-treatment of engine exhaust air, a diesel particulate filter shall be provided to meet the emission level requirements of SCAQMD.

- **Rule 1113 (Architectural Coatings):** This rule requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce volatile organic compounds (VOC) emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories. Per Rule 1113 no person shall apply or solicit the application of any architectural coating within the SCAQMD with VOC content in excess of the values specified in a table incorporated in Rule 1113. All paints shall be applied using either high-volume low-pressure spray equipment or by hand application.

- **Rule 2202 (Employee Commute Reduction Program Guidelines)**: This rule is designed to assist employers in understanding the development and implementation requirements of the Employee Commute Reduction Program (ECRP) at their worksites. The ECRP focuses on reducing work related vehicle trips and vehicle miles traveled to a worksite with the purpose of achieving and maintaining the employers' designated average vehicle ridership targets.

- **Rule 2305 (Warehouse Indirect Source Rule)**: In May of 2021, SCAQMD adopted Rule 2305 to reduce emissions associated with warehouses and mobile sources attracted to warehouses. This rule applies to all existing and proposed warehouses over 100,000 square feet located in SCAQMD. Rule 2305 requires warehouse operators to track annual vehicle miles traveled associated with truck trips to and from the warehouse. These trip miles are used to calculate the warehouses' WAIRE (Warehouse Actions and Investments to Reduce Emissions) Points Compliance Obligation. WAIRE Points are earned based on emission reduction measures and warehouse operators are required to submit an annual WAIRE Report which includes truck trip data and emission reduction measures. Reduction strategies listed in the WAIRE menu include acquire zero emission (ZE) or near zero emission (NZE) trucks; require ZE/NZE truck visits; require ZE yard trucks; install on-site ZE charging/fueling infrastructure; install on-site energy systems; and install filtration systems in residences, schools, and other buildings in the adjacent community. Warehouse operators that do not earn enough WAIRE points to satisfy the WAIRE Points Compliance Obligation are required to pay a mitigation fee. This Proposed Project would comply with the adopted Rule 2305 (Warehouse Indirect Source Rule).

The Applicant shall also require construction contractors to implement the following regulatory compliance measures during construction to reduce exhaust emissions:

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
- All construction equipment must be properly tuned and maintained in accordance with the manufacturer's specifications and documentation demonstrating proper maintenance, in accordance with the manufacturer's specifications, shall be maintained on site. Tampering with construction equipment to increase horsepower or to defeat emission control devices must be prohibited.[28]
- All streets located within the construction site area shall be swept at least once a day using SCAQMD Rule 1186 certified street sweepers if visible soil materials are carried to adjacent streets.
- The Applicant would require construction contractors to recycle or salvage a minimum of 65 percent of the non-hazardous construction and demolition waste generated directly from construction and demolition of the Project per CalGreen Construction Waste Management Requirements.

Criteria Air Pollutants

The following provides a summary of the potential health and welfare effects and typical sources of each of the criteria air pollutants.

Ozone

Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. O_3 is not emitted directly into the atmosphere but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving VOC and NO_x. VOC and NO_x are known as precursor compounds for O_3. Substantial ozone production generally requires O_3 precursors to be present in a stable atmosphere with strong sunlight for approximately three hours. O_3 is a regional air pollutant because it is not emitted directly by sources but is formed downwind of sources of VOC and NO_x under the influence of wind and

28 Code of Federal Regulations, Part 1068 – General Compliance Provisions for Highway, Stationary, and Nonroad Programs, https://www.ecfr.gov/current/title-40/chapter-I/subchapter-U/part-1068.

sunlight. O_3 concentrations tend to be higher in the late spring, summer, and fall, when long sunny days combine with regional air subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds.

Carbon Monoxide

CO is a nonreactive pollutant that is a product of incomplete combustion of organic material, and is mostly associated with motor vehicle traffic, and in wintertime, with wood–burning stoves and fireplaces. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground–level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures.

When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces its oxygen-carrying capacity, resulting in reduced levels of oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia. CO measurements and modeling were important in the early 1980s when CO levels were regularly exceeded throughout California, but in more recent years, CO measurements and modeling are not a priority in most California air districts due to the retirement of older vehicles, fewer emissions from new vehicles, and improvements to fuels.

Nitrogen Oxides

When combustion temperatures are extremely high, as in aircraft, truck and automobile engines, atmospheric nitrogen combines with oxygen to form various oxides of nitrogen. Nitric oxide (NO) and NO_2 are the most significant air pollutants generally referred to as NO_x. Nitric oxide is a colorless and odorless gas that is relatively harmless to humans, quickly converts to NO_2 and can be measured. Nitrogen dioxide has been found to be a lung irritant capable of producing pulmonary edema. Inhaling NO_2 can lead to respiratory illnesses such as bronchitis and pneumonia.

Volatile Organic Compounds

VOC means any compound of carbon, excluding carbon monoxide, carbon dioxide (CO_2), carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions and thus, a precursor of ozone formation. VOC are any reactive compounds of carbon, excluding methane, CO, CO_2, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and other exempt compounds.

VOC includes a variety of chemicals, some of which may have short- and long-term adverse health effects. VOC are emitted by a wide array of products numbering in the thousands. Examples include paints and lacquers, paint strippers, cleaning supplies, building materials and furnishings, as well as fuel storage and use.

VOC can cause eye, nose, and throat irritation; headaches, loss of coordination, nausea; and damage to liver, kidney, and central nervous system. Some organics can cause cancer in animals; some are suspected or known to cause cancer in humans. The ability of organic chemicals to cause health effects varies greatly from those that are highly toxic, to those with no known health effect. As with other pollutants, the extent and nature of the health effect would depend on many factors including level of exposure and length of time exposed. Eye and respiratory tract irritation, headaches, dizziness, visual disorders, and memory impairment are among the immediate symptoms that some people have experienced soon after exposure to some organics.

Particulate Matter

PM_{10} and $PM_{2.5}$ consist of airborne particles that measure 10 micrometers or less in diameter and 2.5 micrometers or less in diameter, respectively. PM_{10} and $PM_{2.5}$ represent fractions of particulate matter that can be inhaled into the air passages and the lungs, causing adverse health effects. Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, wood burning stoves and fireplaces, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition, construction activities and mining, are more local in nature, while others such as vehicular traffic and wood burning stoves and fireplaces, have a more regional effect.

Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates can also damage materials and reduce visibility. Dust comprised of large particles (diameter greater than 10 micrometers) settles out rapidly and is easily filtered by human breathing passages. This dust is of concern more as a soiling nuisance rather than a health hazard. The remaining fractions, PM_{10} and $PM_{2.5}$, are a health concern particularly at levels above the federal and California ambient air quality standards. $PM_{2.5}$ (including diesel exhaust particles) is thought to have greater effects on health, because these particles are so small and thus penetrate to the deepest parts of the lungs.

Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, coughing, bronchitis, and respiratory illnesses in children. Mortality studies since the 1990s have shown a statistically significant direct association between mortality (premature deaths) and daily concentrations of particulate matter in the air. Despite important gaps in scientific knowledge and continued reasons for some skepticism, a comprehensive evaluation of the research findings provides persuasive evidence that exposure to fine particulate air pollution has adverse effects on cardiopulmonary health. The CARB has estimated that achieving the ambient air quality standards for PM_{10} could reduce premature mortality rates by 6,500 cases per year.

While current regulations are focused on both PM_{10} and $PM_{2.5}$, there has been growing concern in the public health community about the contribution of ultrafine particles (UFP) to the overall health impacts of PM. These very minute particles (consisting primarily of organic material, soot, and trace elements) have a different chemical composition than the larger PM fractions ($PM_{2.5}$ and PM_{10}). UFP are emitted from almost every fuel combustion process, including diesel, gasoline, and jet engines. Although there are many sources of UFP in the atmosphere, vehicle exhaust is the major contributor to UFP concentrations in urban areas, particularly in proximity to major roads. Consequently, there is growing concern that people living near roadways with high traffic volumes and other sources of combustion-related pollutants (e.g., airports, refineries, and railyards) may be exposed to high levels of UFP.[29]

Sulfur Dioxide

SO_2 is a combustion product of sulfur or sulfur–containing fuels such as coal and diesel. SO_2 is also a precursor to the formation of atmospheric sulfate and particulate matter and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain.

Lead

Ambient lead concentrations meet both the federal and State standards in the Project area. Lead has a range of adverse neurotoxin health effects and was released into the atmosphere via leaded gasoline products. The phase-out of leaded gasoline in California has resulted in dramatically decreased levels of atmospheric lead. Metal processing is currently the primary source of lead emissions in the SCAB. The highest concentrations of lead in air are generally found near lead smelters and general aviation airports, where piston aircraft use leaded fuel. Other stationary sources that generate lead emissions include waste incinerators, utilities, and lead-acid battery manufacturers. The maximum lead concentrations recorded in the Project area are below federal and California standards. Notably, diesel fuel does not contain lead emissions and gasoline fuel is unleaded. Although lead is a criteria air pollutant, it was not evaluated because the Proposed Project would not involve piston aircraft and the use of aviation gasoline (avgas), a common source of lead emissions and therefore, would have a negligible impact on ambient lead levels in the South Coast Air Basin.

29 South Coast Air Quality Management District, Multiple Air Toxics Exposure Study (MATES-V) in the South Coast Air Basin, August 2021, http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v

Toxic Air Contaminants

Non-criteria air pollutants or toxic air contaminants are airborne substances that can cause short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TAC includes both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TAC includes approximately 240 compounds, including particulate emissions from diesel-fueled engines and asbestos.

In August of 1998, CARB identified particulate emissions from diesel-fueled engines as TAC. CARB developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*[30], and *Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines.*[31] The document represents a proposal to reduce diesel particulate emissions, with the goal to reduce emissions and the associated health risk by 75 percent in 2010 and 85 percent in 2020.[32] The program aims to require the use of state-of-the-art catalyzed diesel particulate filters and ultra-low sulfur diesel fuel on diesel-fueled engines.

DPM is the most complex of diesel emissions. Diesel particulates, as defined by most emission standards, are sampled from diluted and cooled exhaust gases. This definition includes both solid and liquid material that condenses during the dilution process. The basic fractions of DPM are elemental carbon; heavy hydrocarbons derived from the fuel and lubricating oil and hydrated sulfuric acid derived from the fuel sulfur. DPM contains a large portion of the polycyclic aromatic hydrocarbons (PAH) found in diesel exhaust. Diesel particulates include small nuclei particles of diameters below 0.04 micrometers (µm) and their agglomerates of diameters up to 1 µm. DPM is a major factor in total TAC exposure in California.

California State law defines TAC as air pollutants having carcinogenic effects. A total of 243 substances have been designated as TAC under California law; they include the 187 (federal) hazardous air pollutants (HAP) adopted in accordance with AB 2728. The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources, but AB 2588 does not regulate air toxics emissions. TAC emissions from individual facilities are quantified and prioritized. Depending on the risk levels, emitting facilities are required to implement varying levels of risk reduction measures.

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30 California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles,* October 2000, http://www.arb.ca.gov/diesel/documents/rrpfinal.pdf

31 California Air Resources Board, Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines, October 2000.

32 Generally, there was a 60 percent reduction in health risks from 2005 through 2015, based on the SCAQMD Multiple Air Toxics Exposure Study.

The FAA's Aviation Emissions and Air Quality Handbook, Chapter 6,[33] lists potential HAP to be included in an airport emissions inventory. Typically, aircraft HAP emissions include formaldehyde in the greatest amount, followed by acetaldehyde, acrolein, benzene, methyl alcohol, and 1,3-butadiene. **Attachment C: Health Risk Assessment Methodology and Assumption** contains further information on the development of the aircraft HAP emissions inventory.

In 2005, the SCAQMD conducted a comprehensive study on air toxics in the SCAB called the Multiple Air Toxics Exposure Study (MATES-III). The monitoring program measured more than 30 air pollutants, including both gas and particulates. The monitoring study was accompanied by a computer modeling study in which SCAQMD estimated the risk of cancer from breathing toxic air pollution throughout the region based on emissions and weather data. MATES-III found that the average cancer risk in the region from carcinogenic air pollutants ranges from approximately 870 in a million to 1,400 in a million, with an average regional risk of approximately 1,200 in a million.[34]

In 2015, the Multiple Air Toxics Exposure Study IV (MATES IV) is a follow up to previous air toxics studies in the Basin. The MATES IV Study includes an updated emissions inventory of toxic air contaminants and a modeling effort to characterize risk across the SCAB. The study focuses on the carcinogenic risk from exposure to air toxics but does not estimate mortality or other health effects from particulate exposures. An additional focus of MATES IV is the inclusion of measurements of ultrafine particle concentrations. Results for MATES-IV show that trends in monitored levels air toxics continue to decline, modeled exposures and risks were substantially lower compared to MATES III (approximately 60 percent decrease), and DPM remains the largest component of air toxics estimated risk, at approximately 68 percent of the South Coast Air Basin wide cancer risk of 418 per million persons, ranging from 320 to 480 per million persons. Based on data within MATES-IV, the Proposed Project is within an area with an estimated cancer risk of 1,000 to 1,200 per million persons.[35]

In August of 2021, the Multiple Air Toxics Exposure Study V (MATES V)[36] was released. MATES V focuses on measurements during 2018 and 2019 with a comprehensive modeling analysis and emissions inventory based on 2018 data. In addition to new measurements and updated modeling results, several key updates were implemented in MATES V. First, MATES V estimates cancer risks by considering multiple exposure

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33 Federal Aviation Administration, Aviation Emissions and Air Quality Handbook, January 2015, https://www.faa.gov/regulations_policies/policy_guidance/envir_policy/airquality_handbook

34 South Coast Air Quality Management District, Multiple Air Toxics Exposure Study (MATES-III) in the South Coast Air Basin, September 2008, https://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-iii

35 South Coast Air Quality Management District, Multiple Air Toxics Exposure Study (MATES-IV) in the South Coast Air Basin, May 1, 2015, http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-iv

36 South Coast Air Quality Management District, Multiple Air Toxics Exposure Study (MATES-V) in the South Coast Air Basin, August 2021, http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v

pathways, which includes inhalation and non-inhalation pathways. Previous MATES studies quantified the cancer risks based on the inhalation pathway only. Second, along with cancer risk estimates, MATES V includes information on the chronic non-cancer risks from inhalation and non-inhalation pathways for the first time. As in previous MATES iterations, DPM is the largest contributor to overall air toxics cancer risk. However, the average levels of DPM in MATES V are 50 percent lower at the ten monitoring sites compared to MATES IV and 86 percent lower since MATES II based on monitored data. According to the MATES-V Data Visualization interactive tool, the area around Ontario International Airport has a cumulative cancer risk ranging from 560 to 625 per million persons.[37]

6.0 THRESHOLDS OF SIGNIFICANCE

Because of the SCAQMD's regulatory role in the Air Basin, the significance thresholds and analysis methodologies in the SCAQMD's *CEQA Air Quality Handbook* were used in evaluating project impacts for construction, operations, and air toxics.[38] These significance thresholds, under which the Proposed Project was evaluated, are described within the following section.

SCAQMD has identified thresholds to determine the significance of regional air quality emissions for construction activities and project operation, as shown in **Table 3: Mass Daily Emissions Thresholds**.

Table 3
Mass Daily Emissions Thresholds (pounds)

Pollutant	Construction	Operation
VOC	75	55
NO_x	100	55
CO	550	550
SO_2	150	150
PM_{10}	150	150
$PM_{2.5}$	55	55
Lead	3	3

Source: South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, April 2019, *http://www.aqmd.gov/ceqa/hdbk.html*

37 South Coast Air Quality Management District, Multiple Air Toxics Exposure Study (MATES-V) in the South Coast Air Basin, August 2021, http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v

38 South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, April 2019, http://www.aqmd.gov/ceqa/hdbk.html

Secondly, the Proposed Project would result in a significant construction and/or operational air quality impact if the Project exceeds the ambient concentration significance thresholds set forth in **Table 4: Ambient Air Quality Significance Thresholds for Criteria Pollutants**.

Table 4
Ambient Air Quality Significance Thresholds for Criteria Pollutants

Pollutant	Averaging Period	Pollutant Concentration Threshold
CO	1-hour /8-hour	SCAQMD is in attainment (federal and state); project is significant if it causes or contributes to an exceedance of the attainment standards of 20 ppm (1-hour) and 9 ppm (8-hour)
NO_2	1-hour	SCAQMD is in attainment (federal and state); project is significant if it causes or contributes to an exceedance of the following attainment standard 0.18 ppm (state)
	Annual	0.03 ppm (state) and 0.0534 ppm (federal)
PM_{10}	24-hour	10.4 µg/m^3 (construction) and 2.5 µg/m^3 (operation)
	Annual	1.0 µg/m^3 (construction and operation)
$PM_{2.5}$	24-hour	10.4 µg/m^3 (construction) and 2.5 µg/m^3 (operation)
SO_2	1-hour	0.25 ppm (State) and 0.075 ppm (federal)
	24-hour	0.04 ppm (State)
Lead	30-day Average	1.5 µg/m^3 (State)
	Rolling 3-month Average	0.15 µg/m^3 (federal)

Source: South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, April 2019, http://www.aqmd.gov/ceqa/hdbk.html

Per SCAQMD guidance, the evaluated concentrations of CO, NO_2, and SO_2 included both the Project contribution plus background concentrations. The total concentration is then compared to the significance thresholds. For CO, NO_2, and SO_2, these significance thresholds are reflective of the CAAQS and NAAQS. Per SCAQMD guidance, the Project contribution of PM_{10} and $PM_{2.5}$ is compared to the significance thresholds without adding background concentrations. Further information on the background concentrations is provided in **Attachment A: Emissions Inventory and Dispersion Modeling Methodology and Assumptions**.

The Proposed Project would also result in a significant health impact if the carcinogenic or toxic air contaminants individually or cumulatively are equal to or exceed the maximum individual cancer risk of ten in one million persons or a chronic and acute hazard index of 1.0 or the cancer burden of 0.5 excess cancer cases (in areas greater than or equal to one in one million).[39]

7.0 CONSTRUCTION EMISSIONS INVENTORY

Intermittent (short-term construction emissions that occur from activities, such as site-grading, paving, and building construction) air quality impacts related to the construction of the Proposed Project were evaluated. The air quality analysis focuses on daily emissions from construction (mobile, area, stationary, and fugitive sources) activities. CARB's CalEEMod and AP-42 (for asphalt/concrete recycling plant fugitive dust emissions) was used to quantify construction-related emissions. CalEEMod output worksheets are included in **Attachment B: Construction and Operational Air Emissions Inventory**. The emissions generated from these construction activities include:

- Dust (including PM_{10} and $PM_{2.5}$) primarily from "fugitive" sources (i.e., emissions released through means other than through a stack or tailpipe) such as material handling for demolition and soil movement and travel on unpaved surfaces; and
- Combustion exhaust emissions of criteria air pollutants and their precursors (ROG, NO_x, CO, PM_{10}, and $PM_{2.5}$) primarily from operation of heavy off-road construction equipment, haul trucks, (primarily diesel-operated), and construction worker automobile trips (primarily gasoline-operated).
- VOC as ROG primarily from "fugitive" sources such as architectural coating and paving.

Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. High winds (greater than 10 miles per hour) occur infrequently in the area, less than two percent of the time. In the absence of mitigation, construction activities may result in significant quantities of dust, and as a result, local visibility and PM_{10} concentrations may be adversely affected on a temporary and intermittent basis during construction. In addition, the fugitive dust generated by construction would include not only PM_{10}, but also larger particles, which would fall out of the atmosphere within several hundred feet of the Project site and could result in nuisance-type impacts.

Erosion control measures and water programs are typically undertaken to minimize these fugitive dust and particulate emissions. A dust control efficiency of over 50 percent due to daily watering and other

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39 South Coast Air Quality Management District, Risk Assessment Procedures for Rule 1401, 1401.1 and 212, September 1, 2017, http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12

measures (e.g., limiting vehicle speed to 15 mph, management of stockpiles, screening process controls, etc.) was used. Based on CalEEMod, one water application per day reduces fugitive dust by 34 percent, two water applications per day reduces fugitive dust by 55 percent, and three water applications per day reduces fugitive dust by 61 percent.

Construction worker trips were modeled using the light-duty auto/truck classification. Construction worker trips are a composite of gasoline and diesel vehicles. Construction worker vehicles were assumed to be 14.7 miles per one-way trip per CalEEMod. Haul trucks were modeled as diesel combination long-haul trucks, which is a heavy-heavy duty truck emission factor for public vehicles. Distance traveled was assumed to be 20 miles per one-way trip for construction haul trucks per CalEEMod. The particulate emissions include paved road dust, brake wear, and tire wear particulate emissions. For haul trucks, exhaust particulate emissions are approximately 15 percent of the total particulate emissions.

An on-site asphalt/concrete recycling operation would be expected to be located on the south side of East Avion Street on a partially paved and flat parcel that is, flanked by East Mission Boulevard (and railroad tracks) to the south, and industrial abandoned (industrial) uses on either side (which is within the project site). The recycling operations would reduce the total vehicle miles traveled needed for asphalt/concrete delivery trucks but would require delivery of some raw materials (i.e., asphalt, Portland cement, and aggregate) to mix the materials on-site. The construction emissions inventory includes an analysis of fugitive dust emissions associated with asphalt/concrete recycling operation (i.e., cold milling machine for asphalt and crushing processing equipment for concrete) as well as the exhaust emissions associated with the equipment engines (approximately 170 horsepower) and haul trucks (approximately 20 miles per trip). The asphalt/concrete recycling operation would contain various crusher, conveyors, and screens. These emissions were summed with the construction emissions developed in CalEEMod to represent the total construction emissions for the Proposed Project.

During Phases 1 and 2, the on-site asphalt/concrete recycling operation would have a capacity rating of 650 tons per hour (325 cubic yards per hour) with asphalt recycling at 200 cubic yards per hour and concrete recycling at 125 cubic yards per hour. Recycling would occur over approximately 23 and 8 days during Phase 1 and 2, respectively; processing a total of 119,600 and 41,600 tons during Phase 1 and 2, respectively.

The following provides the estimated construction schedule and associated emissions. Notably, project delays that affect the corresponding time period in which construction of Phase 1 and Phase 2 would occur would result in lower emission factors due to regulatory requirements and greater engine efficiencies, and thus, lower emission estimates.

During Phase 1, construction activities are estimated to begin in March of 2023, completion in September of 2024, and after Material Handling Equipment (MHE) testing, would become operational in January of 2025. **Table 5: Estimated Construction Schedule – Phase 1** provides the estimated construction schedule during Phase 1. Typically, construction activities would occur between 5 a.m. and 3 p.m. (ten hours per day), on Monday through Friday.

Table 5
Estimated Construction Schedule – Phase 1

Phase	Start	End	Working Days
Demolition	03/01/2023	06/29/2023	87
Site Preparation	05/26/2023	11/13/2023	122
Garage Construction	07/03/2023	02/01/2024	154
Building Construction	09/01/2023	09/04/2024	264
Apron Paving	11/15/2023	06/18/2024	155
MHE Installation	03/15/2024	12/31/2024	208

Source: CalEEMod and Information from project proponent, May 12, 2022.

Demolition would involve removal of approximately 192,484 square feet of buildings requiring approximately 875 haul truck trips (or approximately ten haul truck trips per day) per CalEEMod. Demolition would also involve removal of approximately 2,047,320 square feet of asphalt/concrete, which would be recycled within the project site and not require offsite haul truck trips (i.e., avoiding 2,616 haul truck trips).[40] Site preparation would consist of land clearing and grading resulting in approximately 107,000 cubic yards of import materials requiring approximately 13,375 haul truck trips (or approximately 102 haul truck trips per day) based on a haul truck capacity of eight cubic yards. Phase 1 would require a maximum of 280 construction employee trips and 100 vender trips per day during building construction and less trips during the other phases. The estimated construction equipment associated with the Proposed Project along with the number of pieces of diesel equipment, daily hours of operation, horsepower (hp), and load factor (i.e., percent of full throttle) are shown in **Table 6: Estimated Construction Equipment Usage – Phase 1**. Phase 1 would include construction of the following component details of the Proposed Project:

- 508,675 square feet within Cargo Sort Facility
- 27,000 square feet within Aviation Line Maintenance Garage
- 101,500 square feet within Cargo Sort Facility Office

40 Assuming asphalt depth of four inches and concrete depth of eight inches; resulting in 30,510 cubic yards and based on eight cubic yards of haul truck capacity per CalEEMod.

- 7,000 square feet within South Secure Airport Access Point
- 2,047,320 square feet of aircraft apron
- 900 parking spaces and 271,000 square feet within parking garage
- 33 parking spaces and 15,300 square feet within surface parking lot
- 39 truck docks and 122,200 square feet within truck yard area
- Project area of 62 acres (including parking garage of four acres)

Table 6
Estimated Construction Equipment Usage – Phase 1

Phase	Equipment	Amount	Daily Hours	HP	Load Factor
Demolition	Excavators	3	8	450	0.38
Demolition	Other Construction Equipment	3	8	425	0.42
Demolition	Rubber Tired Dozers	2	8	247	0.40
Demolition	Other Material Handling Equipment	2	8	168	0.40
Site Preparation	Excavators	3	8	425	0.38
Site Preparation	Off-Highway Trucks	3	8	300	0.38
Site Preparation	Plate Compactors	2	8	250	0.43
Site Preparation	Rollers	2	8	120	0.38
Site Preparation	Rubber Tired Dozers	2	8	250	0.40
Site Preparation	Skid Steer Loaders	2	8	225	0.37
Garage Construction	Cranes	2	7	231	0.29
Garage Construction	Pumps	1	8	200	0.74
Garage Construction	Tractors/Loaders/Backhoes	2	8	120	0.37
Building Construction	Aerial Lifts	5	8	75	0.31
Building Construction	Cranes	2	7	231	0.29
Building Construction	Generator Sets	1	8	84	0.74
Building Construction	Pumps	1	8	200	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37
Building Construction	Tractors/Loaders/Backhoes	2	8	120	0.37
Building Construction	Welders	1	8	46	0.45
Apron Paving	Graders	1	8	200	0.41
Apron Paving	Other Construction Equipment	1	8	385	0.42
Apron Paving	Pavers	2	8	350	0.42
Apron Paving	Paving Equipment	2	8	132	0.36
Apron Paving	Rollers	2	8	120	0.38
MHE Installation	Aerial Lifts	3	8	75	0.31
MHE Installation	Forklifts	3	8	50	0.20
MHE Installation	Tractors/Loaders/Backhoes	1	8	120	0.37
MHE Installation	Welders	2	8	10	0.45

Source: CalEEMod and Information from project proponent, December 15, 2021.

During Phase 2, construction activities are estimated to begin in September of 2025 (demolition), December of 2026 (site preparation), and August of 2027 (building construction), with completion in August of 2028, and would become operational in January of 2029. **Table 7: Estimated Construction**

Schedule – Phase 2 provides the estimated construction schedule during Phase 2. Typically, construction activities would occur between 5 a.m. and 3 p.m. (ten hours per day), on Monday through Friday.

Table 7
Estimated Construction Schedule – Phase 2

Phase	Start	End	Working Days
Demolition	09/14/2025	01/13/2026	87
Site Preparation	12/06/2026	05/25/2027	122
Building Construction	08/08/2027	08/10/2028	264
Apron Paving	10/25/2027	05/26/2028	155
MHE Installation	02/20/2028	12/06/2028	208

Source: CalEEMod and Information from project proponent, May 25, 2022.

Demolition would involve removal of approximately 432,295 square feet of buildings requiring approximately 1,966 haul truck trips (or approximately 23 haul truck trips per day). Demolition would also involve removal of approximately 1,045,440 square feet of asphalt/concrete, which would be recycled within the project site and not require offsite haul truck trips (i.e., avoiding 910 haul truck trips).[41] Site preparation would consist of land clearing and grading resulting in approximately 50,000 cubic yards of import materials requiring approximately 6,250 haul truck trips (or approximately 51 haul truck trips per day) based on a haul truck capacity of eight cubic yards. Phase 2 would require a maximum of 240 construction employee trips and 100 vender trips per day during building construction and less trips during the other phases. The estimated construction equipment associated with the Proposed Project along with the number of pieces of diesel equipment, daily hours of operation, horsepower (hp), and load factor (i.e., percent of full throttle) are shown in **Table 8: Estimated Construction Equipment Usage – Phase 2**. Phase 2 would include construction of the following elements of the Proposed Project:

- 246,825 square feet within Cargo Sort Facility
- 27,000 square feet within GSE Maintenance Building
- 1,045,440 square feet of aircraft apron
- 28 truck docks and 87,800 square feet within truck yard area
- Project area of 35 acres

41 Assuming asphalt depth of four inches and concrete depth of eight inches; resulting in 12,800 cubic yards and based on eight cubic yards of haul truck capacity per CalEEMod.

Table 8
Estimated Construction Equipment Usage – Phase 2

Phase	Equipment	Amount	Daily Hours	HP	Load Factor
Demolition	Excavators	3	8	450	0.38
Demolition	Other Construction Equipment	3	8	425	0.42
Demolition	Rubber Tired Dozers	2	8	247	0.40
Demolition	Other Material Handling Equipment	2	8	168	0.40
Site Preparation	Excavators	3	8	425	0.38
Site Preparation	Off-Highway Trucks	3	8	300	0.38
Site Preparation	Plate Compactors	2	8	250	0.43
Site Preparation	Rollers	2	8	120	0.38
Site Preparation	Rubber Tired Dozers	2	8	250	0.40
Site Preparation	Skid Steer Loaders	2	8	225	0.37
Building Construction	Aerial Lifts	5	8	75	0.31
Building Construction	Cranes	2	7	231	0.29
Building Construction	Generator Sets	1	8	84	0.74
Building Construction	Pumps	1	8	200	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7	97	0.37
Building Construction	Tractors/Loaders/Backhoes	2	8	120	0.37
Building Construction	Welders	1	8	46	0.45
Apron Paving	Graders	1	8	200	0.41
Apron Paving	Other Construction Equipment	1	8	385	0.42
Apron Paving	Pavers	2	8	350	0.42
Apron Paving	Paving Equipment	2	8	132	0.36
Apron Paving	Rollers	2	8	120	0.38
MHE Installation	Aerial Lifts	3	8	75	0.31
MHE Installation	Forklifts	3	8	50	0.20
MHE Installation	Tractors/Loaders/Backhoes	1	8	120	0.37
MHE Installation	Welders	2	8	10	0.45

Source: CalEEMod and Information from project proponent, December 15, 2021.

Basically, construction emission estimates are a function of the type of equipment, an emission factor (typically in grams per horsepower-hour), its horsepower, and the number of hours it is used. Construction emissions from onroad vehicles are a function of the type of vehicle, an emission factor (typically in grams per mile), and the estimated number of miles traveled. The maximum daily construction emissions represent the maximum values from CALEEMOD for either summer or winter time periods.

Table 9: Estimated Maximum Daily Construction Emissions (pounds) – Phase 1 shows the estimated maximum daily emissions for construction related activities (including combustion engine and fugitive dust emissions) for the Proposed Project. For Phase 1, the maximum daily construction emissions would not exceed the SCAQMD thresholds of significance.

Table 9
Estimated Maximum Daily Construction Emissions (pounds) – Phase 1

Construction Year	VOC	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2
2023	3.67	114	30.0	35.8	8.38	0.31
2024	3.53	96.9	17.9	7.15	2.13	0.22
Significance Thresholds	75	550	100	150	55	150
Significant?	No	No	No	No	No	No

Source: RCH Group, 2022

Table 10: Estimated Maximum Daily Construction Emissions (pounds) – Phase 2 shows the estimated maximum daily emissions for construction related activities (including combustion engine and fugitive dust emissions) for the Proposed Project. For Phase 2, the maximum daily construction emissions would not exceed the SCAQMD thresholds of significance.

Table 10
Estimated Maximum Daily Construction Emissions (pounds) – Phase 2

Construction Year	VOC	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2
2025	1.56	58.5	9.27	26.9	4.30	0.13
2026	1.56	58.5	11.7	6.34	3.16	0.13
2027	2.29	76.8	11.6	6.35	3.17	0.16
2028	3.13	93.4	17.4	7.15	2.13	0.21
Significance Thresholds	75	550	100	150	55	150
Significant?	No	No	No	No	No	No

Source: RCH Group, 2022

Based on the CalEEMod and using standard fuel consumption estimates, construction activities during Phase 1 would require approximately 241,710 gallons of diesel fuel (onsite equipment) and approximately 87,625 gallons of diesel fuel (offsite haul/vender trucks) along with 62,415 gallons of gasoline fuel (employee trips) while during Phase 2 would require approximately 219,540 gallons of diesel fuel (onsite equipment) and approximately 62,820 gallons of diesel fuel (offsite haul/vender trucks) along with 54,220 gallons of gasoline fuel (employee trips).[42]

42 Fuel usage is estimated using the CalEEMod output for CO2, and a 10.15 kgCO2/gallon conversion factor for diesel fuel and 8.91 kgCO2/gallon conversion factor for gasoline fuel, https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf

Summary of Construction Emissions Inventory Results

The following concluding statements can be made about the construction emissions inventory results:

- The construction emissions would not exceed the significance threshold and would be a *less than significant impact for all pollutants.*

8.0 OPERATIONAL EMISSIONS INVENTORY

The sources of airport-related air pollutant emissions are aircraft, APU, GSE, stationary sources such as emergency generators, and motor vehicles (employee and deliveries), as well as area sources (consumer products and landscaping), and energy usage (natural gas and electrical). For aircraft, APU, and GSE, the operational emission inventories were prepared using Version 3d of the Federal Aviation Administration's (FAA's) Aviation Environmental Design Tool (AEDT).[43] For employee vehicles and delivery trucks, the operational emission inventories were prepared using CARB's EMFAC emissions model. The air quality analysis of operations includes a review of criteria pollutant emissions such as CO, NO_x, SO_x, VOC as ROG, coarse particulate or PM_{10}, and fine particulate or $PM_{2.5}$. AEDT output worksheets are included in **Attachment B: Construction and Operational Air Emissions Inventory**. The following describes each emission source associated with the Proposed Project:

- **Aircraft** – Exhaust gases from aircraft engines are predominantly comprised of nitrogen, oxygen, and water vapor, compounds not normally considered air pollutants. Aircraft also emit CO, VOC, NO_x, SO_x, PM_{10}, and $PM_{2.5}$. The amount of pollutant emitted depends on factors such as engine type, aircraft type, and operational mode (i.e., taxi/idle, approach, climb-out, or takeoff).

  The aircraft activities comprising a landing/take-off cycle produce ground-based emissions (i.e., emissions in aircraft taxi/idle mode) and emissions that occur above ground level (i.e., during aircraft modes of approach, climb-out, and takeoff). While the taxi/idle mode and portions of the approach and climb-out modes occur within the immediate area—for the purpose of estimating the level of emissions that could impact air pollutants—extends beyond the area described up to the atmospheric mixing height (i.e., the height above ground in which a pollutant disperses). In the Ontario area, the atmospheric mixing height is 2,402 feet above ground level.[44] To be at this altitude, arriving aircraft would be approximately six miles from the Airport (i.e., the evaluation

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43 Federal Aviation Administration, Aviation Environmental Design Tool (AEDT) Users Guide, September 2017, https://aedt.faa.gov/

44 South Coast Air Quality Management District, Draft Aircraft Emissions Inventory for South Coast Air Quality Management District, August 2016, http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/aircraft-emissions-inventory-for-the-south-coast-air-quality-management-district.pdf

includes all aircraft activity occurring approximately six miles from the end of any of the airport's runways).

The number of annual aircraft operations and the aircraft fleet mix for the Baseline (2021) and future conditions (2025 and 2029) was used in the air quality analysis.[45] AEDT default emission factors were used to estimate aircraft emissions for all aircraft. The factors are provided by aircraft engine type and operational mode (i.e., take-off, climb out, approach, and taxi/idle).[46] Aircraft emissions are described within several operational modes: engine startup, taxi in and taxi out, climb (aboveground within takeoff and climb-out) and descend (aboveground within approach and landing). AEDT default times were used for each mode except for ground taxi/delay movements. Times in mode for taxi-in (for arrivals) and taxi-out (for departures) were based on airfield simulation modeling using AirTOP.[47] Of note, the Proposed Project anticipates some operation of electric cargo aircraft.[48] **Attachment A: Emissions Inventory and Dispersion Modeling Methodology and Assumptions** provides information related to aircraft operations used in the air quality analysis.

Notably, the Proposed Project would increase the taxi-in times and taxi-out times associated with non-project aircraft operations. This is a result of the greater number of aircraft operations which decreases airfield taxi efficiency. Therefore, the air quality analysis includes the impacts due to project-related and non-project related aircraft operations.

- **APU** – APU are small turbine engines on an aircraft that are used to start the main engines; provide electrical power to aircraft radios, lights, and other equipment; and power the onboard air conditioning (heating and cooling) system.

  Use of a GPU or gate connections eliminates the need for aircraft to use their own power at the gate except for short periods of time during engine start-up and shut-down. Terminal gates/aprons without pre-conditioned air (PCA)/ground power typically assume an APU operating

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45 Aircraft operations which are not directly part of the proposed project are included in the analysis because the project aircraft results in changes in taxi movements and speeds for all airport aircraft (passenger and other cargo operations).

46 For the purposes of the emissions inventories, a landing and take-off cycle is comprised of the following AEDT operational mode categories:

- *Descend Below Mixing Height*: The modes in this category are associated with an aircraft's arrival, beginning at the atmospheric mixing height, and including descend emissions below 1,000 feet, the landing ground roll, and arrival taxi (i.e., taxi-in) emissions.
- *Climb Below Mixing Height:* The modes in this category are associated with an aircraft's departure, beginning with startup and including climb taxi (i.e., taxi-out), takeoff ground roll, climb below 1,000 feet and climb to the atmospheric mixing height.

47 Transoft Solutions, AirTOP, https://www.airtop-software.com/

48 Eviation Aircraft, https://www.eviation.com/

time of 26 minutes (13 minutes during taxi in and 13 minutes during taxi out). Terminal gates/aprons with PCA/ground power typically assume an APU operating time of seven minutes (3.5 minutes during taxi in and 3.5 minutes during taxi out).[49] All of the passenger terminal gates at Ontario International Airport provide PCA and gate power to aircraft.[50] The Proposed Project would provide aircraft parking position power within the Project site which would reduce APU operating times from 26 to seven minutes.

- **GSE** – GSE are equipment used to service aircraft between flights (e.g., cargo loaders, baggage tugs, tow tugs, belt loaders).[51] GSE emissions depend on the level of fuel consumption and distance traveled/operating time. The Proposed Project would include the use and operation of electric-powered equipment, including forklifts, loaders, tugs, ground power units, and ramp support (vans/carts) that would be stored and charged in designated areas in the cargo building and aircraft apron.[52] For the preparation of emissions for GSE, default AEDT emission factors were used and default AEDT operating times were used. The estimated annual fuel usage for the GSE is approximately 8,000 gallons of diesel during Phase 1 while no fuel is used for GSE in Phase 2. The following provides a list of expected GSE associated with the Proposed Project:

Ground Support Equipment	Fuel Type	Number of Units
Loaders (Commander 30)	Electric	12
Belt Loaders	Electric	8
Ground Power Units	Electric	8
Push back Tugs	Electric	5
Stairs (B737)	None	3
Stairs (B747/B767)	None	8
Tugs	Electric	25
Dollies	None	450
Tow bars	None	15
Ramp Support (Vans/Carts)	Electric	5
Large Dollies	None	10
Forklifts	Electric	27

- **Stationary sources** – Airports have a variety of stationary sources, including heating and refrigeration plants, boilers, generators, aircraft engine testing, and fuel storage/transfer

49 Federal Aviation Administration, *Aviation Emissions and Air Quality Handbook Version 3 Update 1, January 2015,* https://www.faa.gov/regulations_policies/policy_guidance/envir_policy/airquality_handbook/

50 APU/GSE associated with passenger, FedEx and UPS aircraft and other similar activities are not affected by the proposed project and therefore, were not included in the analysis.

51 APU/GSE associated with passenger, FedEx and UPS aircraft and other similar activities are not affected by the proposed project and therefore, were not included in the analysis.

52 Diesel-powered fuel trucks would be used during Phase 1 and replaced with electric hydrant carts within Phase 2.

facilities. Emission levels from some stationary sources are regulated through regulatory permits. The Proposed Project includes seven 2.0-megawatt (MW) diesel-engine driven emergency generators; five generators during Phase 1 and an additional two generators within Phase 2.[53] The Applicant shall comply with Rule 201 and 203 (Authority to Construct and Permit to Operate) which require that owners of applicable construction or operation equipment obtain air quality permits from the SCAQMD prior to construction and operation. The facility is being designed to not use any natural gas.

Phase 1 of the proposed Project would require approximately 8.5 MW of power with Phase 2 requiring another 4 MW of power. At full development, the Proposed Project would require approximately 12.5 MW of power.

The Proposed Project would include a 1.5-MW Solar PV Panel system on the rooftop of the Cargo Sorting Building and Parking Structure. Approximately 20 percent of the electrical usage (2,378,973 kilowatts)[54] would be generated by the Solar PV Panel system.

The estimated annual fuel usage, assuming each generator operates 50 hours per year (2 hours per day) is approximately 34,760 gallons of diesel fuel during Phase 1 and approximately 48,660 gallons of diesel fuel during Phase 2.[55]

Motor vehicles – Project-related motor vehicle activity includes employee and delivery trucks.[56] Emissions factors for these sources were obtained from the EMFAC model. For the Proposed Project, electric charging stations would be provided in the employee and visitor parking lots, and truckyard. The motor vehicle fleet mix and fuel type were based on information within EMFAC. Employees would conduct 2,531 trips per day resulting in 35,402 miles per day during Phase 1 and 35,540 miles per day during Phase 2. Delivery trucks would conduct 150 trips per day resulting in 9,889 miles per day during Phase 1 and 224 trips per day resulting in 14,623 miles per day during Phase 2. Employee vehicles would travel 14 miles per trip. Full delivery trucks would travel 90.6 miles per trip during Phase 1 and 88.3 miles per trip during Phase 2. Empty delivery trucks would travel 14 miles per trip.

53 Passenger terminal (as well as FedEx and UPS) boilers, generators, and other stationary sources are not affected by the proposed project and therefore, were not included in the analysis.

54 Igssolar, Solar Energy Analysis for DHL Southern California, December 15, 2021.

55 Vender Specifications for Standby Generator, https://www.cat.com/en_US/products/new/power-systems/electric-power.html

56 Airport passenger associated motor vehicles, terminal deliveries, FedEx and UPS delivery trucks, and other similar activities are not affected by the proposed project and therefore, were not included in the analysis.

To evaluate the potential impacts of the change in air quality conditions that would result from the Proposed Project, the following conditions were be analyzed:

- No Project
- With Project

Three timeframes will be evaluated:

- Baseline Condition (2021)
- Phase 1 (2025)
- Phase 2 (2029)[57]

The following provides the estimated operational emissions. Notably, project delays that affect the corresponding time period in which Phase 1 and Phase 2 would become operational would likely result in lower emission due to regulatory requirements and greater aircraft engine efficiencies and changes in aircraft fleet mix.

Table 11: Estimated Annual Operational Emissions (tons) – Baseline presents the annual criteria air pollutant emissions for the Baseline Condition (2021).

Table 11
Estimated Annual Operational Emissions (tons) – Baseline

CO	VOC	NO_x	SO_2	PM_{10}	PM_{10}
589	121	574	48.6	5.32	5.32

Source: RCH Group, 2022

Table 12: Estimated Annual Operational Emissions (tons) – Without Project presents the annual criteria air pollutant emissions without the Proposed Project.

Table 12
Estimated Annual Operational Emissions (tons) – Without Project

Condition	CO	VOC	NO_x	SO_2	PM_{10}	PM_{10}
Phase 1	677	135	672	54.2	5.69	5.69
Phase 2	717	142	782	59.7	6.07	6.07

Source: RCH Group, 2022

57 Operational conditions during Phase 2 include Proposed Project activities from both Phase 1 and 2.

Table 13: Estimated Annual Operational Emissions (tons) – With Project presents the annual criteria air pollutant emissions with the Proposed Project.

Table 13
Estimated Annual Operational Emissions (tons) – With Project

Condition	CO	VOC	NO_x	SO_2	PM_{10}	PM_{10}
Phase 1	872	168	838	67.1	7.34	7.09
Phase 2	991	189	1,042	79.7	8.45	8.18

Source: RCH Group, 2022

For the emissions inventory, in order to determine the Proposed Project-related operational impacts associated with air pollutant emissions, the total emissions associated with the Proposed Project that would occur in Phase 1 and Phase 2 including other aircraft operations not associated with the project were compared to the Baseline emissions. The difference between these two conditions was used to determine the significance of the Proposed Project when compared to the SCAQMD thresholds.

- Phase 1 With Project operations compared to the Baseline Condition
- Phase 2 With Project operations compared to the Baseline Condition

Table 14: Estimated Daily Operational Emissions (pounds) – Phase 1 With Project Compared to Baseline presents the daily criteria air pollutant emissions when compared With Project to the Baseline Condition during Phase 1. As shown, the Proposed Project operational emissions during Phase 1 would exceed SCAQMD significance thresholds for CO, VOC, and NO_x, primarily due to aircraft, followed by employee vehicles, delivery trucks, and emergency generators.

Table 14
Estimated Daily Operational Emissions (pounds) – Phase 1 With Project Compared to Baseline

Emission Source	CO	VOC	NO_x	SO_2	PM_{10}	PM_{10}
Aircraft	1,438	238	1,421	97.9	6.58	6.58
APU	12.7	1.00	15.4	1.89	2.07	2.07
GSE	0.11	0.12	0.16	<0.01	0.01	0.01
Employee Motor Vehicles	60.8	0.96	5.43	0.23	1.82	0.74
Delivery Trucks	28.8	0.97	2.45	0.09	0.47	0.19
Emergency Generators	30.7	2.25	5.91	4.34	0.35	0.35
Area Sources	0.37	15.6	<0.01	<0.01	<0.01	<0.01
Grand Total	**1,571**	**259**	**1,451**	**104**	**11.3**	**9.94**
Significance Thresholds	550	55	55	150	150	55
Significant?	**Yes**	**Yes**	**Yes**	No	No	No

Values reflect rounding of totals.
Source: RCH Group, 2022

Table 15: Estimated Daily Operational Emissions (pounds) – Phase 2 With Project Compared to Baseline presents the daily criteria air pollutant emissions when compared With Project to the Baseline Condition. As shown, the Proposed Project operational emissions during Phase 2 would exceed SCAQMD significance thresholds for CO, VOC, NO_x, and SO_2, primarily due to aircraft, followed by employee vehicles, delivery trucks, and emergency generators. Notably, Phase 2 operations would not require fuel trucks and thus, the GSE emissions would be zero.

Table 15
Estimated Daily Operational Emissions (pounds) – Phase 2 With Project Compared to Baseline

Emission Source	CO	VOC	NO_x	SO_2	PM_{10}	PM_{10}
Aircraft	2,097	346	2,529	165	11.2	11.2
APU	20.0	1.54	24.4	3.03	3.38	3.38
GSE	-	-	-	-	-	-
Employee Motor Vehicles	49.6	0.68	3.80	0.21	1.77	0.69
Delivery Trucks	25.5	0.37	1.97	0.12	0.66	0.26
Emergency Generators	30.7	2.25	5.91	4.34	0.35	0.35
Area Sources	0.57	22.2	<0.01	<0.01	<0.01	<0.01
Grand Total	**2,223**	**373**	**2,565**	**173**	**17.3**	**15.8**
Significance Thresholds	550	55	55	150	150	55
Significant?	**Yes**	**Yes**	**Yes**	**Yes**	No	No

Values reflect rounding of totals.
Source: RCH Group, 2022

However, this comparison of the project to the Baseline is influenced by factors that are not attributable to the Project itself. Specifically, the comparison contains future aircraft operations from background growth that are projected to occur with or without the Proposed Project. In order to remove the contribution of background aircraft growth, for CEQA purposes, a second comparison was provided for the Proposed Project and without Proposed Project. This comparison was made for informational purposes only.

- Phase 1 With Project operations compared to the Phase 1 Without Project operations
- Phase 2 With Project operations compared to the Phase 2 Without Project operations

Table 16: Estimated Daily Operational Emissions (pounds) – Phase 1 With Project Compared to Phase 1 Without Project presents the daily criteria air pollutant emissions when compared With Project to the Without Project during Phase 1. As shown, the Proposed Project operational emissions during Phase 1 would exceed SCAQMD significance thresholds for CO, VOC, and NO_x, primarily due to aircraft, followed by employee vehicles, delivery trucks, and emergency generators.

Table 16
Estimated Daily Operational Emissions (pounds) – Phase 1 With Project Compared to Without Project

Emission Source	CO	VOC	NO_x	SO_2	PM_{10}	PM_{10}
Aircraft	955	158	886	67.2	4.55	4.55
APU	12.7	1.00	15.4	1.89	2.07	2.07
GSE	0.11	0.12	0.16	<0.01	0.01	0.01
Employee Motor Vehicles	60.8	0.96	5.43	0.23	1.82	0.74
Delivery Trucks	28.8	0.97	2.45	0.09	0.47	0.19
Emergency Generators	30.7	2.25	5.91	4.34	0.35	0.35
Area Sources	0.37	15.6	<0.01	<0.01	<0.01	<0.01
Grand Total	**1,089**	**179**	**915**	**73.8**	**9.27**	**7.91**
Significance Thresholds	550	55	55	150	150	55
Significant?	**Yes**	**Yes**	**Yes**	No	No	No

Values reflect rounding of totals.
Source: RCH Group, 2022

Table 17: Estimated Daily Operational Emissions (pounds) – Phase 2 With Project Compared to Without Project presents the daily criteria air pollutant emissions when compared With Project to the Without Project during Phase 2. As shown, the Proposed Project operational emissions during Phase 2 would exceed SCAQMD significance thresholds for CO, VOC, and NO_x, primarily due to aircraft, followed by employee vehicles, delivery trucks, and emergency generators.

Table 17
Estimated Daily Operational Emissions (pounds) – Phase 2 With Project Compared to Without Project

Emission Source	CO	VOC	NO_x	SO_2	PM_{10}	PM_{10}
Aircraft	1,392	232	1,390	104	7.05	7.05
APU	20.0	1.54	24.4	3.03	3.38	3.38
GSE	-	-	-	-	-	-
Employee Motor Vehicles	49.6	0.68	3.80	0.21	1.77	0.69
Delivery Trucks	25.5	0.37	1.97	0.12	0.66	0.26
Emergency Generators	30.7	2.25	5.91	4.34	0.35	0.35
Area Sources	0.51	22.2	<0.01	<0.01	<0.01	<0.01
Grand Total	**1,518**	**259**	**1,426**	**112**	**13.2**	**11.7**
Significance Thresholds	550	55	55	150	150	55
Significant?	**Yes**	**Yes**	**Yes**	No	No	No

Values reflect rounding of totals.
Source: RCH Group, 2022

The values comparing the With Project to the Without Project are lower than the previously compared With Project to the Baseline Condition; accountable to the baseline aircraft growth which is not related to the Proposed Project.

Standby Generators

The Proposed Project requires that the entire facility be backed up on generator power to provide emergency power primarily for lighting and other emergency building systems. To accomplish this, it is estimated that seven 2.0-megawatt diesel-engine driven generators are required.

Emergency generator emissions were calculated based on compliance with applicable federal emissions standards and compliance with SCAQMD Rule 1470 (Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines) mandated emission limits and operating hour constraints. This analysis also assumed that the standby generators would operate up to two hours per day and a total of 50 hours per year for testing and maintenance (per SCAQMD Rule 1470 limit). SCAQMD requires that all internal combustion engines (ICE) greater than 50 brake horsepower (bhp) and gas turbines greater than 2,975,000 Btu per hour obtain a permit to construct prior to installation of the engines at a site.

SCAQMD defines a standby ICE or turbine for non-utility power generation as one that does not operate more than 200 hours a year and is only operated in the event of an emergency power failure or for routine testing and maintenance is considered a standby backup generator for power generation. Operators should petition the SCAQMD's Hearing Board for a variance to operate in excess of the allowed 200 hours before it is anticipated that the hours may be exceeded.

- The internal combustion engines must meet SCAQMD's BACT requirements.
- It is advisable before purchasing any equipment to consult with the SCAQMD and apply for approval of a Permit to Construct from the SCAQMD prior to installation of the engine. Typically, the SCAQMD either issues a Permit to Construct or a Permit to Construct/Operate.
- The Applicant would conduct maintenance and/or testing on each of the seven standby generators on separate days to limit daily emissions from maintenance/testing activities.

Summary of Operational Emissions Inventory Results

The following concluding statements can be made about the operational emissions inventory results:

- The operational emissions would exceed the significance threshold for CO, VOC, NOx, and SO_2 and would be a *significant and unavoidable impact on regional air quality.*

9.0 AMBIENT AIR CONCENTRATION IMPACTS

Dispersion is the process by which atmospheric pollutants spread due to wind and vertical stability. The base data for this type of analysis is emissions inventories. A dispersion model uses an emissions inventory to estimate concentrations of pollutants at specific locations. Dispersion models use hourly average meteorological data, terrain elevation data, and source emission release characteristics to compute downwind pollutant concentrations over periods that can range from one hour to one year.

The dispersion model used for the air quality analysis, USEPA's AERMOD (Version 21112), is state-of-the-art. Given the accuracy of the input data, the model results offer the best available estimates with which to predict ambient concentrations of air pollutants. AERMOD simulates point, area, volume, and line emissions sources. AERMOD was executed using regulatory default options for stack-tip downwash, buoyancy-induced dispersion, and final plume rise, default wind speed profile categories, default potential temperature gradients, and—except for an analysis that was performed to convert predicted concentrations of NO_x to concentrations of NO_2 —no pollutant decay.

A dispersion modeling analysis was conducted to assess project-related impacts to local air concentrations of CO, NO_2, PM_{10}, $PM_{2.5}$, and SO_2. Concentrations were compared to SCAQMD's significance thresholds and California/National Ambient Air Quality Standards (CAAQS/NAAQS). The Proposed Project would result in a significant construction and/or operational air quality impact if concentrations from the Proposed Project exceed the significance concentration and operational thresholds set forth in **Table 2: Ambient Air Quality Standards for Criteria Pollutants**.

The SCAQMD's recommended thresholds are based on the difference between the maximum monitored ambient pollutant concentrations in the area and the CAAQS and NAAQS. Therefore, the thresholds depend upon the concentrations of pollutants monitored locally with respect to the Project site. For pollutants that already exceed the CAAQS and NAAQS (e.g., PM_{10} and $PM_{2.5}$), the thresholds are based on SCAQMD Rule 403 for construction and Rule 1303 for operations. Because the concentration thresholds are designed to attain or maintain the CAAQS and NAAQS, they are set at levels that would protect human health.

Attachment A: Emissions Inventory and Dispersion Modeling Methodology and Assumptions provides documentation of the Ontario International Airport Cargo Development Air Quality Modeling Protocol, which has been reviewed by the SCAQMD, and describes the data used within the air quality modeling and how the air quality modeling would be performed.

The methodology for CO, NO_2, and SO_2 requires that the project-related contributions for these pollutants be added to existing background concentrations and the summation be compared to the appropriate threshold. The significance thresholds for PM_{10} and $PM_{2.5}$ represent the allowable increase in concentrations above background levels that would not cause or contribute to an exceedance of the CAAQS and NAAQS.

For the air quality analysis, the construction and operational emissions due to the Proposed Project were assessed with respect to the thresholds using dispersion modeling:

- CO – The significance thresholds for CO are the 1-hour and 8-hour CAAQS of 23 milligrams per cubic meter (mg/m^3) and 10 mg/m^3, respectively (or 20 and 9 ppm). For CO, the CAAQS are at least as stringent as the NAAQS, therefore, compliance with CAAQS indicates compliance with NAAQS. The project incremental concentrations were added to background concentrations before comparison to the ambient standards.

- NO_2 – The significance thresholds for the 1-hour NO_2 concentration is the 1-hour NO_2 CAAQS of 339 $\mu g/m^3$ (0.18 ppm). The significance thresholds for the 1-hour NO_2 concentration is the 1-hour NO_2 CAAQS of 57 $\mu g/m^3$ (0.03 ppm), which is more stringent than the annual NO_2 NAAQS of 100 $\mu g/m^3$ (0.053 ppm), therefore, compliance with CAAQS indicates compliance with NAAQS. The project incremental concentrations were added to background concentrations before comparison to the ambient standards.

- SO_2 - The significance thresholds for the 1-hour SO_2 concentration is the 1-hour SO_2 CAAQS of 655 $\mu g/m^3$ (0.25 ppm) and the 1-hour SO_2 NAAQS of 196 $\mu g/m^3$ (0.075 ppm). The significance thresholds for the daily SO_2 concentration is the 24-hour SO_2 CAAQS of 105 $\mu g/m^3$ (0.04 ppm). The 3-hour NAAQS for SO_2 is 1,300 $\mu g/m^3$ (0.5 ppm), which is double the value of the 1-hour SO_2 CAAQS, therefore, the significance determination for the 1-hour SO_2 CAAQS represents the significance determination of the 3-hour SO_2 for NAAQS. The project incremental concentrations were added to background concentrations before comparison to the ambient standards.

- PM_{10} and $PM_{2.5}$ – The significance thresholds for PM_{10} and $PM_{2.5}$ concentrations ate the CEQA thresholds developed by the SCAQMD. For both PM_{10} and $PM_{2.5}$, SCAQMD develop separate daily thresholds for construction (10.4 $\mu g/m^3$) and operations (2.5 $\mu g/m^3$). SCAQMD also developed an annual threshold for PM_{10} of 1.0 $\mu g/m^3$ applicable to both construction and operations. These thresholds are relative to the project incremental impacts; thus, project-related concentrations were not added to background constriction before comparing to these thresholds.

Table 18: Estimated Concentration Impacts from Construction Activities – Phase 1 provides the Proposed Project air concentrations from construction activities for nearby receptors.

Ambient Air Quality Concentrations Due to Construction Activities

An air quality analysis was conducted to determine the ambient concentrations at nearby receptors which would result from project construction activities. **Attachment A: Emissions Inventory and Dispersion Modeling Methodology and Assumptions** provides detailed information about the location of air quality receptors used in the dispersion modeling analysis of criteria pollutants (NO_2, CO, SO_2, PM_{10}, and $PM_{2.5}$). These receptors are designed to represent offsite locations where a person has access and can be situated for an hour or longer at a time (which is different from the HRA receptors which are designed to represent specific residences, schools, daycares, and offsite worker locations). The ambient air quality standards analysis results are presented for Phase 1 and 2. The maximum impacts due to construction activities occur near the Project site along the Airport boundary and dissipate moderately within 1,000 feet of the Project site. Phase 1 construction activities would occur during 2023 and 2024 while Phase 2 construction activities would occur from 2025 through 2029.

As shown in **Table 18: Estimated Concentration Impacts from Construction Activities – Phase 1**, for the air quality receptors during project construction during Phase 1, the maximum incremental 1-hour NO_2 impacts, including background concentrations, would be 0.09 ppm, which is below the State threshold of 0.18 ppm. The maximum project construction incremental annual NO_2 impacts including background concentrations would be 0.02 ppm, which is below the thresholds of 0.03 ppm (state) and below the threshold of 0.053 ppm (federal). Therefore, construction activities would not exceed the 1-hour and annual NO_2 thresholds and would be a *less than significant air quality impact of NO_2 due to construction activities during Phase 1*.

As shown in **Table 18: Estimated Concentration Impacts from Construction Activities – Phase 1**, for the air quality receptors during Project construction during Phase 1, the maximum incremental 24-hour and annual PM_{10} impacts would be 3.67 µg/m^3 and 0.09 µg/m^3, respectively. Impacts would be below the 24-hour PM_{10} threshold of 10.4 µg/m^3 and the annual PM_{10} threshold of 1.0 µg/m^3. The Project construction maximum incremental 24-hour $PM_{2.5}$ impacts would be 0.97 µg/m^3, which would be below the 24-hour $PM_{2.5}$ threshold of 10.4 µg/m^3. Therefore, construction activities would result in a *less than significant air quality impact of PM_{10} and $PM_{2.5}$ due to construction activities Phase 1*. The PM_{10} and $PM_{2.5}$ concentrations include construction exhaust and fugitive dust.

Additionally, as shown in **Table 18: Estimated Concentration Impacts from Construction Activities – Phase 1**, for the air quality receptors during project construction, the maximum incremental SO_2 and CO impacts including background concentrations would be well below the significance thresholds and would be a *less than significant air quality impact of SO_2 and CO due to construction activities during Phase 1*.

Table 18
Estimated Concentration Impacts from Construction Activities – Phase 1

Criteria	CAAQS 1-Hour NO_2 (ppm)	CAAQS Annual NO_2 (ppm)	NAAQS Annual NO_2 (ppm)	24-Hour PM_{10} ($\mu g/m^3$)	Annual PM_{10} ($\mu g/m^3$)	24-Hour $PM_{2.5}$ ($\mu g/m^3$)	CAAQS 1-Hour SO_2 (ppm)	NAAQS 1-Hour SO_2 (ppm)	24-Hour SO_2 (ppm)	1-Hour CO (ppm)	8-Hour CO (ppm)
Phase 1 Project Increment	0.02	<0.01	<0.01	3.67	0.09	0.97	<0.01	<0.01	<0.01	0.12	0.01
Background Concentration	0.08	0.02	0.02				<0.01	<0.01	<0.01	2.70	1.20
Total Concentration	**0.09**	**0.02**	**0.02**	**3.67**	**0.09**	**0.97**	**<0.01**	**<0.01**	**<0.01**	**2.82**	**1.21**
Significance Threshold	0.18	0.03	0.053	10.4	1.00	10.4	0.25	0.075	0.04	20.0	9.00
Potentially Significant (Yes or No)?	No	No	No	No	No	No	No	No	No	No	No
Percent of Threshold	52	63	36	35	9	9	1	4	3	14	13

Source: RCH Group, 2022
Total concentrations reflect rounding of values. Per SCAQMD guidance, PM_{10} and $PM_{2.5}$ impacts do not include background concentrations.

Table 19
Estimated Concentration Impacts from Construction Activities – Phase 2

Criteria	CAAQS 1-Hour NO_2 (ppm)	CAAQS Annual NO_2 (ppm)	NAAQS Annual NO_2 (ppm)	24-Hour PM_{10} ($\mu g/m^3$)	Annual PM_{10} ($\mu g/m^3$)	24-Hour $PM_{2.5}$ ($\mu g/m^3$)	CAAQS 1-Hour SO_2 (ppm)	NAAQS 1-Hour SO_2 (ppm)	24-Hour SO_2 (ppm)	1-Hour CO (ppm)	8-Hour CO (ppm)
Phase 2 Project Increment	0.02	<0.01	<0.01	3.66	0.11	0.65	<0.01	<0.01	<0.01	0.14	0.01
Background Concentration	0.08	0.02	0.02				0.10	1.03	<0.01	2.70	1.20
Total Concentration	**0.09**	**0.02**	**0.02**	**3.66**	**0.11**	**0.65**	**<0.01**	**<0.01**	**<0.01**	**2.84**	**1.21**
Significance Threshold	0.18	0.03	0.053	10.4	1.00	10.4	0.25	0.075	0.04	20.0	9.00
Potentially Significant (Yes or No)?	No	No	No	No	No	No	No	No	No	No	No
Percent of Threshold	51	63	36	35	11	6	1	4	3	14	13

Source: RCH Group, 2022
Total concentrations reflect rounding of values. Per SCAQMD guidance, PM_{10} and $PM_{2.5}$ impacts do not include background concentrations.

Table 19: Estimated Concentration Impacts from Construction Activities – Phase 2 provides the Proposed Project air concentrations from construction activities for nearby receptors.

As shown in **Table 19: Estimated Concentration Impacts from Construction Activities – Phase 2**, for the air quality receptors during project construction during Phase 2, the maximum incremental 1-hour NO_2 impacts, including background concentrations, would be 0.09 ppm, which is below the State threshold of 0.18 ppm. The maximum project construction incremental annual NO_2 impacts including background concentrations would be 0.02 ppm, which is below the thresholds of 0.03 ppm (state) and below the threshold of 0.053 ppm (federal). Therefore, construction activities would not exceed the 1-hour and annual NO_2 thresholds and would be a *less than significant air quality impact of NO_2 due to construction activities during Phase 2*.

For the air quality receptors during project construction during Phase 2, the maximum incremental 24-hour and annual PM_{10} impacts would be 3.66 µg/m^3 and 0.11 µg/m^3, respectively. The project construction maximum incremental 24-hour $PM_{2.5}$ impacts would be 0.65 µg/m^3, which would be below the 24-hour $PM_{2.5}$ threshold of 10.4 µg/m^3. Therefore, construction activities would result in a *less than significant air quality impact of PM_{10} and $PM_{2.5}$ due to construction activities during Phase 2*. The PM_{10} and $PM_{2.5}$ concentrations include construction exhaust and fugitive dust.

Additionally, as shown in **Table 19: Estimated Concentration Impacts from Construction Activities – Phase 2**, for the air quality receptors during project construction during Phase 2, the maximum incremental SO_2 and CO impacts including background concentrations would be well below the significance thresholds and would be a *less than significant air quality impact of SO_2 and CO due to construction activities during Phase 2*.

As discussed previously, the federal and State standards have been set at levels considered safe to protect public health, including the health of “sensitive” populations, such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. Based on the results shown in **Table 18: Estimated Concentration Impacts from Construction Activities – Phase 1** and **Table 19: Estimated Concentration Impacts from Construction Activities – Phase 2**, construction of the proposed Project is not likely to result in adverse health effects as a result of its criteria air pollutant emissions.

Ambient Air Quality Concentrations Due to Operational Activities

An air quality analysis was conducted to determine the ambient concentrations at nearby receptors which would result from project operations. Proposed Project includes the operation of aircraft, APU, GSE, stationary sources, and employee vehicles and delivery trucks. For the air dispersion modeling, to evaluate impacts associated with the Proposed Project in isolation (i.e., without including impacts associated with existing airport operations), concentrations associated with the Baseline Condition was subtracted from future year with project concentrations (i.e., project-related concentrations). Then, to determine the total concentrations for CO, SO_2, and NO_2, these project-related concentrations were added to a background concentration (i.e., representing other nearby emission sources not associated with the airport or the project) based on nearby existing ambient monitoring station(s). For 1-hour NO_2 concentrations, the background concentrations were based on seasonal/temporal computations. For CO, SO_2, and NO_2, these total concentrations were compared to the California and National AAQS. Per SCAQMD guidance, the project-related concentrations of PM_{10} and $PM_{2.5}$ were compared to the SCAQMD significance thresholds for PM_{10} and $PM_{2.5}$ (without adding background concentrations). Further information on the background concentrations is provided in **Attachment A: Emissions Inventory and Dispersion Modeling Methodology and Assumptions**.

- Phase 1 With Project operations compared to the Baseline Condition
- Phase 2 With Project operations compared to the Baseline Condition

Table 20: Estimated Operational Concentration Impacts – Phase 1 With Project Compared to Baseline provides the Proposed Project air concentrations during Phase 1 With Project compared to the Baseline Condition.

Table 21: Estimated Operational Concentration Impacts – Phase 2 With Project Compared to Baseline provides the Proposed Project air concentrations during Phase 2 With Project compared to the Baseline Condition.

As shown in **Table 20: Estimated Operational Concentration Impacts – Phase 1 With Project Compared to Baseline**, for the air quality receptors during project operations, the incremental 1-hour NO_2 impacts, including background concentrations, would be a maximum of 0.13 ppm, which is below the State threshold of 0.18 ppm. The maximum project operation incremental annual NO_2 impacts, including background concentrations, would be 0.02 ppm, which is below the thresholds of 0.03 ppm (state) and below the threshold of 0.053 ppm (federal). Therefore, operation activities would not exceed the 1-hour and annual NO_2 thresholds and would result in a *less than significant air quality impact of 1-hour and annual NO_2 due to operation activities during Phase 1.*

Table 20
Estimated Concentration Impacts from Operational Activities – Phase 1 With Project Compared to Baseline

Criteria	CAAQS 1-Hour NO_2 (ppm)	CAAQS Annual NO_2 (ppm)	NAAQS Annual NO_2 (ppm)	24-Hour PM_{10} ($\mu g/m^3$)	Annual PM_{10} ($\mu g/m^3$)	24-Hour $PM_{2.5}$ ($\mu g/m^3$)	CAAQS 1-Hour SO_2 (ppm)	NAAQS 1-Hour SO_2 (ppm)	24-Hour SO_2 (ppm)	1-Hour CO (ppm)	8-Hour CO (ppm)
Project Increment		<0.01	<0.01	0.64	0.20	0.39	<0.01	<0.01	<0.01	0.18	0.05
Background Concentration		0.02	0.02				<0.01	<0.01	<0.01	2.70	1.20
Total Concentration	**0.13**	**0.02**	**0.02**	**0.64**	**0.20**	**0.39**	**<0.01**	**<0.01**	**<0.01**	**2.88**	**1.25**
Significance Threshold	0.18	0.03	0.0534	2.5	1.0	2.5	0.25	0.075	0.04	20.0	9.00
Potentially Significant (Yes or No)?	No	No	No	No	No	No	No	No	No	No	No
Percent of Threshold	70	69	39	26	20	16	3	10	2	14	14

Source: RCH Group, 2022
The incremental peak concentration was determined by calculating the difference between the With Project and the Baseline Condition at each receptor, then selecting the maximum value across all receptors. Total concentrations reflect rounding of values. Per SCAQMD guidance, PM_{10} and $PM_{2.5}$ impacts do not include background concentrations.
Background NO2 concentrations were included in the AERMOD (as seasonal/temporal values); thus, AERMOD directly calculated the total Project plus background.

Table 21
Estimated Concentration Impacts from Operational Activities – Phase 2 With Project Compared to Baseline

Criteria	CAAQS 1-Hour NO_2 (ppm)	CAAQS Annual NO_2 (ppm)	NAAQS Annual NO_2 (ppm)	24-Hour PM_{10} ($\mu g/m^3$)	Annual PM_{10} ($\mu g/m^3$)	24-Hour $PM_{2.5}$ ($\mu g/m^3$)	CAAQS 1-Hour SO_2 (ppm)	NAAQS 1-Hour SO_2 (ppm)	24-Hour SO_2 (ppm)	1-Hour CO (ppm)	8-Hour CO (ppm)
Project Increment		<0.01	<0.01	0.98	0.22	0.83	<0.01	<0.01	<0.01	0.21	0.08
Background Concentration		0.02	0.02				<0.01	<0.01	<0.01	2.70	1.20
Total Concentration	**0.16**	**0.02**	**0.02**	**0.98**	**0.22**	**0.83**	**<0.01**	**<0.01**	**<0.01**	**2.91**	**1.28**
Significance Threshold	0.18	0.03	0.0534	2.5	1.0	2.5	0.25	0.075	0.04	20.0	9.00
Potentially Significant (Yes or No)?	No	No	No	No	No	No	No	No	No	No	No
Percent of Threshold	86	75	42	39	22	33	3	9	3	15	14

Source: RCH Group, 2022
The incremental peak concentration was determined by calculating the difference between the With Project and the Baseline Condition at each receptor, then selecting the maximum value across all receptors. Total concentrations reflect rounding of values. Per SCAQMD guidance, PM_{10} and $PM_{2.5}$ impacts do not include background concentrations.
Background NO2 concentrations were included in the AERMOD (as seasonal/temporal values); thus, AERMOD directly calculated the total Project plus background.

As shown in **Table 20: Estimated Operational Concentration Impacts – Phase 1 With Project Compared to Baseline**, for the air quality receptors during project operation, the maximum incremental 24-hour and annual PM_{10} impacts would be 0.64 μg/m^3 and 0.20 μg/m^3, respectively; impacts would be below the 24-hour PM_{10} threshold of 2.5 μg/m^3 and below the annual PM_{10} threshold of 1.0 μg/m^3. The project operation maximum incremental 24-hour $PM_{2.5}$ impacts would be 0.39 μg/m^3, which would be below the 24-hour $PM_{2.5}$ threshold of 2.5 μg/m^3. Therefore, operation activities would result in a *less than significant air quality impact of PM_{10} and $PM_{2.5}$ due to operation activities during Phase 1*.

Additionally, as shown in **Table 20: Estimated Operational Concentration Impacts – Phase 1 With Project Compared to Baseline**, for the air quality receptors during project operation, the maximum incremental SO_2 and CO impacts including background concentrations would be well below the significance thresholds and would be a *less than significant air quality impact of SO_2 and CO due to operation activities during Phase 1*.

As shown in **Table 21: Estimated Operational Concentration Impacts – Phase 2 With Project Compared to Baseline**, for the air quality receptors during project operations, the incremental 1-hour NO_2 impacts, including background concentrations, would be a maximum of 0.16 ppm, which is below the State threshold of 0.18 ppm. The maximum project operation incremental annual NO_2 impacts, including background concentrations, would be 0.02 ppm, which is below the thresholds of 0.03 ppm (state) and below the threshold of 0.053 ppm (federal). Therefore, operation activities would not exceed the 1-hour and annual NO_2 thresholds and would result in a *less than significant air quality impact of 1-hour and annual NO_2 due to operation activities during Phase 2.*

As shown in **Table 21: Estimated Operational Concentration Impacts – Phase 2 With Project Compared to Baseline**, for the air quality receptors during project operation, the maximum incremental 24-hour and annual PM_{10} impacts would be 0.98 μg/m^3 and 0.22 μg/m^3, respectively; impacts would be below the 24-hour PM_{10} threshold of 2.5 μg/m^3 and below the annual PM_{10} threshold of 1.0 μg/m^3. The project operation maximum incremental 24-hour $PM_{2.5}$ impacts would be 0.83 μg/m^3, which would be below the 24-hour $PM_{2.5}$ threshold of 2.5 μg/m^3. Therefore, operation activities would result in a *less than significant air quality impact of PM_{10} and $PM_{2.5}$ due to operation activities during Phase 2*.

Additionally, as shown in **Table 21: Estimated Operational Concentration Impacts – Phase 2 With Project Compared to Baseline**, for the air quality receptors during project operation, the maximum incremental SO_2 and CO impacts including background concentrations would be well below the significance thresholds and would be a *less than significant air quality impact of SO_2 and CO due to operation activities during Phase 2*.

As with the emissions inventory results, a second comparison was made in order to remove the influence of background airport growth by comparing the concentrations from future year with Proposed Project and the future year without Proposed Project. This comparison was made for informational purposes only.

- Phase 1 With Project operations compared to the Phase 1 Without Project operations
- Phase 2 With Project operations compared to the Phase 2 Without Project operations

Table 22: Estimated Operational Concentration Impacts – Phase 1 With Project Compared to Without Project provides the Proposed Project air concentrations during Phase 1 With Project compared to Without Project.

Table 23: Estimated Operational Concentration Impacts – Phase 2 With Project Compared to Without Project provides the Proposed Project air concentrations during Phase 2 With Project compared to Without Project.

As shown in **Table 22: Estimated Operational Concentration Impacts – Phase 1 With Project Compared to Without Project**, for the air quality receptors during project operations, the incremental 1-hour NO_2 impacts, including background concentrations, would be a maximum of 0.08 ppm, which is below the State threshold of 0.18 ppm. The maximum project operation incremental annual NO_2 impacts, including background concentrations, would be 0.02 ppm, which is below the thresholds of 0.03 ppm (state) and 0.053 ppm (federal). Therefore, operation activities would not exceed the 1-hour and annual NO_2 thresholds and would result in a *less than significant air quality impact of 1-hour and annual NO_2 due to operation activities during Phase 1.*

As shown in **Table 22: Estimated Operational Concentration Impacts – Phase 1 With Project Compared to Without Project**, for the air quality receptors during project operation, the maximum incremental 24-hour and annual PM_{10} impacts would be 0.65 µg/m^3 and 0.20 µg/m^3, respectively; impacts would be below the 24-hour PM_{10} threshold of 2.5 µg/m^3 and below the annual PM_{10} threshold of 1.0 µg/m^3. The project operation maximum incremental 24-hour $PM_{2.5}$ impacts would be 0.40 µg/m^3, which would be below the 24-hour $PM_{2.5}$ threshold of 2.5 µg/m^3. Therefore, operation activities would result in a *less than significant air quality impact of PM_{10} and $PM_{2.5}$ due to operation activities during Phase 1*.

Table 22
Estimated Concentration Impacts from Operational Activities – Phase 1 With Project Compared to Without Project

Criteria	CAAQS 1-Hour NO_2 (ppm)	CAAQS Annual NO_2 (ppm)	NAAQS Annual NO_2 (ppm)	24-Hour PM_{10} ($\mu g/m^3$)	Annual PM_{10} ($\mu g/m^3$)	24-Hour $PM_{2.5}$ ($\mu g/m^3$)	CAAQS 1-Hour SO_2 (ppm)	NAAQS 1-Hour SO_2 (ppm)	24-Hour SO_2 (ppm)	1-Hour CO (ppm)	8-Hour CO (ppm)
Project Increment		<0.01	<0.01	0.65	0.20	0.40	<0.01	<0.01	<0.01	0.15	0.04
Background Concentration		0.02	0.02				<0.01	<0.01	<0.01	2.70	1.20
Total Concentration	**0.08**	**0.02**	**0.02**	**0.65**	**0.20**	**0.40**	**<0.01**	**<0.01**	**<0.01**	**2.85**	**1.24**
Significance Threshold	0.18	0.03	0.0534	2.5	1.0	2.5	0.25	0.075	0.04	20.0	9.00
Potentially Significant (Yes or No)?	No	No	No	No	No	No	No	No	No	No	No
Percent of Threshold	47	66	37	26	20	16	3	8	1	14	14

Source: RCH Group, 2022

The incremental peak concentration was determined by calculating the difference between the With Project and the Without Project at each receptor, then selecting the maximum value across all receptors. Total concentrations reflect rounding of values. Per SCAQMD guidance, PM_{10} and $PM_{2.5}$ impacts do not include background concentrations.

Background NO2 concentrations were included in the AERMOD (as seasonal/temporal values); thus, AERMOD directly calculated the total Project plus background.

Table 23
Estimated Concentration Impacts from Operational Activities – Phase 2 With Project Compared to Without Project

Criteria	CAAQS 1-Hour NO_2 (ppm)	CAAQS Annual NO_2 (ppm)	NAAQS Annual NO_2 (ppm)	24-Hour PM_{10} ($\mu g/m^3$)	Annual PM_{10} ($\mu g/m^3$)	24-Hour $PM_{2.5}$ ($\mu g/m^3$)	CAAQS 1-Hour SO_2 (ppm)	NAAQS 1-Hour SO_2 (ppm)	24-Hour SO_2 (ppm)	1-Hour CO (ppm)	8-Hour CO (ppm)
Project Increment		<0.01	<0.01	0.96	0.21	0.82	<0.01	<0.01	<0.01	0.37	0.12
Background Concentration		0.02	0.02				<0.01	<0.01	<0.01	2.70	1.20
Total Concentration	**0.09**	**0.02**	**0.02**	**0.96**	**0.21**	**0.82**	**<0.01**	**<0.01**	**<0.01**	**3.07**	**1.32**
Significance Threshold	0.18	0.03	0.0534	2.5	1.0	2.5	0.25	0.075	0.04	20.0	9.00
Potentially Significant (Yes or No)?	No	No	No	No	No	No	No	No	No	No	No
Percent of Threshold	51	71	40	38	21	33	3	9	2	15	15

Source: RCH Group, 2022

The incremental peak concentration was determined by calculating the difference between the With Project and the Without Project at each receptor, then selecting the maximum value across all receptors. Total concentrations reflect rounding of values. Per SCAQMD guidance, PM_{10} and $PM_{2.5}$ impacts do not include background concentrations.

Background NO2 concentrations were included in the AERMOD (as seasonal/temporal values); thus, AERMOD directly calculated the total Project plus background.

Additionally, as shown in **Table 22: Estimated Operational Concentration Impacts – Phase 1 With Project Compared to Without Project**, for the air quality receptors during project operation, the maximum incremental SO_2 and CO impacts including background concentrations would be well below the significance thresholds and would be a *less than significant air quality impact of SO_2 and CO due to operation activities during Phase 1*.

Table 23: Estimated Operational Concentration Impacts – Phase 2 With Project Compared to Without Project provides the Proposed Project air concentrations during Phase 2 With Project compared to Without Project.

As shown in **Table 23: Estimated Operational Concentration Impacts – Phase 2 With Project Compared to Without Project**, for the air quality receptors during project operations, the incremental 1-hour NO_2 impacts, including background concentrations, would be a maximum of 0.09 ppm, which is below the State threshold of 0.18 ppm. The maximum project operation incremental annual NO_2 impacts, including background concentrations, would be 0.02 ppm, which is below the thresholds of 0.03 ppm (state) and 0.053 ppm (federal). Therefore, operation activities would not exceed the 1-hour and annual NO_2 thresholds and would result in a *less than significant air quality impact of 1-hour and annual NO_2 due to operation activities during Phase 2.*

As shown in **Table 23: Estimated Operational Concentration Impacts – Phase 2 With Project Compared to Without Project**, for the air quality receptors during project operation, the maximum incremental 24-hour and annual PM_{10} impacts would be 0.96 µg/m^3 and 0.21 µg/m^3, respectively; impacts would be below the 24-hour PM_{10} threshold of 2.5 µg/m^3 and below the annual PM_{10} threshold of 1.0 µg/m^3. The project operation maximum incremental 24-hour $PM_{2.5}$ impacts would be 0.82 µg/m^3, which would be below the 24-hour $PM_{2.5}$ threshold of 2.5 µg/m^3. Therefore, operation activities would result in a *less than significant air quality impact of PM_{10} and $PM_{2.5}$ due to operation activities during Phase 2*.

Additionally, as shown in **Table 23: Estimated Operational Concentration Impacts – Phase 2 With Project Compared to Without Project**, for the air quality receptors during project operation, the maximum incremental SO_2 and CO impacts including background concentrations would be well below the significance thresholds and would be a *less than significant air quality impact of SO_2 and CO due to operation activities during Phase 2*.

As discussed previously, the federal and State standards have been set at levels considered safe to protect public health, including the health of "sensitive" populations, such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. Based on the results shown in **Table 20** through **Table**

23, operation of the Proposed Project is not likely to result in adverse health effects as a result of its criteria air pollutant emissions.

Ambient Air Quality Concentrations Associated with Roadway Intersections

Localized CO concentrations associated with motor vehicle travel on area roadways were evaluated using a screening method based on the California Line Source Dispersion Model (CALINE-4) microscale dispersion model, developed by Caltrans, in combination with EMFAC2021 emission factors. In traffic studies, the term "level of service" (LOS) describes traffic performance at roadway intersections and is generally expressed as a letter grade (A through F, with an F grade reflecting highly congested traffic conditions).

To establish a more accurate record of baseline CO concentrations affecting the Basin, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a daily traffic volume of approximately 100,000 vehicles per day. The SCAQMD 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm, which indicates that the most stringent 1-hour CO standard (20.0 ppm) would likely not be exceeded until the daily traffic at the intersection exceeded more than 400,000 vehicles per day.[58] Additionally, the SCAQMD also recommends an evaluation of potential localized CO impacts when a project causes the LOS at a study intersection to worsen from C to D, or if a project increases the V/C ratio at any intersection rated D or worse by 2 percent or more.

None of the Project's studied intersections would exceed 400,000 vehicles per day. Additionally, none of the Project's study intersections worsen from C to D or increase the V/C ratio at any intersection rated D or worse by two percent or more. As such, the Project would not produce the volume of traffic required to generate a CO hot spot in the context of the 2003 AQMP hot spot study.

To further support this conclusion, CO concentration levels were forecasted at the Project's three most potentially impacted intersections using the CALINE-4 dispersion model developed by Caltrans, peak-hour traffic volumes, and conservative meteorological assumptions. The following intersections were evaluated because the Proposed Project's transportation study found that they would operate below LOS standards (i.e., LOS E/F):

1. Euclid Avenue/SR-83 at Mission Boulevard

58 South Coast Air Quality Management District, 2003 AQMP Appendix V, August 2003.

2. Bon View Avenue at Mission Boulevard

3. Airport Drive at Haven Avenue

Project-generated traffic volumes are forecasted to have a negligible effect on the projected 1-hour and 8-hour CO concentrations at each of the three intersection locations analyzed. Thus, the project would not cause any new or exacerbate any existing CO hot spots, and, as a result, health impacts related to localized mobile-source CO emissions would not be considered significant. **Attachment A: Emissions Inventory and Dispersion Modeling Methodology and Assumptions** contains a memorandum concerning the CO intersection analysis and detailed results.

Summary of Air Quality Concentration Assessment Results

The following concluding statements can be made about the ambient air quality analysis results:

- The maximum concentrations of the 1-hour and annual NO_2 impacts including background concentrations would not exceed the significance threshold and would be a *less than significant impact for all offsite receptors due to construction and operational activities during Phase 1 and 2*.

- The maximum concentrations of 24-hour and annual PM_{10} and 24-hour $PM_{2.5}$ would not exceed the significance threshold and would be *less than significant impact for all offsite receptors due to construction and operational activities during Phase 1 and 2*.

- The maximum concentrations of SO_2 and CO including background concentrations would be well below the significance thresholds and would be a *less than significant air quality impact of SO_2 and CO on all nearby receptors due to construction and operational activities during Phase 1 and 2*.

10.0 HEALTH RISK ASSESSMENT

The Proposed Project is expected to emit a variety of air toxics and a health risk assessment (HRA) was completed to evaluate the health impacts of the Proposed Project as required by the SCAQMD. The Proposed Project would constitute a new emission source of diesel particulate matter (DPM) due to its construction activities and haul trucks. Studies have demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. Secondly, various air toxics would be emitted by the aircraft during operations.[59] The HRA focuses on

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59 Toxic air contaminants are a broad class of compounds known to cause morbidity or mortality. TAC are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., gasoline service stations, dry cleaners). TAC are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TAC are regulated at the regional, state, and federal level.

impacts on existing residences, schools, offsite workers, and other sensitive populations (including onsite workers within the passenger terminal and other areas within the Airport).

Health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. Individual cancer risk is the likelihood that a person exposed to air toxic concentrations over a 30-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. The maximally exposed individual (MEI) represents the worst–case risk estimate, based on a theoretical person continuously exposed for a lifetime at the point of highest compound concentration in the air. This is a highly conservative assumption since most people do not remain at home all day and on average residents change residences every 11 to 12 years. In addition, this assumption assumes that residents are experiencing outdoor concentrations for the entire exposure period.

The HRA was conducted following methodologies in OEHHA's *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*[60] and SCAQMD's *Risk Assessment Procedures for Rule 1401, 1401.1 and 212*.[61] This was accomplished by applying the estimated concentrations at the receptors analyzed to the established cancer risk estimates and acceptable reference concentrations for noncancer health effects.

Recent OEHHA's revisions to its Guidance Manual were primarily designed to ensure that the greater sensitivity of children to cancer and other health risks is reflected in the HRA. For example, OEHHA now recommends that risks be analyzed separately for multiple age groups, focusing especially on young children and teenagers, rather than the past practice of analyzing risks to the general population, without distinction by age. OEHHA also now recommends that statistical "age sensitivity factors" be incorporated into an HRA, and that children's relatively high breathing rates be accounted for. On the other hand, the Guidance Manual revisions also include some changes that would reduce calculated health risks. For example, under the former guidance, OEHHA recommended that residential cancer risks be assessed by assuming 70 years of exposure at a residential receptor; under the Guidance Manual, this assumption is lessened to 30 years.

CARB and OEHHA have identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma,

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60 Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, February 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html

61 South Coast Air Quality Management District, Risk Assessment Procedures for Rule 1401, 1401.1 and 212, September 1, 2017, http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12

emphysema, and bronchitis. Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptors. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. For health risk assessments, the health impacts are analyzed for individual residents assumed to be standing in their primary outdoor spaces closest to the source of air toxics and for individual offsite workers assumed to be standing outside of a commercial or industrial building.

Land uses surrounding the Airport are primarily industrial/commercial. Distances from the Airport boundary to residential zoned areas are approximately 1,200 feet (0.23 miles) to the northwest, 1,300 feet (0.25 miles) to the southwest, 2,800 feet (0.53 miles) to the north, 3,600 feet (0.68 miles) to the west, and 6,500 feet (1.2 miles) to the south. However, there also are some residences located within the industrial/ commercial areas to the west and south. The closest existing sensitive receptor to the project is a single-family residence on South Grove Avenue, approximately 200 feet north of the airport boundary (approximately 2,000 feet northwest of Runway 8L – 26R). The closest school is the Mariposa Elementary School, approximately 2,000 feet (0.38 miles) north of the airport boundary. The closest hospital is the Kaiser Permanente Ontario Vineyard hospital, approximately 5,300 feet (one mile) south of the airport boundary. Notably, the typical emission sources associated with the Proposed Project are located well within the Airport boundary and are generally located within the southern portion of the Airport (Runway 8R – 26L and south), therefore, the distances from the project emission sources and the receptors are further than noted.

Attachment C: Health Risk Assessment Methodology and Assumptions provides additional methodologies and assumptions.

Health Impacts

Health risks were not quantified for Existing Conditions as the specific health risks associated with the Airport cannot be assessed independent of all sources of pollutants which contribute to the community's overall risk. However, SCAQMD has conducted studies on carcinogenic risk from exposure to air toxics in the SCAB. The most recent is the Multiple Air Toxics Exposure Study V (MATES V). According to the MATES Data Visualization interactive tool, the area around Ontario has a cumulative cancer risk of 600 per million persons.[62]

The Proposed Project would constitute a new emission source of DPM due to its construction activities. Studies have demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic

62 South Coast Air Quality Management District, Multiple Air Toxics Exposure Study (MATES-V) in the South Coast Air Basin, August 2021, http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v

(long-term) inhalation exposure to DPM poses a chronic health impact. Health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. Individual cancer risk is the likelihood that a person exposed to air toxic concentrations over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology and a 30-year exposure duration. The maximally exposed individual (MEI) represents the worst–case risk estimate, based on a theoretical person exposed for a period of 30 years at the highest concentration. This is a highly conservative assumption since most people do not remain in place all day and on average residents change residences every 11 to 12 years and do not stay in the same place of work for 25 years. In addition, this assumes that individuals are experiencing outdoor concentrations for the entire exposure period (even when indoors). A school child exposure duration is between ages 2 and 16 years old, which again, is conservative because the elementary, middle, and high school are not often located at the same location.

The Proposed Project would also constitute a new emission source of DPM due to its delivery truck activities and air toxics due to aircraft operations.

A further description of the sensitive receptors included in the dispersion modeling analysis is provided in **Attachment A: Emissions Inventory and Dispersion Modeling Methodology and Assumptions**.

Peak daily emission estimates were used to estimate short-term air concentrations (1-hour, 8-hour, and 24-hour) while annual emission estimates were used to estimate annual air concentrations. DPM (reported as exhaust emissions of $PM_{2.5}$) and other air toxics emission rates were utilized along with derived concentrations from USEPA's AERMOD atmospheric dispersion model (using a unit emission rate of 1) to calculate air concentrations at receptors in the Project vicinity. The HRA is intended to provide a worst–case estimate of the increased exposure by employing a standard emission estimation program, an accepted pollutant dispersion model, approved toxicity factors, and conservative exposure parameters.

In accordance with OEHHA *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments,* this HRA was accomplished by applying the highest estimated concentrations of specific air toxics at the receptors analyzed to the established cancer potency factors and acceptable reference concentrations for noncancer health effects. Increased cancer risks were calculated using the modeled concentrations and OEHHA-recommended methodologies for both child exposure (3rd trimester through two years of age and ages two through 16 years) and adult exposure (16 to 30 years). The cancer risk calculations were based on applying the OEHHA-recommended age sensitivity factors and breathing rates, as well as the fraction of time at home (100 percent for child and 73 percent for adult), and an exposure duration of 30 years, to the concentration exposures; over a 70-year lifetime. As a conservative assumption, children are assumed to attend a daycare or school near their home and no discount should be taken for time spent outside of the area (i.e., 100 percent fraction of time) affected by the project's emissions. For worker exposures, it is assumed that the working age begins at 16 years, and that exposures to Project emissions occur during the work shift which is typically up to eight hours per day during workdays. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing air pollutants.

Per Education Code Section 17213 (School Site Selection and Approval Guide), a school shall only be located where, “the health risks from the facilities or other pollution sources do not and will not constitute an actual or potential endangerment of public health to persons who would attend or be employed at the school.” Projects located within ¼ mile of a school that involve the construction or alteration of a facility that might reasonably be anticipated to emit hazardous air emissions, or the handling of an extremely hazardous substance or mixture containing extremely hazardous substances in a quantity equal to or greater than the state threshold quantity specified in subdivision (j) of HSC Section §25532, and that may impose a health or safety hazard to persons who would attend or would be employed at the school, must meet all requirements per CEQA Guidelines §15186 (b)(1)(2*).*

These conservative methodologies overestimate both noncarcinogenic and carcinogenic health risk, possibly by an order of magnitude or more. Therefore, for carcinogenic risks, the actual probabilities of cancer formation in the populations of concern due to exposure to carcinogenic pollutants are likely to be lower than the risks derived using the HRA methodology. The extrapolation of toxicity data in animals to humans, the estimation of concentration prediction methods within dispersion models; and the variability in lifestyles, fitness and other confounding factors of the human population also contribute to the overestimation of health impacts. Therefore, the results of this HRA, although conducted in accordance with all regulatory agency protocols, are highly overstated. Cancer risk estimates do not mean, and should not be interpreted to mean, that a person will develop cancer from estimated exposures to toxic air pollutants.

SCAQMD currently does not require the evaluation of long-term cancer risk or chronic health impacts for a short-term construction project.[63] The Proposed Project’s construction activities would occur over six years (2023 through 2028). The relatively short duration when compared to the 30-year exposure duration would limit exposures to offsite receptors. Secondly, exhaust emissions associated with the construction activities would not exceed the air concentrations significance thresholds (see **Section 10**) and thus, it is anticipated that construction emissions would not pose a threat to health impacts at nearby receptors. Nevertheless, a construction-related health risk assessment was completed.

63 SCAQMD is currently reviewing and developing guidance for the health risk assessment of construction activities.

For the residential cancer risk, each year of Proposed Project implementation was evaluated separately with an exposure duration of one year, starting with the age bin for infants in utero in the third trimester of pregnancy. The cancer risk results for each year were summed to calculate the total cancer risk during the Proposed Project construction period. The Proposed Project's incremental increase in cancer risk is based on the emissions associated with the Proposed Project's implementation. For non-cancer chronic and acute health risks, the maximum hazard index (HI) was calculated for each year of construction for the Proposed Project. The highest HI for all years would be the maximum HI during the Proposed Project construction period. The Proposed Project's incremental increase in non-cancer chronic and acute health risks is based on the emissions associated with the Proposed Project's implementation. The model conservatively assumes that residents would be standing and breathing outdoors at the location of the property line or primary outdoor space closest to the airport or flight paths between 17 and 21 hours per day (depending on the age group), starting with infants in utero in the third trimester of pregnancy for the first year of Proposed Project implementation. For offsite worker cancer risk, an exposure duration of one year was selected with an assumption of eight hours per day, five days per week of exposure while standing outside, in accordance with the OEHHA guidelines.

The SCAQMD thresholds of significance applied to assess project-level health impacts are the exposure of persons to substantial levels of air toxics resulting in (a) a cancer risk level greater than 10 per one million persons or (b) a noncancerous risk (chronic or acute) hazard index greater than 1 or (c) a cancer burden of greater than 0.5 excess cancer cases.[64]For this threshold, sensitive receptors include residential uses, schools, daycare centers, nursing homes, medical centers, and offsite workers.

Health Impacts for Construction Activities

The SCAQMD currently does not require a HRA to be conducted for short-term emissions from construction equipment. Nevertheless, an analysis was conducted for the proposed project. **Table 24: Estimated Health Impacts from Construction Activities** provides the Proposed Project's health impacts from construction activities for nearby sensitive receptors (i.e., onsite workers, offsite workers, and residence at Hofer Ranch). Notably, the construction health impacts are very low and the influence area is very small, due in large part to the size of construction and the implementation of emissions reduction measures. There is very little geographical overlap between construction health impacts and the operational health impacts.

64 South Coast Air Quality Management District, Risk Assessment Procedures for Rule 1401, 1401.1 and 212, September 1, 2017, http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12

Table 24
Estimated Health Impacts from Construction Activities

Criteria	Cancer Risk	Chronic Impact
Offsite Worker	0.06	<0.01
Onsite Worker	0.58	0.01
Residence	0.06	<0.01
Significance Threshold	10	1.0
Potentially Significant (Yes or No)?	No	No

*Note: Values in **bold** are in excess of applicable standard.*
Source: RCH Group, 2022

As shown **in Table 24: Estimated Health Impacts from Construction Activities**, the maximum cancer risk from Proposed Project construction emissions would be 0.6 per one million persons for the onsite worker (located to the west of the project site) and less than 0.1 per one million persons for the offsite worker and residence. The maximum chronic health impact modeled would be 0.01.

Health Impacts for Operational Activities

The HRA focuses on impacts on existing residences, offsite workers, and other sensitive populations (including onsite workers within the passenger terminal and other areas within the Airport) from emissions of air toxics during aircraft operations. Typically, aircraft HAP emissions include formaldehyde in the greatest amount, followed by acetaldehyde, acrolein, benzene, methyl alcohol, and 1,3-butadiene. **Attachment C: Health Risk Assessment Methodology and Assumption** contains further information on the development of the aircraft HAP emissions inventory and detailed results.

As with the previous air quality dispersion modeling analyses, the project-related health impacts were compared to the SCAQMD significance thresholds:

- Phase 1 With Project operations compared to the Baseline Condition
- Phase 2 With Project operations compared to the Baseline Condition

However, this comparison of the Project to the Baseline is influenced by factors that are not attributable to the Project itself. Specifically, the comparison contains future aircraft operations from background growth that are projected to occur with or without the Proposed Project.[65]

65 Concentrations increase between Phase 1 and 2, due to the difference between Phase 1 and Phase 2 emissions. Due to the increase of concentrations in later years, the HRA was conducted for a receptor exposed starting with Phase 1 and starting with Phase 2; each for 30 years.

Table 25: Estimated Health Impacts from Operational Activities – With Project Compared to Baseline provides the Proposed Project's health impacts from operational activities for nearby sensitive receptors.

Table 25
Estimated Health Impacts from Operational Activities – With Project Compared to Baseline

Criteria	Cancer Risk	Acute Impact	Chronic Impact
	Phase 1		
Residence	2.52	0.30	0.02
Offsite Worker	0.24	0.25	0.02
Onsite Worker (non-Terminal)	1.98	0.40	0.19
Onsite Worker (Terminal)	0.86	0.24	0.08
School	0.33	0.05	<0.01
Significance Threshold	10	1.0	1.0
Potentially Significant (Yes or No)?	No	No	No
	Phase 2		
Residence	4.66	0.22	0.03
Offsite Worker	0.43	0.27	0.04
Onsite Worker (non-Terminal)	3.22	0.66	0.31
Onsite Worker (Terminal)	0.91	0.21	0.09
School	0.57	0.03	0.01
Significance Threshold	10	1.0	1.0
Potentially Significant (Yes or No)?	No	No	No

*Note: Values in **bold** are in excess of applicable standard.*
Source: RCH Group, 2022

As shown, the maximum cancer risk from project operations for residence, offsite worker (such as office buildings, retail centers, hotels, hospitals), onsite worker, and school would be 2.5, 0.2, 2.0, and 0.3 per one million persons, respectively (Phase 1) and would be 4.7, 0.4, 3.2, and 0.6 per one million persons, respectively (Phase 2). The maximum exposed residence is located at Hofer Ranch (receptor 1) and secondarily, is located north of the terminal complex (receptor 18). The maximum exposed onsite worker is located to the west of the project site. Thus, the cancer risk for sensitive receptors due to operational activities would be below the SCAQMD threshold of 10 per one million persons and would be *less than significant health impacts for all sensitive receptors due to operational activities*.

Attachment A: Emissions Inventory and Dispersion Modeling Methodology and Assumptions describes and displays the receptors used within the HRA.

The maximum acute health impact modeled to occur at a residence, offsite worker, onsite worker, and school would be less than 0.4 (Phase 1) and 0.7 (Phase 2). The maximum chronic health impact (Phase 1) modeled to occur at a residence, offsite worker, onsite worker, and school would be less than 0.2 (Phase 1) and 0.3 (Phase 2). Thus, the acute and chronic health impact due to operational activities at all sensitive receptors would be below the project-level threshold of 1 and would be *less than significant for all sensitive receptors due to operational activities*.

Notably, a portion of the health impacts, especially associated with the onsite terminal worker receptor, are attributed to airport growth which would occur with or without the Proposed Project. As shown in **Table 25: Estimated Health Impacts from Operational Activities – With Project Compared to Baseline**, the cancer risk associated with offsite worker and school receptors are less than one per million. However, the cancer risk associated with residence and onsite worker receptors would be greater than one per million, although in only a limited geographical area. The cancer burden is the estimated increase in the occurrence of cancer cases in a population as a result of exposures to air toxics emissions from the project source over a 70-year exposure duration. The cancer burden for a population unit (city, census tract, sub-area or grid) is the product of the number of persons in the population and the estimated individual risk from TAC. The cancer burden only needs to be calculated if the resulting cancer estimates from a 30-year exposure duration is greater than one in one million. For the cancer risks from operational activities compared to baseline, the zone of impact is approximately 2,520 meters (or 7.7 square miles) from the center of the airport (Phase 1) and 3,400 meters (or 13.9 square miles) (Phase 2). The respective population within the zone impact areas are 5,530 and 41,200, respectively, or 722 and 2,966 persons per square mile.[66] Generally, the residential population in the Air Basin is less than 10,360 persons per square mile, but some areas are as high as 18,130 persons per square mile. However, the population density is lower surrounding the project site given the open space and industrial land uses. In general, the population density in Ontario is 3,576 people per square mile. The cancer burden due to operations would be 0.02 (Phase 1) and 0.22 (Phase 2) and therefore, below the SCAQMD threshold of 0.5 excess cancer cases and would therefore be *less than significant due to operational activities.*

A second comparison was made to remove the influence of background airport growth by comparing the health impacts from future year with Proposed Project and the future year without Proposed Project. This comparison was made for informational purposes only and in which the significance of the Project impacts is not based.

- Phase 1 With Project operations compared to the Phase 1 Without Project operations

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66 Center for International Earth Science Information Network - CIESIN - Columbia University. 2018. Population Estimation Service, Version 3 (PES-v3). Palisades, NY: NASA Socioeconomic Data and Applications Center, https://sedac.ciesin.columbia.edu/data/collection/gpw-v4/population-estimation-service

- Phase 2 With Project operations compared to the Phase 2 Without Project operations

Generally, it would be expected that the impacts when comparing the With Project to Without Project would be less than the impacts when comparing the With Project to Baseline and that Phase 2 impacts would be greater than Phase 1 impacts.

Table 26: Estimated Health Impacts from Operational Activities – With Compared to Without Project provides the Proposed Project's health impacts from operational activities for nearby sensitive receptors.

Table 26
Estimated Health Impacts from Operational Activities – With Project Compared to Without Project

Criteria	Cancer Risk	Acute Impact	Chronic Impact
	Phase 1		
Residence	2.02	0.09	0.01
Offsite Worker	0.32	0.21	0.03
Onsite Worker (non-Terminal)	2.34	0.56	0.23
Onsite Worker (Terminal)	0.21	0.09	0.02
School	0.34	0.04	<0.01
Significance Threshold	10	1.0	1.0
Potentially Significant (Yes or No)?	No	No	No
	Phase 2		
Residence	3.20	0.13	0.02
Offsite Worker	0.52	0.46	0.05
Onsite Worker (non-Terminal)	3.38	0.73	0.32
Onsite Worker (Terminal)	0.02	<0.01	<0.01
School	0.56	0.02	0.01
Significance Threshold	10	1.0	1.0
Potentially Significant (Yes or No)?	No	No	No

*Note: Values in **bold** are in excess of applicable standard.*
Source: RCH Group, 2022

As shown, the maximum cancer risk from project (Phase 1) operations for residence, offsite worker (such as office buildings, retail centers, hotels, hospitals), onsite worker, and school would be 2.0, 0.3, 2.3, and 0.3 per one million persons, respectively (Phase 1) and would be 3.2, 0.5, 3.4, and 0.6 per one million persons, respectively (Phase 2). The maximum exposed residence is located at Hofer Ranch (receptor 1) and secondarily, is located south-southwest of the airport (receptor 5). The maximum exposed onsite worker is located to the west of the project site. Thus, the cancer risk for sensitive receptors due to operational activities would be below the SCAQMD threshold of 10 per one million persons and would be *less than significant health impacts for all sensitive receptors due to operational activities*.

The maximum acute health impact modeled to occur at a residence, offsite worker, onsite worker, and school would be less than 0.6 (Phase 1) and 0.7 (Phase 2). The maximum chronic health impact (Phase 1) modeled to occur at a residence, offsite worker, onsite worker, and school would be less than 0.2 (Phase 1) and 0.3 (Phase 2). Thus, the acute and chronic health impact due to operational activities at all sensitive receptors would be below the project-level threshold of 1 and would be *less than significant for all sensitive receptors due to operational activities*.

As shown in **Table 26: Estimated Health Impacts from Operational Activities – With Project Compared to Without Project**, the cancer risk associated with offsite worker and school receptors are less than one per million. However, the cancer risk associated with residence and onsite worker receptors would be greater than one per million, although in only a very limited geographical area. The maximum exposed residence is at the Hofer Ranch and all other residence cancer risk is less than one per million over a 70-year exposure duration. Therefore, the cancer burden due to operations would be less than 0.01 and below the SCAQMD threshold of 0.5 excess cancer cases and would therefore be *less than significant due to operational activities.*

Summary of Health Risk Assessment Results

The following concluding statements can be made about the health risk assessment results:

- The cancer risk for offsite worker receptors due to construction activities would be below the SCAQMD threshold of 10 per one million persons and would be l*ess than significant health impacts for all offsite worker receptors due to construction activities*.
- The cancer risk for all sensitive receptors due to operational activities would be below the SCAQMD threshold of 10 per one million persons and would be l*ess than significant health impacts for all sensitive receptors due to operational activities*.
- The acute and chronic health impacts for offsite worker receptors due to construction activities would be below the SCAQMD threshold of 1 and would be l*ess than significant health impacts for all offsite worker receptors due to construction activities*.
- The acute and chronic health impacts for all sensitive receptors due to operational activities would be below the SCAQMD threshold of 1 and would be l*ess than significant health impacts for all sensitive receptors due to operational activities*.

11.0 GREENHOUSE GAS EMISSIONS

"Global warming" and "global climate change" are the terms used to describe the increase in the average temperature of the earth's near-surface air and oceans since the mid-20th century and its projected continuation. Warming of the climate system is now considered to be unequivocal (IPCC, 2007), with global surface temperature increasing approximately 1.33 degrees Fahrenheit (°F) over the last 100 years. Continued warming is projected to increase global average temperature between 2 and 11°F over the next 100 years.

Natural processes and human actions have been identified as the causes of this warming. The International Panel on Climate Change (IPCC) concludes that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward. After 1950, however, increasing GHG concentrations resulting from human activity such as fossil fuel burning, and deforestation have been responsible for most of the observed temperature increase.[67] These basic conclusions have been endorsed by more than 45 scientific societies and academies of science, including all of the national academies of science of the major industrialized countries. Since 2007, no scientific body of national or international standing has maintained a dissenting opinion.

Increases in GHG concentrations in the earth's atmosphere are thought to be the main cause of human-induced climate change. GHG naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space. Some GHG occur naturally and are necessary for keeping the earth's surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have decreased the amount of solar radiation that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.[68]

Gases that trap heat in the atmosphere are referred to as GHG because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHG has been implicated as the driving force for global climate change. The primary GHG are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), ozone, and water vapor.

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67 International Panel on Climate Change, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp. https://www.ipcc.ch/site/assets/uploads/2018/05/SYR_AR5_FINAL_full_wcover.pdf

68 International Panel on Climate Change, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp. https://www.ipcc.ch/site/assets/uploads/2018/05/SYR_AR5_FINAL_full_wcover.pdf

While the presence of the primary GHG in the atmosphere are naturally occurring, CO_2, CH_4, and N_2O are also emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHG include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes. Greenhouse gases are typically reported in "carbon dioxide-equivalent" measures (CO_2e).[69]

There is international scientific consensus that human-caused increases in GHG have and will continue to contribute to global warming. Potential global warming impacts may include, but are not limited to, loss in snowpack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.

City of Ontario Climate Action Plan

The City of Ontario prepared and adopted a Climate Action Plan (CAP).[70] The City prepared the CAP to achieve compliance with State mandates and focus on feasible actions the City can take to minimize adverse impacts on growth and development on global climate change. The CAP contains detailed strategies and measures that will be implemented to reduce GHG emissions. The City's CAP proposes a 2020 emissions reduction target equivalent to 15 percent below 2005 emissions levels and a 2035 emissions reduction target equivalent to 50 percent below 2005 emissions levels.

The City's GHG Emissions Inventory shows building energy use, transportation, commercial and industrial uses, residential uses, waste/wastewater and water use in the city generated 2,503,816 metric tons of CO_2e in 2008 and 3,127,987 metric tons of CO_2e in 2020 (projected). Of the sources in this total, the largest contributors include building energy use, transportation, and agriculture sector emissions, which contribute approximately 40 percent, 39 percent, and 10 percent, respectively.

GHG emission reduction measures specified in the CAP include performance standards for projects emitting more the 3,000 metric tons of CO_2e, building energy efficiency programs, renewable energy requirements, waste diversion, and transportation management.

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69 Because of the differential heat absorption potential of various GHG, GHG emissions are frequently measured in "carbon dioxide-equivalents," which present a weighted average based on each gas's heat absorption (or "global warming") potential.

70 City of Ontario, *Climate Action Plan*, Adopted November 2014, https://www.ontarioca.gov/sites/default/files/Ontario-Files/Planning/Applications/Community%20Climate%20Action%20Plan.pdf

California Green Building Standards Code

The California Green Building Standards Code or CALGreen is a regulatory code for all residential, commercial, and school buildings to meet uniform standards in building design intended to minimize impacts on climate change.

CALGreen does not prevent a local jurisdiction from adopting a more stringent code, as State law provides methods for local enhancements. CALGreen recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided, they provide a minimum 50-percent diversion requirement. CALGreen also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard, which buildings need to meet in order to be certified for occupancy. Enforcement is generally done by the local building official.

The development of CALGreen is intended to cause a reduction in GHG emissions from buildings; promote environmentally responsible, cost-effective, healthier places to live and work; reduce energy and water consumption; and respond to directives issued by the Governor, such as Assembly Bill 32, calling for the reduction of Statewide GHG emissions to 1990 levels by 2020. In short, CALGreen was established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impacts during and after project construction.

CALGreen contains requirements for construction site selection, storm water control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. CALGreen provides design options allowing a project designer to determine how best to achieve compliance for a given site or building condition. CALGreen also requires building commissioning, which is a process for verifying that all building systems, like heating and cooling equipment and lighting systems, are functioning at their maximum efficiency. The 2023 CALGreen code went into effect January 1, 2023.

California Environmental Quality Act and Climate Change

Under CEQA, lead agencies are required to disclose the reasonably foreseeable adverse environmental effects of projects they are considering for approval. GHG emissions have the potential to affect the environment because they contribute to global climate change. In turn, global climate change has the potential to cause sea level rise, alter rainfall and snowfall patterns, and affect habitat.

Executive Order S-3-05

Governor Schwarzenegger established Executive Order S-3-05 in 2005, in recognition of California's vulnerability to the effects of climate change. Executive Order S-3-05 set forth a series of target dates by which Statewide emissions of GHG would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The executive order directed the Secretary of the CalEPA to coordinate a multiagency effort to reduce GHG emissions to the target levels. The Secretary will also submit biannual reports to the governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the executive order, the secretary of CalEPA created the California Climate Action Team, made up of members from various State agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through State incentive and regulatory programs.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on Statewide GHG emissions. AB 32 requires that Statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished by enforcing a Statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce Statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the State reduces GHG emissions enough to meet the cap. AB 32 also includes guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses and consumers are not unfairly affected by the reductions. Using these criteria to reduce Statewide GHG emissions to 1990 levels by 2020 would represent an approximate 25 to 30 percent reduction in current emissions levels. However, CARB has discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that are not anticipated to significantly increase emissions. Under AB 32, CARB must adopt regulations to achieve reductions in GHG to meet the 1990 emissions cap by 2020.

Climate Change Scoping Plan

AB 32 required CARB to develop a Scoping Plan that describes the approach California will take to reduce GHG to achieve the goal of reducing emissions to 1990 levels by 2020. The Scoping Plan was first approved by CARB in 2008 and must be updated every five years. The initial AB 32 Scoping Plan contains the main strategies California will use to reduce the GHG that cause climate change. The initial Scoping Plan has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and nonmonetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 program implementation fee regulation to fund the program. In August 2011, the initial Scoping Plan was approved by CARB.

The 2013 Scoping Plan Update builds upon the initial Scoping Plan with new strategies and recommendations. The 2013 Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The 2013 Update defines CARB climate change priorities for the next five years and sets the groundwork to reach California's long-term climate goals set forth in Executive Orders S-3-05 and B-16-2012. The 2013 Update highlights California progress toward meeting the near-term 2020 GHG emission reduction goals defined in the initial Scoping Plan. In the 2013 Update, nine key focus areas were identified (energy, transportation, agriculture, water, waste management, and natural and working lands), along with short-lived climate pollutants, green buildings, and the cap-and-trade program. On May 22, 2014, the First Update to the Climate Change Scoping Plan was approved by the Board, along with the finalized environmental documents. The 2017 Scoping Plan, approved on December 14, 2017, outlines options to meet California’s aggressive goals to reduce GHGs by 40 percent below 1990 levels by 2030.

In November of 2022, CARB released the Final 2022 Scoping Plan Update to provide a path to achieving carbon neutrality no later than 2045.[71]

71 California Air Resources Board, *Draft 2022 Scoping Plan Update*, May 10, 2022, https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan#:~:text=The%20Draft%202022%20Scoping%20Plan,neutrality%20no%20later%20than%202045

Executive Order No. B-30-15

On April 29, 2015, Executive Order No. B-30-15 was issued to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. Executive Order No. B-30-15 sets a new, interim, 2030 reduction goal intended to provide a smooth transition to the existing ultimate 2050 reduction goal set by Executive Order No. S-3-05 (signed by Governor Schwarzenegger in June 2005). It is designed so State agencies do not fall behind the pace of reductions necessary to reach the existing 2050 reduction goal. Executive Order No. B-30-15 orders "All State agencies with jurisdiction over sources of GHG emissions shall implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 targets." The Executive Order also states that "CARB shall update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent." The CARB is currently moving forward with a second update to the Climate Change Scoping Plan to reflect the 2030 reduction target. The updated Scoping Plan will provide a framework for achieving the 2030 target. In September of 2016, the AB 32 was extended to achieve reductions in GHG of 40 percent below 1990 levels by 2030. The new plan, outlined in SB 32, involves increasing renewable energy use, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

Federal Vehicle Standards

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014 through 2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.

In August 2016, the USEPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program. On September 27, 2019, the USEPA and the NHTSA published the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program." (84 Fed. Reg. 51,310 (Sept. 27, 2019.) The Part One Rule revokes California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. On March 31, 2020, the USEPA and NHTSA finalized rulemaking for SAFE Part Two, which sets CO_2 emissions standards and corporate average fuel economy (CAFE) standards for passenger vehicles and light duty trucks, covering model years 2021 through 2026.

Federal Aviation Standards

The USEPA and the FAA traditionally work within the standard setting process of the International Civil Aviation Organization's (ICAO's) Committee on Aviation Environmental Protection (CAEP). The ICAO/CAEP leads the effort to establish international emission standards and related requirements that individual nations later adopt into domestic law.

In 2016, the ICAO/CAEP agreed on the first-ever international standards to regulate CO_2 emissions from aircraft. In the same year, the USEPA formally announced that GHG emissions from certain classes of aircraft engines contribute to climate change.[72] In 2017, the ICAO adopted a new aircraft CO_2 emission standard intended to reduce the impact of aviation GHG emissions on the global climate. The USEPA adopted the same GHG emissions standard on January 11, 2021, the first aircraft GHG-related standard in U.S. history.[73] The standard applies to civil subsonic jet aircraft and larger civil subsonic propeller-driven aircraft designed after January 2020 or in production by 2028.

On November 15, 2021, the USEPA filed a motion to govern in the litigation on a rule that put in place commercial aircraft GHG emission standards, which USEPA promulgated in early 2021. That rule implemented the historic international agreement the Obama Administration negotiated in 2016 through ICAO to set the first-ever GHG emission standards for airplanes.

At the same time, in order to effectively address the climate crisis, the Biden Administration recognizes more action is necessary across the transportation sector and in the aviation sector specifically to significantly reduce GHG emissions. As such, the U.S. will press for ambitious new international CO_2 standards at the upcoming round of ICAO negotiations. The Biden Administration announced a series of actions aimed at boosting the development of sustainable aviation fuel and released the U.S. Aviation Climate Action Plan at COP26.[74]

Greenhouse Gas Regional Emission Estimates

In 2019, the United States emitted about 6,558 million metric tons of CO_2e. Emissions increased from 2018 to 2019 by 1.7 percent. This decrease was driven largely by a decrease in emissions from fossil fuel

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72 United States Environmental Protection Agency, Final Rule for Finding That Greenhouse Gas Emissions From Aircraft Cause or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health and Welfare, (August 15, 2016), https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-finding-greenhouse-gas-emissions-aircraft

73 United States Environmental Protection Agency, Control of Air Pollution From Airplanes and Airplane Engines: GHG Emission Standards and Test Procedures, (January 11, 2021), https://www.epa.gov/regulations-emissions-vehicles-and-engines/control-air-pollution-airplanes-and-airplane-engines-ghg

74 United States Environmental Protection Agency, Statement on Airplane Greenhouse Gas Emissions Standards Litigation, https://www.epa.gov/regulations-emissions-vehicles-and-engines/statement-airplane-greenhouse-gas-emissions-standards

combustion resulting from a decrease in total energy use in 2019 compared to 2018 and a continued shift from coal to natural gas and renewables in the electric power sector.[75] GHG emissions in 2018 (after accounting for sequestration from the land sector) were 10.2 percent below 2005 levels. GHG emissions in 2019 (after accounting for sequestration from the land sector) were 13 percent below 2005 levels.

According to the USEPA, a shift from coal to natural gas and the use of renewables in the electric power sector largely drove the reduction. In 2019, the transportation sector (i.e., motor vehicles, aircraft, trains, and ships/boats) contributed 1,876 million metric tons (approximately 29 percent of total emissions) of CO_2e to those 6,558 million metric tons, with aircraft emissions representing approximately ten percent of the transportation sector's emissions (i.e., approximately 188 million metric tons of CO_2e).[76]

In 2019, California emitted approximately 418.2 million metric tons of CO_2e, 7.0 million metric tons of CO_2e lower than 2018 levels and 12.8 million metric tons of CO_2e below the 2020 GHG Limit of 431 million metric tons of CO_2e).[77] Consistent with recent years, these reductions have occurred while California's economy has continued to grow and generate jobs. The transportation sector remains the largest source of GHG emissions in the state with 40 percent of the emissions in 2019 but saw a decrease in emissions compared to 2018.[78]

Emissions from the electricity sector account for 14 percent of the inventory and showed a decrease. California in 2019 used more electricity from zero-GHG sources (for the purpose of the GHG inventory, these include hydro, solar, wind, and nuclear energy) than from GHG-emitting sources for both in-state generation and total (in-state plus imports) generation. The industrial sector has seen steady emissions in the past few years and remains at 21 percent of the inventory.[79]

Thresholds of Significance

To date, national standards have not been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions

75 United States Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks*, April 2021, https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2019

76 United States Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks, April 2021, https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks

77 California Air Resources Board, *Emissions Trends Report 2000-2019 (2021 Edition)*, https://ww2.arb.ca.gov/ghg-inventory-data

78 California Air Resources Board, *Emissions Trends Report 2000-2019 (2021 Edition)*, https://ww2.arb.ca.gov/ghg-inventory-data

79 California Air Resources Board, *Emissions Trends Report 2000-2019 (2021 Edition)*, https://ww2.arb.ca.gov/ghg-inventory-data

reduction at the Project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

The standards of significance applied to the analysis of potential GHG impacts are based on Appendix G of the *CEQA Guidelines.* According to Appendix G evaluation thresholds, the Proposed Project would be considered to have significant air quality impacts if it were to:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant effect on the environment; or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The City of Ontario has not adopted a numerical significance threshold for assessing impacts related to GHG emissions and has not formally adopted a qualified local plan for reducing GHG emissions. Nor have SCAQMD, OPR, CARB, CAPCOA, or any other State or regional agency adopted a numerical significance threshold for assessing GHG emissions that is applicable to the Proposed Project. Assessing the significance of a project's contribution to cumulative global climate change involves: (1) developing pertinent inventories of GHG emissions, and (2) considering project consistency with applicable emission reduction strategies and goals.

To identify if the Proposed Project would "generate GHG, either directly or indirectly, that may have a significant impact on the environment" this analysis looks at whether the Proposed Project would result in a net increase in GHG emissions. This approach reflects the fact that neither USEPA nor CARB nor SCAQMD have established a numeric threshold for determining the significance of GHG emissions.

The estimated construction GHG emissions for the Proposed Project are 7,248 metric tons of CO_2e. Given the six years of construction, the annual construction GHG emissions for the Proposed Project are 1,208 metric tons of CO_2e. As indicated, the 30-year amortized construction related GHG emissions would be approximately 242 metric tons of CO_2e per year. The results of the comparison are presented in **Table 27: Estimated Construction Greenhouse Gas Emissions for the Proposed Project (metric tons of CO_2e).**

Table 27
Estimated Construction Greenhouse Gas Emissions for the Proposed Project (metric tons of CO_2e)

Construction Year	metric tons of CO_2e
2023	2,161
2024	1,737
2025	469
2026	166
2027	1,213
2028	1,501
Total Construction Emissions	**7,248**
Total 30-Year Amortized Construction Emissions	**242**

Source: RCH Group, 2022

Table 28: Estimated Annual Operational GHG Emissions (metric tons of CO_2e) – Baseline presents the GHG emissions from aircraft for the Baseline Condition (2021).

Table 28
Estimated Annual Operational GHG Emissions (metric tons of CO_2e) – Baseline

metric tons of CO_2e
115,733

Source: RCH Group, 2022

Table 29: Estimated Annual Operational GHG Emissions (metric tons of CO_2e) – Without Project presents the GHG emissions from aircraft without the Proposed Project.

Table 29
Estimated Annual Operational GHG Emissions (metric tons of CO_2e) – Without Project

Condition	metric tons of CO_2e
Phase 1	129,057
Phase 2	142,451

Source: RCH Group, 2022

Table 30: Estimated Annual Operational GHG Emissions (metric tons of CO_2e) – With Project presents the GHG emissions from aircraft and other project-related sources with the Proposed Project.

Table 30
Estimated Annual Operational GHG Emissions (metric tons of CO_2e) – With Project

Condition	metric tons of CO_2e
Phase 1	195,289
Phase 2	243,548

Source: RCH Group, 2022

As with the criteria air pollutant emissions inventory, in order to determine the Proposed Project-related operational impacts associated with GHG emissions, the total emissions associated with the Proposed Project that would occur in Phase 1 and Phase 2 including other aircraft operations not associated with the project were compared to the Baseline emissions. The difference between these two conditions was used to determine the significance of the Proposed Project.

- Phase 1 With Project operations compared to the Baseline Condition
- Phase 2 With Project operations compared to the Baseline Condition

Table 31: Estimated Annual Operational GHG Emissions (metric tons of CO_2e) – With Project Compared to Baseline presents the annual GHG emissions during Phase 1 and 2 when comparing the With Project and Baseline. The Proposed Project operations would result in an increase in GHG emissions of 79,556 metric tons of CO_2e annually for Phase 1 and 127,815 metric tons of CO_2e annually for Phase 2 when compared to the Baseline. A majority of the Proposed Project GHG emissions are related to aircraft operations. Based on FAA's AEDT and when comparing With Project to Baseline, the estimated aircraft fuel usage for Phase 1 is 6,437,288 gallons and for Phase 2 is 10,642,404 gallons.

Therefore, the Proposed Project would result in a significant and unavoidable impact from operational GHG emissions.

Table 31
Estimated Annual Operational GHG Emissions (metric tons of CO_2e) – With Project Compared to Baseline

Source	Phase 1	Phase 2
Aircraft	62,283	103,019
APU	994	1,592
GSE	82	-
Employee Motor Vehicles	3,902	3,622
Delivery Trucks	1,528	2,064
Emergency Generators	353	494
Area Sources	<1	<1
Electrical	9,525	15,770
Waste	317	446
Water	574	807
Total Operational Emissions	**79,556**	**127,815**

Source: RCH Group, 2022

However, this comparison of the project to the Baseline is influenced by factors that are not attributable to the Project itself. Specifically, the comparison contains future aircraft operations from background growth that are projected to occur with or without the Proposed Project. In order to remove the contribution of background aircraft growth, for CEQA purposes, a second comparison was provided for the Proposed Project and without Proposed Project. This comparison was made for informational purposes only.

- Phase 1 With Project operations compared to the Phase 1 Without Project operations
- Phase 2 With Project operations compared to the Phase 2 Without Project operations

Table 32: Estimated Annual Operational GHG Emissions (metric tons of CO_2e) – With Project Compared to Without Project presents the annual GHG emissions during Phase 1 and 2 when comparing the With Project and Without Project. The Proposed Project operations would result in an increase in GHG emissions of 66,232 metric tons of CO_2e annually for Phase 1 and 101,096 metric tons of CO_2e annually for Phase 2 when compared to the Without Project. Based on FAA's AEDT and when comparing With Project to Without Project, the estimated aircraft fuel usage for Phase 1 is 5,081,761 gallons and for Phase 2 is 7,924,196 gallons.

The employee vehicles and delivery trucks would use approximately 437,890 gallons of gasoline and 150,560 gallons of diesel during Phase 1, respectively. The employee vehicles and delivery trucks would use approximately 406,610 gallons of gasoline and 203,380 gallons of diesel during Phase 2, respectively.

The estimated annual fuel usage for the GSE is 7,975 gallons of diesel during Phase 1. The estimated annual fuel usage, assuming each generator operates of 50 hours per year (2 hours per day) is approximately 34,760 gallons of diesel fuel during Phase 1 and approximately 48,660 gallons of diesel fuel during Phase 2.[80] Phase 1 of the proposed Project would require approximately 8.5 MW of power with Phase 2 requiring another 4 MW of power. At full development, the Proposed Project would require approximately 12.5 MW of power.

Table 32
Estimated Annual Operational GHG Emissions (metric tons of CO_2e) – With Project Compared to Without Project

Source	Phase 1	Phase 2
Aircraft	48,959	76,300
APU	994	1,592
GSE	82	-
Employee Motor Vehicles	3,902	3,622
Delivery Trucks	1,528	2,064
Emergency Generators	353	494
Area Sources	<1	<1
Electrical	9,525	15,570
Waste	317	446
Water	574	807
Total Operational Emissions	**66,232**	**101,096**

Source: RCH Group, 2022

The Proposed Project would include a 1.5-MW Solar PV Panel system on the rooftop of the Cargo Sorting Building and Parking Structure. Approximately 20 percent of the electrical usage (2,378,973 kilowatts)[81] would be generated by the Solar PV Panel system.

12.0 ODOR IMPACTS

The potential for the Proposed Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include agricultural uses (livestock and farming), wastewater treatment plants, food processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass molding facilities. The Proposed Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the Proposed Project may result from construction equipment exhaust and the application of asphalt and

80 Vender Specifications for Standby Generator, https://www.cat.com/en_US/products/new/power-systems/electric-power.html

81 Igssolar, Solar Energy Analysis for DHL Southern California, December 15, 2021.

architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the Proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. The Proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the Proposed Project construction and operations would be less than significant and no mitigation is required.

13.0 CUMULATIVE IMPACTS

The Airport serves an important role in Southern California's supply chain network. The Airport has been modernizing and implementing infrastructure upgrades to meet local and regional demands.

The SCAQMD *CEQA Air Quality Handbook* states: "[f]rom an air quality perspective, the impact of a project is determined by examining the types and levels of emissions generated by the project and its impact on factors that affect air quality. As such, projects should be evaluated in terms of air pollution thresholds established by the District." According to the SCAQMD, if an individual project results in air emissions of criteria pollutants that exceed the SCAQMD's recommended daily thresholds for project specific impacts, then the project would also result in a cumulatively considerable net increase of these criteria pollutants.

The OIAA recently published a Draft SEIR for the rehabilitation of ONT's Runway 8R-26L and associated airfield improvements. These improvements are proposed so that the airfield meets current FAA standards, safety is improved, and the efficiency of the airfield is enhanced. To implement the improvements, temporary runway closures would be required and the only change in the use of the airfield would result from FAA Air Traffic Control imposed restrictions on the use of Contra Flow operations during nighttime hours (10 p.m. to 7 a.m.).

The Runway 8R-26L runway rehabilitation/reconstruction project is scheduled to begin in 2023 and end in 2025, one of the same years for which the Proposed Project was evaluated. The Runway 8R-26L runway rehabilitation/reconstruction project would not increase operational activities at the Airport and would result in a less than significant impact from construction emissions.

Generally, cumulative air quality conditions in the South Coast Air Basin are considered significant, as the Air Basin is in nonattainment with certain federal and state ambient air quality standards. SCAQMD has provided guidance on an acceptable approach to addressing the cumulative impacts issue for air quality. This guidance states as follows: "As a lead agency, the SCAQMD uses the same significance thresholds for project-specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or Environmental Impact Report … Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable … Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

During construction, the Proposed Project's daily criteria pollutant emissions would not exceed SCAQMD thresholds. Implementation of emission reduction measures would further reduce potential construction-related Proposed Project's daily emissions. As such, air quality impacts from the construction of the Proposed Project would be less than significant and would not result in a cumulatively considerable increase of air emissions during the construction period. Construction activities would not exceed the ambient air quality standards at nearby receptors and cumulative impacts would be less than significant.

During operations, the Proposed Project's daily criteria pollutant emissions would exceed SCAQMD thresholds for CO, VOC, SO_2, and NO_x. As such, impacts from the Proposed Project would be significant and unavoidable and would result in a cumulatively considerable increase of air emissions during operations. Operations would not exceed the ambient air quality standards at nearby receptors. The maximum cancer risk from construction and operations for existing sensitive receptors would be less than the SCAQMD threshold of 10 per one million persons. The Proposed Project would result in a significant and unavoidable impact from operational GHG emissions.

Based on SCAQMD methodology, the Proposed Project's operational emissions would represent a cumulatively considerable contribution, and thus the Project would also result in a cumulatively significant impact.

14.0 SUMMARY

In summary, daily construction emissions would not exceed the SCAQMD significance thresholds, as described in **Section 7**. These impacts are largely due to off-road construction equipment and to a much lesser degree due to offsite construction haul trucks. As shown in **Section 8**, operational emissions would exceed the SCAQMD significance thresholds for CO, VOC, NOx, and SO_2. However, as presented in **Section 9**, the ambient air concentration impacts due to project construction and operations would be less than significant at all nearby receptors for all pollutants. As shown in **Section 10**, the incremental health impacts associated with construction activities and operations would not exceed significance thresholds at residences, offsite worker, and onsite worker locations. As shown in **Section 11**, the GHG emissions associated with construction and operational activities would be significant and unavoidable.

Attachment A

Emissions Inventory and Dispersion Modeling Methodology and Assumptions

The information in this attachment supplements the air quality analysis and is comprised of the following:

- **Operational Emissions Inventory and Dispersion Modeling Supporting Data** – Describes the data and methodologies used to prepare emission inventories and perform air pollutant dispersion analysis to evaluate the Proposed Project on the criteria air pollutants/pollutant precursors.

- **Air Quality Modeling Protocol** – Provides documentation of the Ontario International Airport Cargo Development Air Quality Modeling Protocol, which has been reviewed by the South Coast Air Quality Management District (SCAQMD).

Emission Inventories

For the assessment of the Proposed Project, daily and annual emissions of carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 micrometers in diameter (coarse or PM_{10}), and particulate matter less than 2.5 micrometers in diameter (fine or $PM_{2.5}$) were prepared. Although lead is a criteria pollutant, it was not evaluated because the Proposed Project would not involve piston aircraft and the use of aviation gasoline (avgas), a common source of lead emissions and would have a negligible impact on lead levels in the South Coast Air Basin. To evaluate O_3, estimates of volatile organic compounds (VOC) and nitrogen oxides (NO_x)—the precursors to the air pollutant O_3—were prepared. Emission inventories were also prepared for hazardous air pollutants (HAP) and greenhouse gases (GHG).

The operational emissions inventories were evaluated using the following regulatory models:

- California Air Resources Board's (CARB) EMFAC[1] emissions inventory model. EMFAC is the latest emission inventory model that calculates emission inventories and emission rates for motor vehicles operating on roads in California. This model reflects CARB's current understanding of how vehicles travel and how much they emit. EMFAC can be used to show how California motor vehicle emissions have changed over time and are projected to change in the future.

1 California Air Resources Board, EMFAC2021 User's Guide, January 15, 2021, https://ww2.arb.ca.gov/sites/default/files/2021-01/EMFAC202x_Users_Guide_01112021_final.pdf

- CARB OFFROAD[2] emissions inventory model. OFFROAD is the latest emission inventory model that calculates emission inventories and emission rates for off-road equipment such as loaders, excavators, and off-road haul trucks operating in California. This model reflects CARB's current understanding of how equipment operates and how much they emit. OFFROAD can be used to show how California off-road equipment emissions have changed over time and are projected to change in the future.

- United States Environmental Protection Agency (USEPA) AP-42, Compilation of Air Pollutant Emission Factors, has been published since 1972 as the primary compilation of USEPA's emission factor information. It contains emission factors and process information for more than 200 air pollution source categories. A source category is a specific industry sector or group of similar emitting sources. The emission factors have been developed and compiled from source test data, material balance studies, and engineering estimates.[3]

The aircraft emission inventories were prepared using Version 3d of the Federal Aviation Administration's (FAA's) Aviation Environmental Design Tool (AEDT, Version 3c).[4] The following describe the data used to prepare the emission estimates for aircraft, ground support equipment (GSE), auxiliary power units (APU), motor vehicles (i.e., employee vehicles and delivery trucks), and stationary sources (i.e., emergency generators).

Aircraft Fleet Mix

The number of aircraft operations and the aircraft fleet mix for the Baseline Condition (2021), Phase 1 (2025) and Phase 2 (2029) are presented in **Table A-1**.[5] In addition to the number of aircraft operations, aircraft fleet mix, and engine assignments, AEDT uses departure stage lengths (manifested as departure aircraft weight). The stage lengths assumed in the air quality analysis were a weighted average of the stage lengths used to prepare the aircraft noise analysis.[6]

2 California Air Resources Board, OFFROAD Instructions, http://www.arb.ca.gov/msprog/ordiesel/info_1085/oei_write_up.pdf

3 United States Environmental Protection Agency, AP 42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I, https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emissions-factors

4 Federal Aviation Administration, Aviation Environmental Design Tool (AEDT) Users Guide, September 2017, https://aedt.faa.gov/.

5 An aircraft operation is either a landing or a takeoff; a landing/takeoff cycle or LTO equals 2 operations

6 Aircraft operations which are not directly part of the proposed project are included in the analysis because the project aircraft results in changes in taxi movements and speeds for all airport aircraft (passenger and other cargo operations).

Table A-1
Aircraft Operations/Fleet Mix/Engine Assignments

		Number of Annual Operations			Departure Stage Length		
Aircraft	Engine	Baseline Condition	Phase 1 (2025)	Phase 2 (2029)	Baseline Condition	Phase 1 (2025)	Phase 2 (2029)
Airbus A320-NEO	LEAP-1A26/26E1	1,048	1,622	824	3	3	3
Airbus A321-NEO	LEAP-1A35A/33/33B2/32/30	-	2,592	6,690	-	2	2
Airbus A321-NEO	PW1133G-JM	-	808	1,478	-	2	2
Airbus A300F4-600 Series	PW4158	5,768	6,226	6,750	3	3	3
Airbus A319-100 Series	CFM56-5B6/2P	454	522	708	1	2	2
Airbus A319-100 Series	CFM56-5B7/P	-	-	506	-		2
Airbus A319-100 Series	CFM56-5B9/2P	-	-	436	-		2
Airbus A319-100 Series	V2522-A5	558	-	-	1		-
Airbus A320-200 Series	V2527-A5	678	730	634	3	2	3
Airbus A320-200 Series	CFM56-5B4/2	1,450	1,156	820	3	2	3
Airbus A320-200 Series	CFM56-5B4/3	526	-	-	3		-
Airbus A320-200 Series	V2527-A5	944	830	750	3	2	3
Airbus A321-200 Series	CFM56-5B3/P	-	-	496	-		3
Airbus A321-100 Series	V2530-A5	474	-	-	2		-
Airbus A350-900 series	Trent XWB-84	634	-	906	8		8
Raytheon Beech 1900-C	PT6A-67B	516	556	602	1	1	1
Raytheon Super King Air 300	PT6A-60AG	-	466	-		1	-
Boeing 737-7	LEAP-1B23	-	-	8,634			1
Boeing 737-8	LEAP-1B27	-	4,602	3,990		3	2
Boeing 737-8	LEAP-1B28B2C	-	4,714	6,122		3	2
Boeing 737-9	LEAP-1B28/28B2/28B1/28B3	-	460	922		1	1
Boeing 737-9	LEAP-1B28B2C	-	-	744			1
Boeing 737-700 Series	CFM56-7B20	15,484	13,808	8,926	1	1	1
Boeing 737-700 Series	CFM56-7B22	1,462	1,302	838	1	1	1
Boeing 737-700 Series	CFM56-7B24	5,908	5,258	3,390	1	1	1
Boeing 737-700 Series	CFM56-7B24/3	1,582	1,408	908	1	1	1
Boeing 737-800 Series	CFM56-7B24	2,440	1,030	538	2	2	2
Boeing 737-800 Series	CFM56-7B27	5,166	2,994	1,962	2	2	2
Boeing 737-800 Series	CFM56-7B24/3	1,034	-	-	2		-
Boeing 737-800 Series	CFM56-7B26	-	434	472	-	2	2
Boeing 737-800 Series	CFM56-7B27E/B1	3,870	4,168	4,518	2	2	2

Aircraft	Engine	Number of Annual Operations			Departure Stage Length		
		Baseline Condition	Phase 1 (2025)	Phase 2 (2029)	Baseline Condition	Phase 1 (2025)	Phase 2 (2029)
Boeing 737-900 Series	CFM56-7B26/3	466	-	-	2	-	-
Boeing 737-900-ER	CFM56-7B27E/B1	2,356	1,174	1,052	2	2	3
Boeing 747-400 Series Freighter	CF6-80C2B1F	744	806	862	4	4	4
Boeing 747-8F	GEnx-2B67	926	1,000	1,084	4	4	4
Boeing 757-200 Series Freighter	RB211-535E4	2,410	2,602	2,822	3	3	3
Boeing 757-200 Series Freighter	PW2040	2,120	2,288	2,444	3	3	3
Boeing 767-200 Series Freighter	CF6-80A	1,374	1,484	1,608	4	4	4
Boeing 767-200 Series Freighter	CF6-80A2	838	904	980	4	4	4
Boeing 767-200 Series Freighter	JT9D-7R4D, -7R4D1	-	-	438	-	-	4
Boeing 767-300 ER Freighter	CF6-80C2B6F	11,902	16,278	17,584	3	3	3
Boeing 767-300 ER Freighter	CF6-80C2B7F	434	472	568	3	3	3
Boeing 767-300 ER Freighter	PW4062	1,074	1,160	1,400	3	3	3
Boeing 777-200-LR	GE90-110B1	-	990	1,074	-	3	3
Boeing 777-300 ER	GE90-115B	-	426	-	-	8	-
Raytheon Beech 99	PT6A-28	2,336	2,522	2,734	1	1	1
Cessna 172 Skyhawk	IO-360-B	2,122	2,480	2,296	1	1	1
Cessna 206	TIO-540-J2B2	440	480	472	2	2	2
Cessna 208 Caravan	PT6A-114A	5,730	6,194	6,676	1	1	1
Gulfstream G400	JT15D-1 series	-	490	542	-	1	1
Cessna 525C Citation Jet	UNKNOWN	-	462	614	-	1	1
Cessna 525 Citation Jet	JT15D-1 series	506	694	622	1	1	1
Cessna 560 Citation Excel	PW530	662	960	950	1	1	1
Cessna 750 Citation X	AE3007C	496	696	660	2	2	2
Bombardier Challenger 300	AE3007A1	698	1,094	1,200	2	2	2
Bombardier Challenger 600	CF34-3B/-3B1	650	630	550	1	1	1
Bombardier CRJ-200	CF34-3A1	2,940	1,916	-	1	1	-
Bombardier CRJ-900	CF34-8C5	2,316	2,168	1,376	1	1	1
Boeing MD-10-1 Freighter	CF6-6D	880	-	-	2	-	-
Embraer EMB120 Brasilia	PW118	564	608	660	1	1	2
Embraer ERJ145	AE3007A1/1	-	860	968	-	1	1
Embraer ERJ175-LR	CF34-8E5	1,310	1,218	3,208	2	2	2
Embraer ERJ175	CF34-8E5	1,600	1,490	1,290	2	2	2
Dassault Falcon 900	TFE731-3	438	484	-	2	2	-

Aircraft	Engine	Number of Annual Operations			Departure Stage Length		
		Baseline Condition	Phase 1 (2025)	Phase 2 (2029)	Baseline Condition	Phase 1 (2025)	Phase 2 (2029)
Dassault Falcon 50	TFE731-3	578	620	678	2	2	2
Boeing MD-11 Freighter	CF6-80C2D1F	1,876	1,328	1,492	3	3	3
Boeing MD-11 Freighter	PW4460	1,418	934	1,128	3	3	3
Boeing MD-11	CF6-80C2D1F	924	748	524	3	3	3
Boeing MD-11 Freighter	PW4062	1,718	1,174	1,296	3	3	3
Piper PA-31 Navajo	TIO-540-J2B2	590	638	692	1	1	1
Pilatus PC-12	PT6A-67B	-	440	-	-	1	-
Raytheon Premier I	JT15D-1 series	594	604	454	1	1	1
Cirrus SR22	TIO-540-J2B2	-	424	560	-	1	1
	Without Project Subtotal	**106,026**	**117,626**	**127,122**			
Boeing 737-400 Series Freighter	CFM56-3-B1	-	2,496	3,744	-	2	2
Boeing 747 8F	GEnx-2B67	-	1,248	2,496	-	7	6
Boeing 767-200 Series Freighter	CF6-80A	-	1,872	3,120	-	3	3
Boeing 767-300 ER Freighter	CF6-80C2B7F	-	1,872	3,120	-	2	2
Boeing 777 Freighter	GE90-110B1	-	4,368	6,240	-	6	6
Alice Eviation	Electric	-	1,872	1,872	-	1	1
	Project Subtotal	-	**13,728**	**20,592**			
	Grand Total	**106,026**	**131,354**	**147,714**			
Sources: FAA, Operations Network (OPSNET), January 2022 (Actuals), ONT ANOMS, SACC projected operations, and HNTB Analysis, 2022.							

With the exception of the number of operations, and for consistency, the aircraft operational data (i.e., fleet, aircraft engine assignments, and runway use) input to the AEDT were data developed in support of the noise analysis. Aircraft with at least 183 operations annually (more than 0.5 operations daily) were retained in the fleet mix for air quality analysis as they represent most of the operations. The retained operations were scaled up to match the total number of operations developed in the fleet mix. The average weighted departure stage lengths were applied. Default GSE and APU assignments in AEDT were applied. Because it is customary for criteria air pollutant and pollutant precursor inventories to be reported in tons on an annual basis, the number of operations were factored to reflect the actual annual (year 2019/2020) and future forecast (year 2023, 2024, and 2025) level of operations for the air quality analysis.

Table A-2 presents the aircraft operations (i.e., aircraft type, engine assignments[7], stage lengths[8], and daily/annual operations), associated with Phase 1 (2025) of the Proposed Action. **Table A-3** presents the aircraft operations associated with Phase 2 (2029) of the Proposed Action.

Table A-2
Proposed Action Aircraft Operations – Phase 1 (2025)

Aircraft Description	Engine	Departure Stage Length	Annual Arrivals	Annual Departures	Daily Arrivals	Daily Departures
Boeing 737-400 Series Freighter	CFM56-3-B1	2	1,248	1,248	4	4
Boeing 747 8F	GEnx-2B67	7	624	624	2	2
Boeing 767-200 Series Freighter	CF6-80A	3	936	936	3	3
Boeing 767-300 ER Freighter	CF6-80C2B7F	2	936	936	3	3
Boeing 777 Freighter	GE90-110B1	6	2,184	2,184	7	7
Alice Eviation	-	1	936	936	3	3
		Total	**6,864**	**6,864**	**22**	**22**
Sources: SACC projected operations, 2022.						

7 Recommendations from both the FAA and Airlines for America.

8 Great circle distances to each destination were calculated and then matched to the stage length brackets in the FAA air quality model. The stage length was then weighted by the number of operations in each distance bracket to estimate the average stage length.

Table A-3
Proposed Action Aircraft Operations – Phase 2 (2029)

Aircraft Description	Engine	Departure Stage Length	Annual Arrivals	Annual Departures	Daily Arrivals	Daily Departures
Boeing 737-400 Series Freighter	CFM56-3-B1	2	1,872	1,872	6	6
Boeing 747 8F	GEnx-2B67	6	1,248	1,248	4	4
Boeing 767-200 Series Freighter	CF6-80A	3	1,560	1,560	5	5
Boeing 767-300 ER Freighter	CF6-80C2B7F	2	1,560	1,560	5	5
Boeing 777 Freighter	GE90-110B1	6	3,120	3,120	10	10
Alice Eviation	-	1	936	936	3	3
		Total	**10,296**	**10,296**	**33**	**33**
Sources: SACC projected operations, 2022.						

Aircraft Emission Factors

AEDT default emission factors were used to estimate aircraft emissions for all aircraft.

Aircraft Time-in-Mode

Aircraft have four operational modes—approach, taxi, takeoff, and climbout. AEDT default times in mode were assumed for the approach, takeoff, and climbout modes. Times in mode for taxi-in (for arrivals) and taxi-out (for departures) for the Baseline Condition were obtained from the FAA's Aviation System Performance Metrics (ASPM) database. The taxi times for Phase 1 and Phase were developed by HNTB using airfield simulation models.

Except for ground-based taxi-in/taxi-out, including apron idling and departure runway queue delay, the default aircraft operating times in AEDT by aircraft mode (e.g., approach, take-off, climbout) were used. For the Baseline Conditions, airport-specific times-in-mode for taxi-in and taxi-out were obtained from the FAA Aviation System Performance Metrics (ASPM) database. It was determined that the Baseline Conditions airfield-wide average taxi-in time was 5 minutes and 17 seconds, and the average taxi-out time was 12 minutes and 11 seconds.

Future scenario taxi-in/taxi-out times were obtained through simulations using AirTOP. AirTOP is a gate-to-gate air traffic and airport simulation and assessment software. Future scenario simulations were set up in a way that was consistent with taxiway improvements in the future years. The taxi time outputs from future scenario simulations were compared with the Baseline Conditions simulation output and adjustment factors were calculated. The adjustment factors were applied to the Baseline Conditions annual average taxi times from FAA ASPM database to obtain the future scenario taxi times.[9]

[9] AirTOP is a planning tool used to recreate air traffic operations for the Terminal Control Area and the airfield system. It is an advanced network-based model in which the airspace and ground structures are defined with a respective sequence of waypoints and taxiway points. Aircraft movements are then conducted over the points and segments that make up the

Table A-4 provides the taxi-in/taxi-out time inputs to AEDT by year and alternative. As shown, the Proposed Project would increase the taxi-in times and taxi-out times. This is a result of the greater number of aircraft operations which decreases airfield taxi efficiency.

Table A-4
Aircraft Taxi Times

Condition	Alternative	Taxi Time (Minutes)	
		Taxi In (Arrivals)	Taxi Out (Departures)
Baseline		5:17	12:11
Phase 1 (2025)	No Action	5:20	13:36
	No Action with SACC	5:26	14:26
Phase 2 (2029)	No Action	5:21	13:39
	No Action with SACC	5:26	14:23
Source: FAA's Aviation System Performance Metrics (ASPM) database and HNTB, 2022			

Ground Support Equipment (GSE)/Auxiliary Power Units (APU)

GSE includes ground equipment essential for passenger and aircraft services, such as aircraft tractors, baggage tractors, belt loader, cargo loader, fuel hydrant cart. and various service trucks. APU provides power to sufficiently large commercial aircraft. In addition to aircraft emissions, GSE and APU are also sources of CO, VOC, NOx, SO_2, PM_{10}, and $PM_{2.5}$, among other pollutants.[10]

GSE/APU Emission Factors

Default AEDT emission factors were used to prepare emissions for GSE and APU.

GSE/APU Operating Time

Default AEDT operating times were used to prepare emissions for GSE and APU.

The Proposed Project would use electric GSE. The Proposed Project would provide aircraft gate power within the Project site which would reduce APU operating times to less than 26 minutes.

airspace and ground networks. Travel time and delay information is recorded by AirTOP as the input flights traverse the points and segments. To develop the baseline conditions, OIAA worked closely with FAA to accurately represent operations at ONT, which included many meetings with FAA Air Traffic Control Tower staff and ONT Operations staff to review assumptions on taxi routes, speeds, runway occupancy times, in-trail separations, use of airspace routes, runway operating configurations, and specific pilot behaviors. The baseline conditions simulation was calibrated by sharing simulation animations and output statistics with stakeholders for review and comment. Following several rounds of review, a well-calibrated model was established. Future scenario simulations were set up while incorporating potential future ONT projects (e.g., runway closures, temporary suspension of contra flow during construction, and taxiway improvements) in the future years.

10 APU/GSE associated with passenger, FedEx and UPS aircraft and other similar activities are not affected by the proposed project and therefore, were not included in the analysis.

Ground Access Vehicles

Project-related ground access vehicles include employee-owned vehicles and delivery trucks.[11] Emissions factors for this airport source were obtained from the EMFAC model. For the proposed project, electric charging stations would be provided in the employee and visitor parking lots, and truckyard. The motor vehicle fleet mix and fuel type were based on information within EMFAC. Employees would conduct 2,531 trips per day resulting in 35,402 miles per day during Phase 1 and 35,540 trips per day during Phase 2. Delivery trucks would conduct 150 trips per day resulting in 9,889 miles per day during Phase 1 (excluding fuel trucks during Phase 1 which were includes as ground support equipment with 48 trips per day at three miles per trip) and 224 trips per day resulting in 14,623 trips per day during Phase 2. Employee vehicles would travel 14 miles per trip. Full delivery trucks would travel 90.6 miles per trip during Phase 1 and 88.3 miles per trip during Phase 2. Empty delivery trucks would travel 14 miles per trip.

Project-related employee and delivery truck volumes per intersection/roadway segment were used to estimate the air quality impacts along nearby intersections/roadways

Stationary Sources

The Proposed Project requires that the entire facility be backed up on generator power to provide emergency power primarily for lighting and other emergency building systems. To accomplish this, it is estimated that seven 2.0-megawatt diesel-engine driven generators are required.[12]

Aircraft Engine Run-ups

Airlines routinely inspect and maintain their aircraft to ensure the safety of the traveling public. Each aircraft is on a stringent maintenance schedule based on its number of hours in operation. As part of this regularly scheduled maintenance, the FAA requires aircraft engine ground run-ups. Run-ups are routine aircraft engine maintenance tests that require the operation of an engine at various power settings for several minutes on the ground. The Airport provided detailed engine 2019 run-up logs. There were less than 100 run-ups during 2019. No Proposed Project aircraft operations would be expected to conduct engine run-up maintenance, and therefore, were not included in the analysis.

11 Airport passenger associated motor vehicles, terminal deliveries, FedEx and UPS delivery trucks, and other similar activities are not affected by the proposed project and therefore, will not be included in the analysis.

12 Passenger terminal (as well as FedEx and UPS) boilers, generators, and other stationary sources are not affected by the Proposed Project and therefore, were not included in the analysis.

Dispersion Modeling

Dispersion is the process by which atmospheric pollutants spread due to wind and vertical stability. The base data for this type of analysis is emissions inventories. A dispersion model uses an emissions inventory to estimate concentrations of pollutants at specific locations. Dispersion models use hourly average meteorological data, terrain elevation data, and source emission release characteristics to compute downwind pollutant concentrations over periods that can range from one hour to one year.

The dispersion model used for the air quality analysis, USEPA's AERMOD (Version 21112), is state-of-the-art. Given the accuracy of the input data, the model results offer the best available estimates with which to predict ambient concentrations of air pollutants. AERMOD simulates point, area, volume, and line emissions sources. AERMOD was executed using regulatory default options for stack-tip downwash, buoyancy-induced dispersion, and final plume rise, default wind speed profile categories, default potential temperature gradients, and—except for an analysis that was performed to convert predicted concentrations of NO_x to concentrations of NO_2 —no pollutant decay.

The selection of the appropriate dispersion coefficients depends on the land use within three kilometers (km) of the project site. The types of land use were based on the classification method defined by Auer (1978), using pertinent United States Geological Survey (USGS) 1:24,000 scale (7.5 minute) topographic maps of the area. If the Auer land use types of heavy industrial, light-to-moderate industrial, commercial, and compact residential account for 50 percent or more of the total area, the USEPA *Guideline on Air Quality Models.*[13] recommends using urban dispersion coefficients; otherwise, the appropriate rural coefficients can be used. Per SCAQMD guidance, urban dispersion coefficients were applied within AERMOD. For this Proposed Project, all emissions sources were modeled with urban effects using the population of 2,035,210 for San Bernardino County.[14]

Aircraft Emission Release Characteristics

As stated previously, AERMOD simulates point, area, volume, and line emissions sources. AEDT was used to prepare the AERMOD input files and was used to develop the aircraft operational emissions sources as area sources.

AEDT aligns the y axis of the surface voxel grid[15] with the runway. The x spacing of the surface voxel grid is set to 20 meters and corresponds to the width of each area source. The y spacing of the voxel grid is

13 United States Environmental Protection Agency, *Guideline on Air Quality Models (Revised), 40 Code of Federal Regulations, Part 51, Appendix W,* November 2005

14 South Coast Air Quality Management District, *SCAQMD Modeling Guidance for AERMOD*, https://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance

15 A unit of graphic information that defines a point in three-dimensional space.

calculated based on the runway length and corresponds to the length of each area source. The result is a series of area sources along the runway and taxiways.

AEDT aligns the y axis of the three-dimensional voxel grid with the runway. The x spacing of the three-dimensional voxel grid is set to 20 meters and corresponds to the width of each airborne area source. The y spacing of the three-dimensional voxel grid is set to 200 meters and corresponds to the length of each airborne area source. AEDT then sets the emissions release height (12 meters) of the runway and airborne area sources. The result is a series of area sources along the airborne flight paths extending for miles beyond the runway ends.

The initial vertical dispersion parameter, Sigma-z describes the vertical concentration distribution at the source. The initial distribution is a Gaussian "bell-curve" whose meaning is the release height and whose standard deviation is equal to the Initial Sigma-z (4.1 meters). In dispersion, this provides the model with an initial finite concentration of pollutant.

AEDT produces raw hourly emissions (HRE files) for airborne operations, taxi operations, ground (runways) operations, and gate/apron operations. These hourly emissions are a function of the aircraft operations, operational profiles, runway usage, assigned taxiways, and meteorological data. AEDT also produces an AERMOD input file; the hourly emissions, input, and meteorological data are then used by AERMOD to estimate ambient concentrations at a select list of receptors.

Figure A-1 displays the modeling emission sources associated with aircraft operations, including gate/apron positions, taxiways, and airborne approach/climb out/takeoff. The airborne approach/climb out/takeoff elements extend well beyond the airport boundary and above the ground.

Meteorological Data

AERMOD uses both surface and upper air meteorological conditions. The dispersion modeling analysis used hourly meteorological data collected at Ontario International Airport for a five-year period (2012 through 2016) and provided by SCAQMD.[16] **Figure A-2** provides the wind rose for this time period. As shown, wind directions are dominantly from the west-southwest with average wind speed conditions of 6.4 miles per hour (2.9 meters per second). **Figure A-3** provides the wind speed distribution showing a large percentage of calm or light wind speeds.

16 South Coast Air Quality Management District, SCAQMD Modeling Guidance for AERMOD, https://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance

Figure A-1
Dispersion Modeling Aircraft Emission Source Locations

Figure A-2
Wind Rose for Ontario International Airport form 2012 through 2016

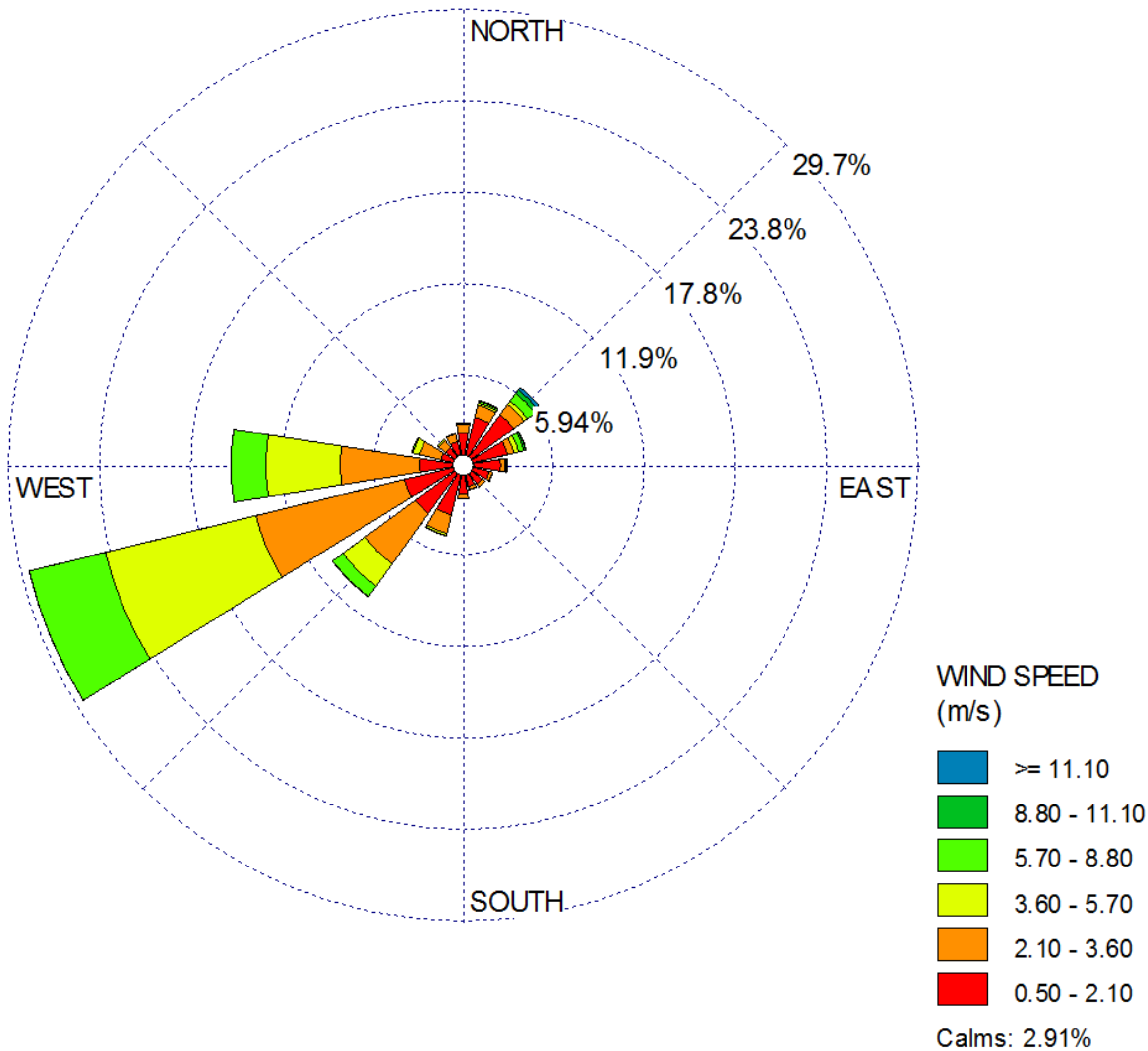
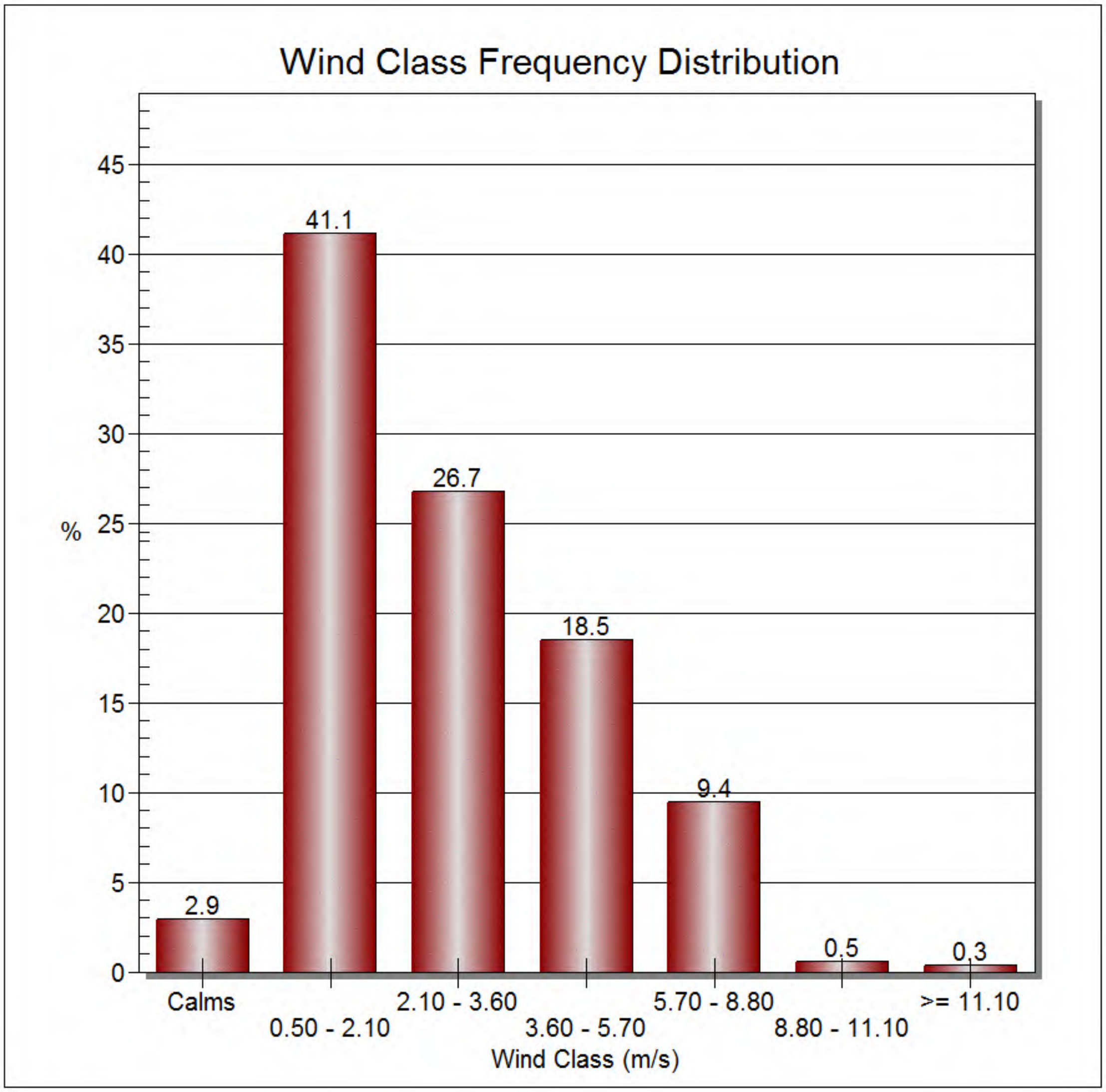


Figure A-3
Wind Speed Distribution for Ontario International Airport form 2012 through 2016



The term “atmospheric mixing height” generally describes the height above ground level where the mixing of most air pollutants in the ambient (i.e., outdoor) air occurs. Within the atmosphere, this height is determined by an assortment of environmental factors including temperature, humidity, solar radiation, wind speed, and topographic features on the ground (i.e., valleys, mountains, water bodies, etc.). The atmospheric mixing height is dynamic and moves up or down both spatially and temporally throughout the day, season, and year with corresponding changes in these abovementioned factors. The mixing height (i.e., the top of the layer of unstable or neutral air above ground) determines the limits of vertical transport and diffusion of pollutants. A value of 2,402 feet was used for the mixing height.[17] Notably, the mixing height is used by AEDT in the calculation of air pollutant/pollutant precursor emissions inventories. The mixing height value is not specifically used within the AERMOD dispersion model.

To determine the year of meteorological data that would result in the greatest predicted pollutant concentrations, a screening analysis was performed. Because it was anticipated that the predicted concentrations of NO_2 would be closest to the National Ambient Air Quality Standard (NAAQS), the screening analysis was performed for one-hour and annual NO_2 concentrations. The meteorological year resulting in the highest one-hour and annual NO_2 concentrations was the year 2013. This year was used to evaluate all pollutants and averaging periods for Baseline Condition, Phase 1, and Phase 2.[18]

Receptors

For the air quality dispersion analysis, concentrations were predicted at enough locations (referred to as receptors)[19] to identify maximum concentrations. Because the AEDT/AERMOD run time is significant when many receptors are evaluated, a strategy was developed to balance the number of receptors while optimizing the fidelity of the results. The following lists the types of receptors that were evaluated:

- **Boundary and Cartesian receptors** – Boundary receptors were in areas along the Airport boundary at a spacing of approximately 10 degrees. This distribution of receptors is standard when conducting an airport air quality assessment. Additionally, evenly receptors (known as Cartesian receptors) were placed beyond the boundary. **Figure A-4** displays the boundary and Cartesian

17 South Coast Air Quality Management District, Draft Aircraft Emissions Inventory for South Coast Air Quality Management District, August 2016, http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/aircraft-emissions-inventory-for-the-south-coast-air-quality-management-district.pdf

18 The emission distribution for NOx is like the emission distribution for CO, SO_2, PM_{10}, and $PM_{2.5}$ because most of the emissions result from aircraft and the temporal operational profiles for aircraft are the same regardless of pollutant. The one-hour and annual NO_2 concentration is worst-case for the same meteorological year. As such, the worst-case concentrations of CO, SO_2, PM_{10}, and $PM_{2.5}$ for both short- and long-term averaging periods occur in the same year. Of note, based on experience, the percentage of the airport/project contribution to the total concentration (airport/project plus background) are highest for NO_2 and the closest to the NAAQS compared to the other pollutants. Therefore, it is unlikely that use of a different year of meteorological data would substantially change the resulting conclusions for CO, SO_2, PM_{10}, or $PM_{2.5}$.

19 The term *receptor* generically describes outdoor land uses or activities which it can be reasonably expected that the public would occupy for a period ranging from one hour to one year.

receptors used in the ambient air quality standards analysis. Additional receptors may be assigned surrounding the location of the maximum concentration to further augment the receptor grid and in-line with the runway ends/beyond the Airport boundary at a spacing recommended within the Modeling Guidance for AERMOD.

- **Sensitive receptors** – Sensitive receptors include schools, parks, residential areas, and health-/day-care centers located in the vicinity of the Airport. **Figure A-5** displays the off-site worker receptors. Receptors were also placed to represent onsite workers within the passenger terminal areas), as shown in **Figure A-6**. **Figure A-7** displays the residential areas surrounding the Airport. **Figure A-8** displays the residential and school receptors used in the health risk assessment.

- **Worst-case receptors** – Worst-case receptors were also selected near air emissions sources such as near runway ends. These receptors represent sites where the pollutant concentrations are expected to be the highest and the public would reasonably be expected to occupy the area for a period of one hour or more.

The maximum project-related concentrations occur in-line and directly beyond the runway ends and nearest to the project site and along the Airport boundary. As such, receptors were generally limited to within two miles of the Airport boundary, in-line with the runway ends, and near the project site (i.e., on the south side of the Airport).

For the ambient air quality dispersion modeling, the height of each receptor was assumed to be ground level consistent with SCAQMD modeling guidance.

Figure A-4
Air Dispersion Modeling Boundary and Cartesian Receptors

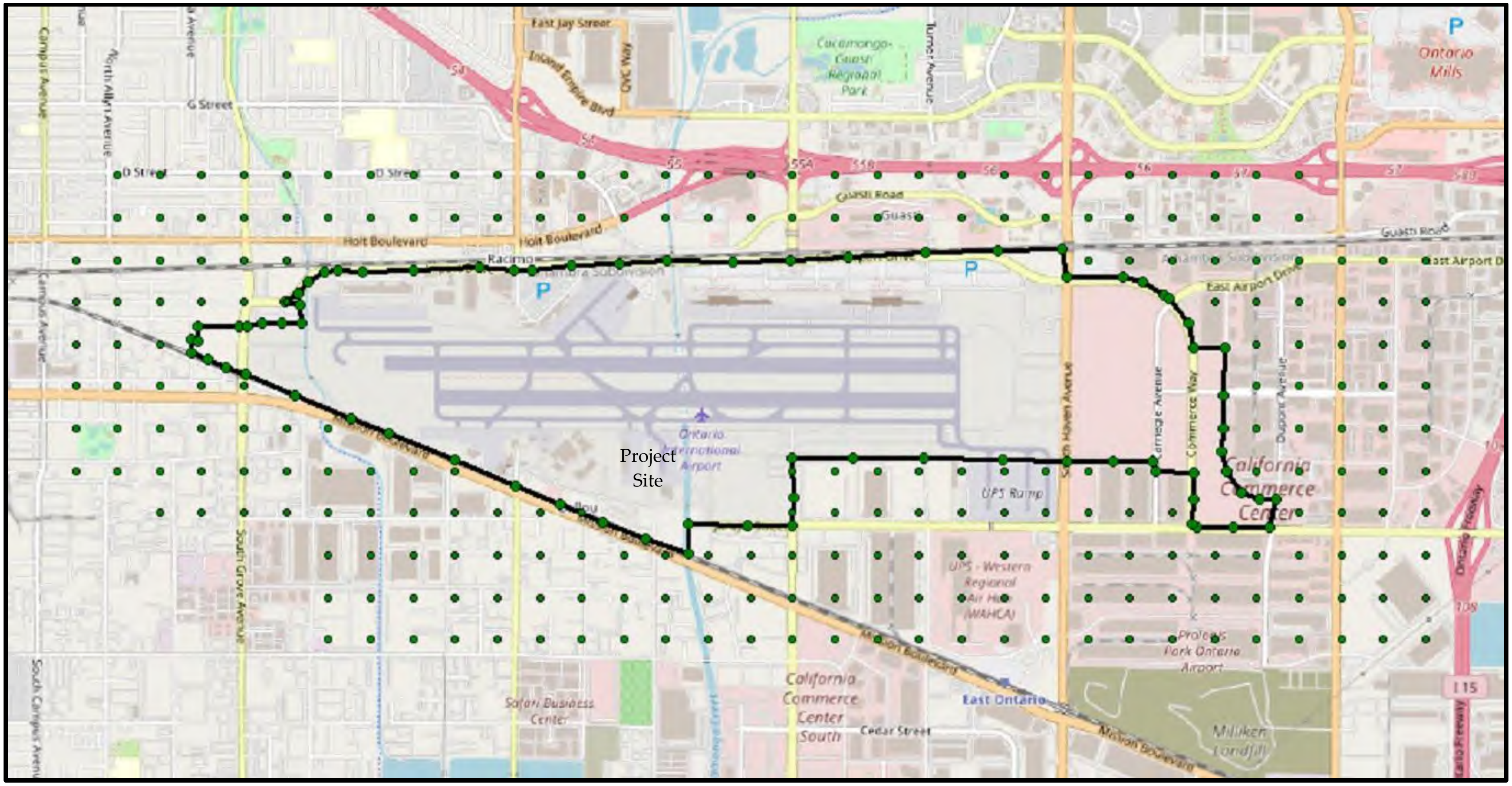


Figure A-5
Air Dispersion Modeling Off-Site Worker Receptors

Figure A-6
Air Dispersion Modeling Onsite Worker Receptors

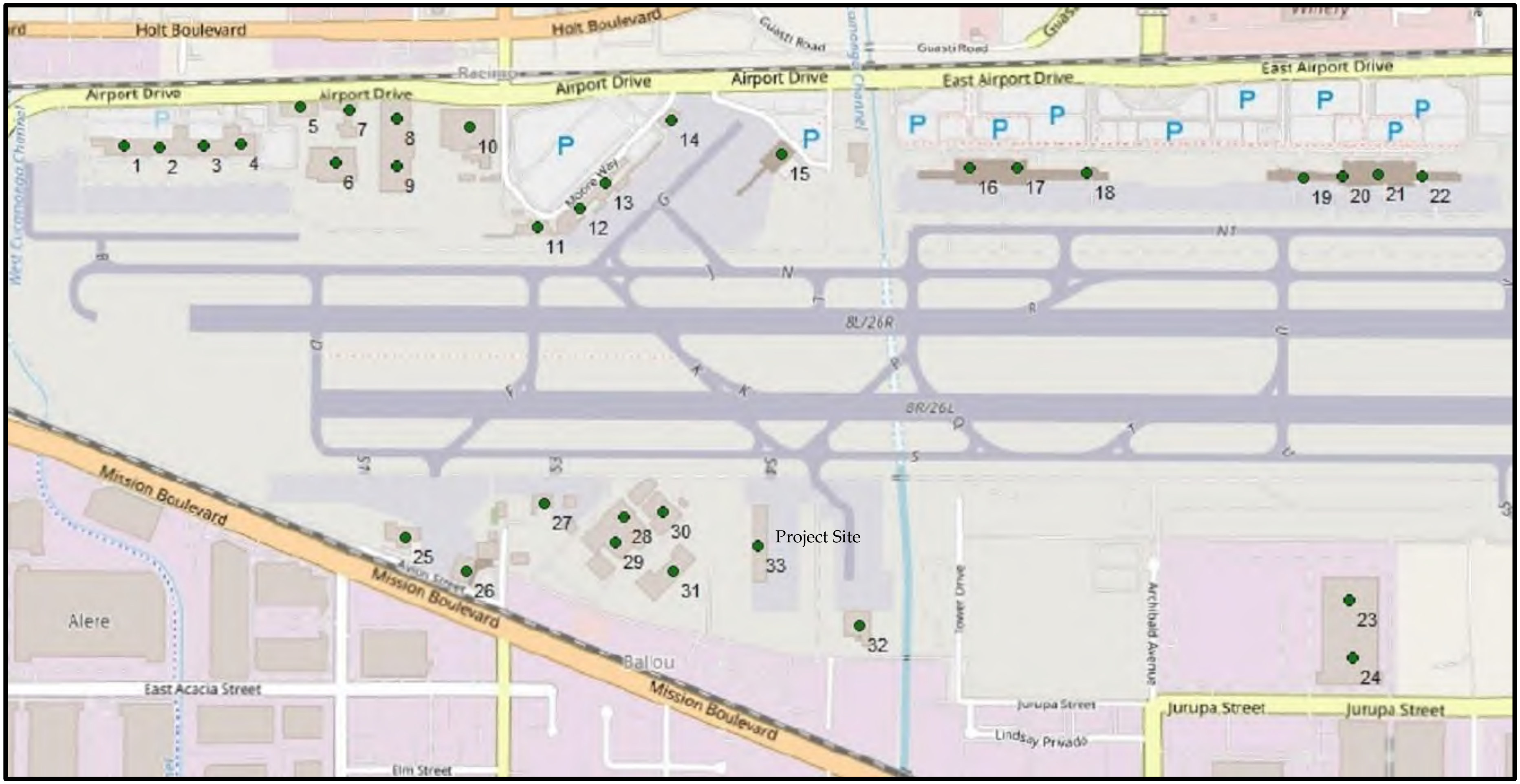


Figure A-7
Residential Areas Surrounding the Airport

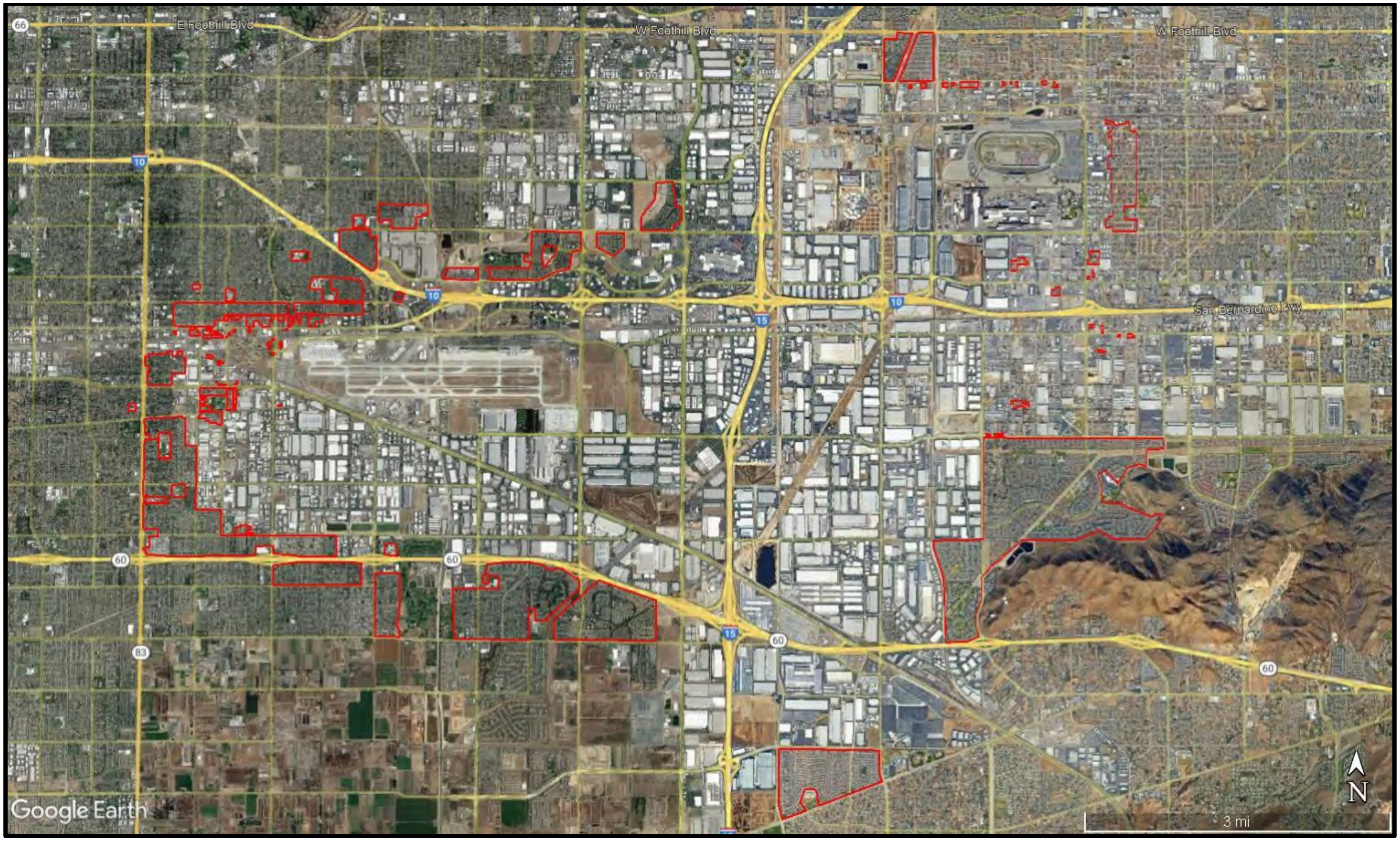
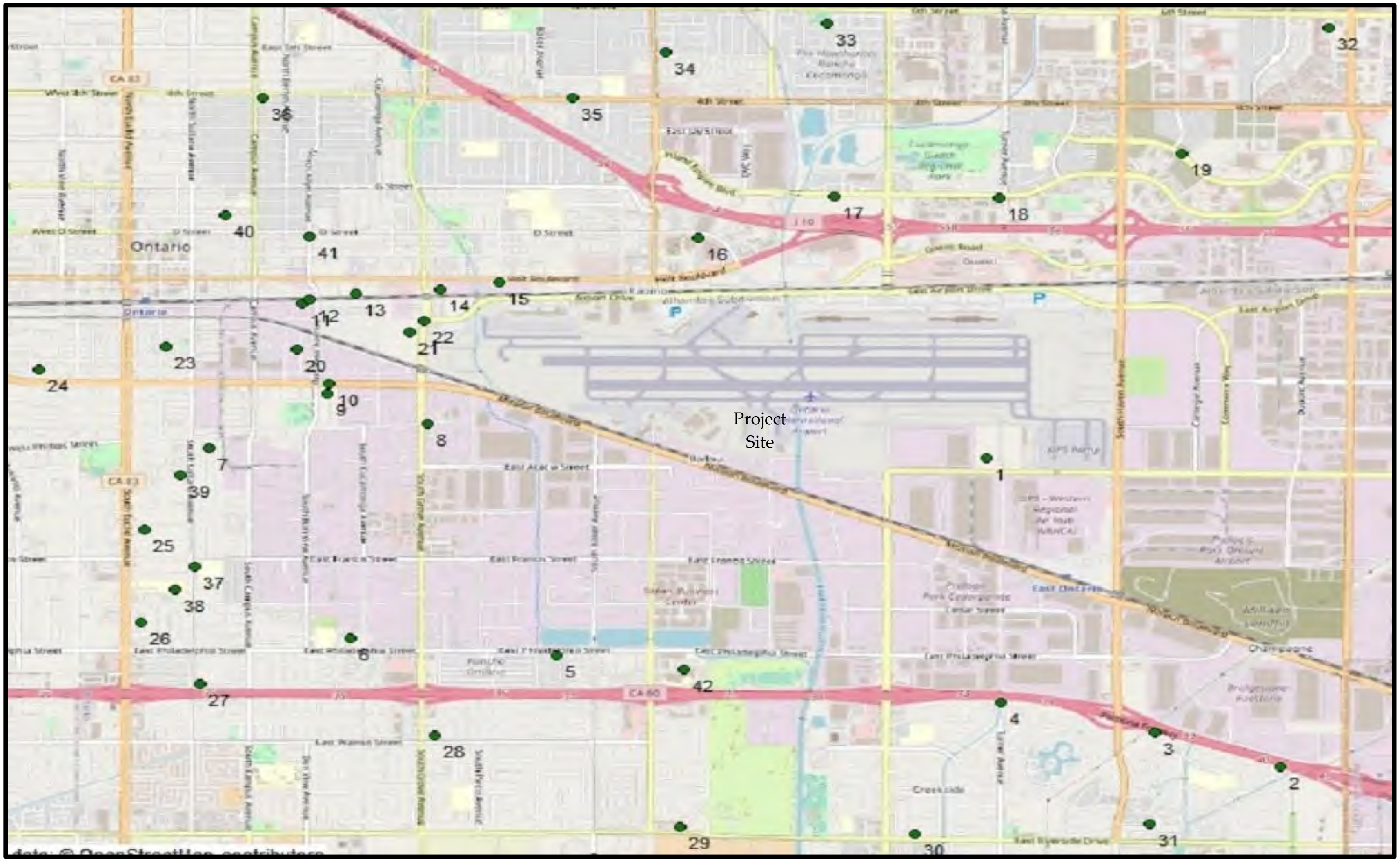


Figure A-8
Air Dispersion Modeling Residential and School Receptors



Operational Profile

An operational profile, which is comprised of temporal factors, were used to describe the relationship of one period to another period of time (i.e., the relationship of the activity during one-hour to the activity during a 24-hour period). In AEDT, temporal factors are applied to represent varying levels of activity as a fraction of a peak hour. The use of temporal factors gives the model the ability to more accurately reflect real world conditions during an entire year.

To represent actual aircraft activity at the Airport throughout the entire calendar year, hour-of-day, day-of-week, and month-of-year operational profiles were used in the air quality analysis. These profiles were used by AEDT in its dispersion mode to calculate concentrations for each hour of the evaluated years at each receptor location.

The hour of the day, day of the week, and monthly operational profiles for the Baseline Condition were developed using airport-specific activity data from FAA's Operations and Performance Data (OPSNET) for the years of 2018 through 2020 (**Table A-5)**. As shown, the peak aircraft operations not associated with the Proposed Project would occur during 7 am (departures) and 7 pm (arrivals) during Tuesday in December. Future year operational profiles for non-project aircraft operations were assigned as the same as for the Baseline Condition. Project aircraft operational profiles were based on anticipated operating schedules and reflective of a greater number of nighttime/early morning operations for the project compared to non-project aircraft operations (**Tables A-6 and A-7**). As shown, peak Proposed Project aircraft operations would occur during the early morning/noon/nighttime on a Thursday in December.

Table A-5
Ontario International Airport Aircraft Operational Profiles

Hour	Arrival	Departure	Operations
1	0.1691	0.4706	0.4851
2	0.0399	0.2179	0.1963
3	0.0785	0.3620	0.3351
4	0.1778	0.1805	0.2693
5	0.1773	0.1415	0.2391
6	0.1752	0.3911	0.4288
7	0.1532	**1.0000**	0.8790
8	0.3122	0.8435	0.8763
9	0.4739	0.5175	0.7457
10	0.6002	0.4351	0.7758
11	0.4771	0.5312	0.7586
Noon	0.4556	0.4875	0.7093
1	0.4074	0.4650	0.6565
2	0.3704	0.4245	0.5982
3	0.4088	0.3679	0.5832
4	0.5268	0.4186	0.7090
5	0.5882	0.3977	0.7382
6	0.7270	0.3279	0.7871
7	**1.0000**	0.3432	**1.0000**
8	0.5324	0.5017	0.7767
9	0.5311	0.2763	0.6031
10	0.6768	0.2834	0.7159
11	0.5885	0.1715	0.5651
Midnight	0.3402	0.1866	0.3937

Day	Profile
Sunday	0.5950
Monday	0.7726
Tuesday	**1.0000**
Wednesday	0.9938
Thursday	0.9844
Friday	0.8723
Saturday	0.6262

Month	Profile
January	0.9042
February	0.8359
March	0.8852
April	0.7950
May	0.8355
June	0.8746
July	0.8995
August	0.9417
September	0.8806
October	0.9436
November	0.9065
December	**1.0000**

Sources: Traffic Flow Management System Counts (TFMSC), Aviation System Performance Metrics (ASPM), and Operations Network (OPSNET)

Table A-6
Ontario International Airport SACC Aircraft Operational Profiles for Phase 1

Hour	Arrival	Departure	Operations
1	-	-	-
2	0.3333	-	0.2500
3	-	0.3333	0.2500
4	-	0.3333	0.2500
5	0.3333	1.0000	**1.0000**
6	0.6667	0.6667	**1.0000**
7	0.6667	0.3333	0.7500
8	0.3333	0.3333	0.5000
9	-	1.0000	0.7500
10	0.3333	-	0.2500
11	0.3333	-	0.2500
Noon	**1.0000**	-	0.7500
1	-	**1.0000**	0.7500
2	-	-	-
3	-	-	-
4	0.3333	-	0.2500
5	-	-	-
6	-	0.3333	0.2500
7	-	-	-
8	0.3333	-	0.2500
9	-	-	-
10	0.3333	0.3333	0.5000
11	0.6667	0.3333	0.7500
Midnight	0.6667	0.3333	0.7500

Day	Profile
Sunday	0.6111
Monday	0.7222
Tuesday	0.8889
Wednesday	0.9444
Thursday	**1.0000**
Friday	0.7778
Saturday	0.6111

Month	Profile
January	0.5333
February	0.4667
March	0.6000
April	0.6000
May	0.6000
June	0.6000
July	0.5333
August	0.6000
September	0.6667
October	0.6667
November	0.7333
December	**1.0000**

Sources: SACC ONT Air Schedule, December 12, 2021, and Patrick Shryock, December 20, 2021

Table A-7
Ontario International Airport SACC Aircraft Operational Profiles for Phase 2

Hour	Arrival	Departure	Operations
1	-	-	-
2	0.3333	-	0.2000
3	-	0.2000	0.2000
4	-	0.2000	0.2000
5	0.3333	0.6000	0.8000
6	0.6667	0.4000	0.8000
7	0.6667	0.2000	0.6000
8	0.3333	0.2000	0.4000
9	0.6667	0.6000	**1.0000**
10	**1.0000**	0.4000	**1.0000**
11	**1.0000**	-	0.6000
Noon	**1.0000**	-	0.6000
1	-	0.6000	0.6000
2	-	0.4000	0.4000
3	**1.0000**	-	0.6000
4	0.3333	-	0.2000
5	-	**1.0000**	**1.0000**
6	-	0.2000	0.2000
7	0.6667	-	0.4000
8	0.3333	-	0.2000
9	-	-	-
10	0.3333	0.6000	0.8000
11	0.6667	0.2000	0.6000
Midnight	0.6667	0.2000	0.6000

Day	Profile
Sunday	0.6111
Monday	0.7222
Tuesday	0.8889
Wednesday	0.9444
Thursday	**1.0000**
Friday	0.7778
Saturday	0.6111

Month	Profile
January	0.5333
February	0.4667
March	0.6000
April	0.6000
May	0.6000
June	0.6000
July	0.5333
August	0.6000
September	0.6667
October	0.6667
November	0.7333
December	**1.0000**

Sources: SACC ONT Air Schedule, December 12, 2021, and Patrick Shryock, December 20, 2021

Nitrogen Oxides (NO_x) to Nitrogen Dioxide (NO_2) Conversion

The results of the dispersion modeling provide predicted concentrations of NO_x which, for comparison to the ambient air quality standards, were converted to concentrations of NO_2. While AERMOD is generally considered a non-chemistry model, it offers three methods for modeling NO_2 formation from NO_x emissions: (i) the Ambient Ratio Method (ARM-2), (ii) the Ozone Limiting Method (OLM), and (iii) the Plume Volume Molar Ratio Method (PVMRM). As discussed in USEPA's Appendix W, PVMRM is most appropriate for analyses with relatively isolated and elevated sources. OLM is more appropriate for analyses with area sources, near-surface releases, or where plume overlap from multiple sources would occur. Moreover, USEPA's *Guideline on Air Quality Models*[20], recommends a three-tiered screening approach to estimate ambient concentrations of NO_2:

20 Appendix W to Part 51 – Guideline on Air Quality Models, http://www.ecfr.gov/cgi-bin/text-idx?SID=e6a5b817b94abf58460f48c032d9a39c&node=40:2.0.1.1.2.23.11.5.37&rgn=div9

- *Tier 1* – Assumes complete (100 percent) conversion of all emitted NO_x to NO_2 based on application of an appropriate refined modeling technique under *Section 4.2.2 of Appendix W* (of the USEPA's Guideline) to estimate ambient NO_x concentrations.

- *Tier 2* – Ambient Ratio Method (ARM-2), where model predicted NO_x concentrations are multiplied by a NO_2/NO_x ambient ratio, derived from ambient monitoring data.

  ARM-2 incorporates a variable ambient ratio that is a function of model predicted one-hour NO_x concentration, based on an analysis of nationwide hourly ambient NO_x monitoring data from approximately 580 stations over the period 2001 through 2010.

- *Tier 3* – Performs a detailed analysis on a case-by-case basis by employing the OLM or PVMRM. These methods require the most detailed level of analysis and produce the least conservative, and presumably the most representative results. Tier 3 requires information such as in stack NO_2/NO_x ratio and ambient ozone concentrations.

The dispersion modeling was performed using the ARM-2 and using the USEPA default NO_2 to NO_x minimum and maximum ambient ratios of 0.5 to 0.9 per SCAQMD and USEPA guidance.[21] The dispersion modeling was also performed using NO_2 to NO_x ambient ratios of 0.2 to 0.9 (for informational purposes only); as several studies have shown that a minimum ambient ratio of 0.2 better represents aircraft exhaust environments, which tend to be at higher exhaust temperature.

Extensive emission testing has been conducted on a wide range of aircraft engines in the last decade. This research has shown that the aircraft-related NO_2/NO_x emission ratio differs markedly from most other NO_x sources.[22] For aircraft, the NO_2 fraction of NO_x decreases with power, from over 98 percent at the lowest power setting (four percent rated thrust or taxi/idle) to under 10 percent at higher power settings (65 to 100 percent rated thrust for climb out/takeoff).[23] Overall, the amount of NO_x emissions emitted by aircraft was assumed to be 3.3 kilogram (kg) per engine per LTO, of which 0.8 kg is emitted in the form of NO_2.[24] **Table A-8** lists the NO_2/NO_x emission ratios for each aircraft operating mode. As shown, aircraft emissions tend to range with an emissions ratio of 0.1 to 0.9, therefore, ambient ratios within airport environments have shown within ambient monitoring data to range from 0.2 to 0.9. As a result, the air

21 Clarification on the Use of AERMOD Dispersion Modeling for Demonstrating Compliance with the NO_2 National Ambient Air Quality Standard, September 30, 2014.
22 Aircraft Particulate Emissions eXperiment – APEX (2004), JETS-APEX2 (2005), and APEX3 (2005).
23 Wormhoudt, Joda, Scott Herndon, Paul Yelvington, Richard Miake-Lye, and Changlie Wey. *Nitrogen Oxide (NO/NO2/HONO) Emissions Measurements in Aircraft Exhausts*. Journal of Propulsion and Power 23, no. 5 (2007): 906-11.
24 Wood, Ezra, Scott Herndon, Michael Timko, Paul Yelvington, and Richard Miake-Lye. *Speciation and Chemical Evolution of Nitrogen Oxides in Aircraft Exhaust Near Airports*. Environmental Science & Technology, 2008, 42, 1884-1891.

quality analysis was performed using the default and non-default ambient ratios for the conversion of NO_x to NO_2.

Table A-8
Aircraft NO_2 to NO_x Emission Ratios

Operating Mode	NO_2/NOx Ratio (kg/kg)	NO_2 Emissions (kg)	NOx Emissions (kg)
Idle	0.914	0.53	0.58
Approach	0.155	0.08	0.49
Takeoff	0.081	0.06	0.70
Climb out	0.088	0.13	1.53
Source: Wood, Ezra, Scott Herndon, Michael Timko, Paul Yelvington, and Richard Miake-Lye. *Speciation and Chemical Evolution of Nitrogen Oxides in Aircraft Exhaust Near Airports*. Environmental Science & Technology, 2008, 42, 1884-1891.			

Runways

AEDT requires that the runway layout be defined, usually in the form of points of latitude and longitude. The runway layout was set up in AEDT using current runway coordinates. **Table A-9** provides the runway end locations for the airfield. There are no differences in the runways for the Baseline Condition and future year alternatives.

Table A-9
Runway Coordinates

Runway Endpoint	Centerline Endpoint		Threshold Crossing height (feet)	Arrival Displaced Threshold (feet)
	Latitude (deg)	Longitude (deg)		
08L	34.05687919	-117.6228218	62	997
26R	34.05689608	-117.5825571	75	0
08R	34.05496053	-117.6162283	65	0
26L	34.05497258	-117.5825551	74	0
Source: HNTB, 2022.				

Background Concentrations

Because the dispersion modeling addresses emissions from project-related sources only, background concentrations were added to the results to account for air emission sources not included in the dispersion modeling.

The SCAQMD maintains a network of monitoring stations within the Air Basin that monitor air quality and compliance with applicable ambient standards. The nearest air monitoring station which measures CO, NO_2, and PM_{10} is located at 1350 San Bernardino Road in Upland (Northwest San Bernardino Valley, Station

5175), four miles to the north of the project site. The nearest air monitoring station which measures SO_2 and $PM_{2.5}$ is located at 14360 Arrow Boulevard in Fontana (Central San Bernardino Valley 1, Station # 5197), seven miles to the northeast of the project site.

As shown in **Table A-10**, the background concentrations were derived from air monitoring data collected in 2018, 2019, and 2020 as the maximum values within the last three years.

Table A-10
Background Concentrations

Pollutant	2018	2019	2020
Nitrogen Dioxide (NO_2)			
Highest 1-Hour Average (ppm)[b]	0.063	0.076	0.066
Highest 98th% 1-Hour Average (ppm)[b]	0.056	0.058	0.058
Annual Average (μg/m³)	0.018	0.017	0.019
Carbon Monoxide (CO)			
Highest 1-Hour Average (ppm)	1.9	2.7	1.5
Highest 8-Hour Average (ppm)	1.2	1.1	1.1
Sulfur Dioxide (SO_2)			
Highest 1-Hour Average (ppb)	2.9	2.4	2.5
Highest 99th% 1-Hour Average (ppb)	2.5	1.9	1.7
Source: Analysis of USEPA ambient monitoring data (*AIRData – Monitor Values Reports*, http://www.epa.gov/air/data/index.html), 2021.			

To account for the variance in background NO_2 concentrations over time, seasonal/temporal background concentrations for NO_2 from the Northwest San Bernardino Valley monitoring station from 2018 through 2020 were derived following USEPA guidance.[25] As shown in **Table A-11**, the estimated NO_2 1-hour background concentrations vary by season and by time of day with a tendency for higher concentrations during fall and winter and nighttime periods. These seasonal/temporal NO_2 background concentrations were used for the 1-Hour NO_2 dispersion analysis. Notably, SCAQMD defines seasons as calendar quarters; Winter is January through March, Spring is defined as April through June, Summer is defined as July through September, and Fall is defined as October through December.[26] **Figure A-9** displays the hourly 1-hour NO_2 background concentrations by season for CAAQS.

25 Additional Clarification Regarding Application of Appendix W Modeling Guidance for the one-hour NO_2 National Ambient Air Quality Standard, March 1, 2011 (https://www.epa.gov/sites/production/files/2015-07/documents/appwno2_2.pdf) and Clarification on the Use of AERMOD Dispersion Modeling for Demonstrating Compliance with the NO_2 National Ambient Air Quality Standard, September 30, 2014 (https://www.epa.gov/sites/default/files/2020-10/documents/no2_clarification_memo-20140930.pdf)

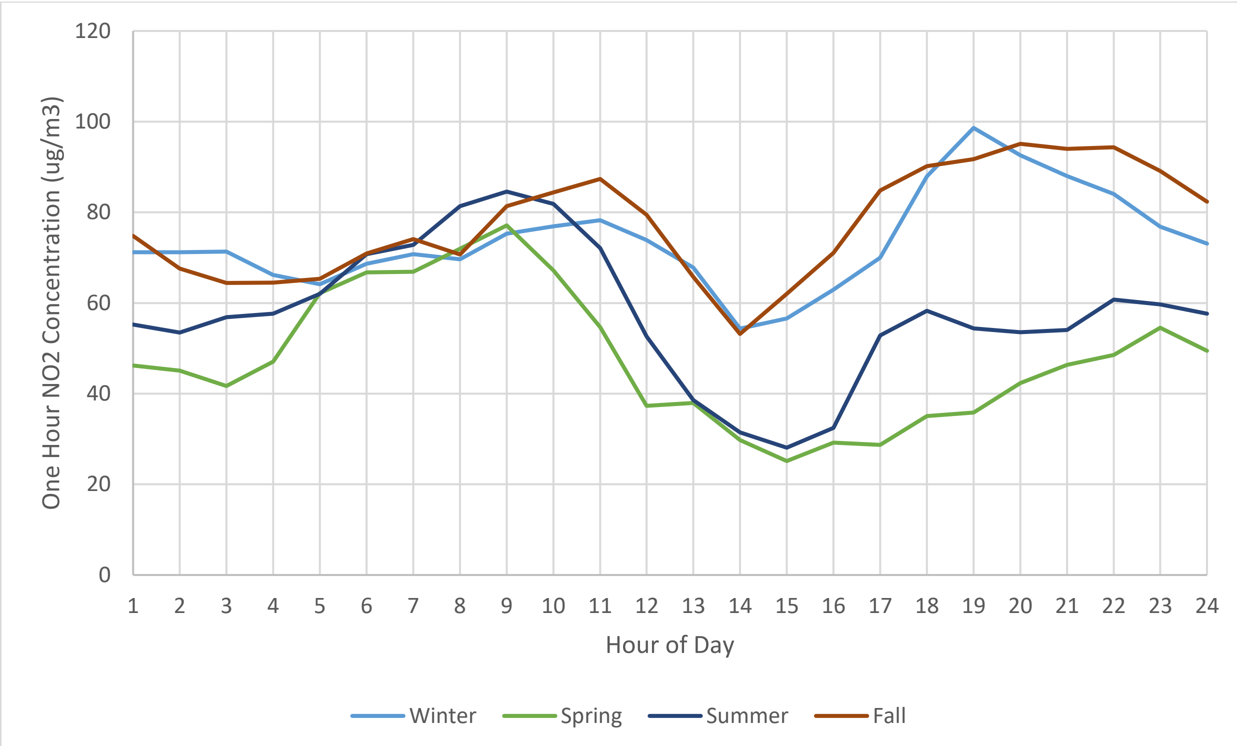
26 The AERMET meteorological processer using the following definitions for seasons: Winter is defined as December, January, and February. Springs is defined as March, April, May. Summer is defined as June, July, August. Fall is defined as September, October, and November.

Table A-11
One-Hour NO_2 Seasonal/Temporal Background Concentration ($\mu g/m^3$)

Hour	Winter	Spring	Summer	Fall
1	71.2	46.2	55.2	74.8
2	71.2	45.1	53.5	67.6
3	71.3	41.7	56.9	64.4
4	66.2	47.1	57.7	64.5
5	64.1	62.1	62.0	65.3
6	68.6	66.8	70.8	70.9
7	70.8	66.9	72.8	74.1
8	69.6	72.0	81.4	70.7
9	75.3	77.1	84.6	81.4
10	76.9	67.1	81.9	84.4
11	78.2	54.7	72.1	87.3
12	73.8	37.3	52.6	79.4
13	67.8	37.9	38.6	65.8
14	54.4	29.8	31.5	53.2
15	56.6	25.1	28.1	62.0
16	62.9	29.2	32.5	71.0
17	70.0	28.7	52.8	84.8
18	88.0	35.0	58.3	90.2
19	98.6	35.8	54.4	91.7
20	92.6	42.3	53.5	95.1
21	88.0	46.3	54.0	94.0
22	84.1	48.5	60.7	94.3
23	76.9	54.5	59.7	89.1
24	73.1	49.5	57.6	82.3

Source: Analysis of USEPA ambient monitoring data (*AIRData – Monitor Values Reports*, http://www.epa.gov/air/data/index.html), 2021.

Figure A-9
One-Hour NO_2 Seasonal/Temporal Background Concentration (µg/m³)



Airfield Capacity and Operating Configurations

In AEDT, the capacity of the airfield, which can affect emissions via ground travel delay, is defined as the highest number of hourly departures, which can occur during the peak hour of arrivals and the highest number of hourly arrivals, which can occur during the peak hour of departures.

Operating configurations specify the pattern of aircraft arrivals and departures on specific runways over the course of a year, depending on weather conditions and airfield capacity. Specifying configurations allows for aircraft to be assigned to runways based on aircraft size (i.e., small, large, and heavy), a similar method to that employed in an actual airport operating environment. For the air quality analysis, the day/evening and night configurations were included to account for airport operating conditions representing non-contra flow and contra flow to model real-world conditions. Day is defined as between the hours of 7 a.m. and 7 p.m., evening is defined as between the hours of 7 p.m. and 10 p.m., and night is defined as between the hours of 10 p.m. and 7 a.m.

This information is used to distribute aircraft arrival and departure operations to each runway end. As required by AEDT, the runway usage by aircraft size (small, large, and heavy), flow (non-contra and contra) and time of day (day/evening and night) were used for the air quality analysis. The day/evening and night flow runway use data for arrivals and departures, used in the air quality analysis is provided in **Tables A-12 and A-13** for the Baseline Condition, **Table A-14 and A-15** for the Phase 1 Without Project, **Table A-16 and A-17** for the Phase 1 With Project, **Table A-18 and A-19** for the Phase 2 Without Project, and **Table A-20 and A-21** for the Phase 2 With Project.

Table A-12
Runway Use for Baseline Condition for Day/Evening

	Arrival					Departure			
Aircraft Size	**08L**	**08R**	**26L**	**26R**		**08L**	**08R**	**26L**	**26R**
All Aircraft	4.13%	1.74%	44.46%	49.66%		3.10%	3.12%	37.67%	56.12%
Small	1.95%	3.92%	76.77%	17.37%		1.21%	4.21%	69.44%	25.14%
Large	4.54%	0.98%	22.45%	72.03%		4.11%	1.69%	19.09%	75.10%
Heavy	5.54%	1.23%	63.35%	29.88%		2.42%	6.04%	53.31%	38.22%
Source: RCH Group and HNTB, 2022									

Table A-13
Runway Use for Baseline Condition for Night

	Arrival					Departure			
Aircraft Size	**08L**	**08R**	**26L**	**26R**		**08L**	**08R**	**26L**	**26R**
All Aircraft	5.73%	0.97%	46.33%	46.96%		23.50%	35.31%	15.56%	25.63%
Small	1.74%	8.03%	74.35%	15.87%		1.20%	14.40%	68.03%	16.37%
Large	6.01%	0.45%	23.55%	69.99%		31.08%	11.96%	10.05%	46.91%
Heavy	5.82%	0.83%	66.69%	26.65%		21.51%	61.67%	8.84%	7.99%
Source: RCH Group and HNTB, 2022									

Table A-14
Runway Use for Phase 1 Without Project for Day/Evening

	Arrival					Departure			
Aircraft Size	**08L**	**08R**	**26L**	**26R**		**08L**	**08R**	**26L**	**26R**
All Aircraft	4.57%	1.81%	44.41%	49.22%		3.73%	3.07%	35.94%	57.27%
Small	2.29%	4.01%	75.19%	18.51%		1.13%	4.58%	67.85%	26.44%
Large	5.13%	0.94%	22.40%	71.52%		4.92%	1.43%	16.25%	77.40%
Heavy	5.88%	1.33%	62.04%	30.75%		3.66%	6.00%	52.07%	38.27%
Source: RCH Group and HNTB, 2022									

Table A-15
Runway Use for Phase 1 Without Project for Night

	Arrival					Departure			
Aircraft Size	**08L**	**08R**	**26L**	**26R**		**08L**	**08R**	**26L**	**26R**
All Aircraft	6.60%	1.12%	48.11%	44.17%		33.62%	37.97%	13.77%	14.64%
Small	2.81%	9.10%	69.98%	18.11%		1.48%	18.88%	62.34%	17.30%
Large	8.01%	0.52%	25.81%	65.66%		56.05%	14.47%	6.24%	23.25%
Heavy	5.62%	0.88%	67.61%	25.89%		22.13%	62.25%	8.87%	6.75%
Source: RCH Group and HNTB, 2022									

Table A-16
Runway Use for Phase 1 With Project for Day/Evening

	Arrival					Departure			
Aircraft Size	**08L**	**08R**	**26L**	**26R**		**08L**	**08R**	**26L**	**26R**
All Aircraft	4.37%	1.98%	46.64%	47.01%		3.44%	3.28%	40.41%	52.88%
Small	2.29%	4.01%	75.19%	18.51%		1.13%	4.58%	67.85%	26.44%
Large	5.01%	1.06%	24.18%	69.76%		4.79%	1.54%	18.29%	75.37%
Heavy	5.09%	1.93%	66.36%	26.63%		2.67%	5.94%	63.50%	27.89%
Source: RCH Group and HNTB, 2022									

Table A-17
Runway Use for Phase 1 With Project for Night

	Arrival					Departure			
Aircraft Size	**08L**	**08R**	**26L**	**26R**		**08L**	**08R**	**26L**	**26R**
All Aircraft	5.01%	0.85%	60.65%	33.50%		29.31%	45.91%	12.01%	12.77%
Small	2.81%	9.10%	69.98%	18.11%		1.48%	18.88%	62.34%	17.30%
Large	7.19%	0.47%	33.35%	58.99%		51.41%	21.55%	5.72%	21.32%
Heavy	3.62%	0.56%	79.13%	16.68%		18.01%	69.27%	7.22%	5.50%
Source: RCH Group and HNTB, 2022									

Table A-18
Runway Use for Phase 2 Without Project for Day/Evening

	Arrival					Departure			
Aircraft Size	**08L**	**08R**	**26L**	**26R**		**08L**	**08R**	**26L**	**26R**
All Aircraft	4.35%	1.79%	45.73%	48.13%		3.56%	3.03%	34.99%	58.42%
Small	2.33%	4.06%	75.04%	18.57%		1.12%	4.62%	67.96%	26.30%
Large	4.73%	0.94%	25.44%	68.90%		4.55%	1.39%	15.35%	78.71%
Heavy	5.68%	1.34%	62.30%	30.68%		3.73%	5.99%	52.04%	38.25%
Source: RCH Group and HNTB, 2022									

Table A-19
Runway Use for Phase 2 Without Project for Night

	Arrival					Departure			
Aircraft Size	**08L**	**08R**	**26L**	**26R**		**08L**	**08R**	**26L**	**26R**
All Aircraft	6.35%	1.11%	48.65%	43.89%		33.50%	38.70%	13.93%	13.87%
Small	3.08%	9.65%	70.21%	17.05%		1.48%	18.77%	62.83%	16.93%
Large	7.48%	0.49%	26.06%	65.97%		57.97%	14.55%	6.21%	21.28%
Heavy	5.60%	0.88%	67.66%	25.86%		21.23%	62.40%	9.09%	7.29%
Source: RCH Group and HNTB, 2022									

Table A-20
Runway Use for Phase 2 With Project for Day/Evening

	Arrival					Departure			
Aircraft Size	**08L**	**08R**	**26L**	**26R**		**08L**	**08R**	**26L**	**26R**
All Aircraft	3.91%	2.19%	50.58%	43.31%		3.09%	3.40%	42.85%	50.66%
Small	2.33%	4.06%	75.04%	18.57%		1.12%	4.62%	67.96%	26.30%
Large	4.52%	1.15%	28.48%	65.85%		4.34%	1.59%	19.02%	75.05%
Heavy	4.07%	2.60%	71.30%	22.02%		2.22%	5.91%	69.05%	22.82%
Source: RCH Group and HNTB, 2022									

Table A-21
Runway Use for Phase 2 With Project for Night

	Arrival					Departure			
Aircraft Size	**08L**	**08R**	**26L**	**26R**		**08L**	**08R**	**26L**	**26R**
All Aircraft	4.89%	0.86%	60.42%	33.83%		29.46%	46.09%	12.25%	12.20%
Small	3.08%	9.65%	70.21%	17.05%		1.48%	18.77%	62.83%	16.93%
Large	6.75%	0.45%	33.26%	59.55%		53.33%	21.38%	5.71%	19.58%
Heavy	3.73%	0.58%	78.47%	17.21%		17.58%	68.86%	7.52%	6.04%
Source: RCH Group and HNTB, 2022									

Gate Assignments, Taxiways, and Taxipaths

Within AEDT, each aircraft is assigned a terminal/apron location (i.e., Terminal 1, 2, or 4 as well as FedEx, UPS, or SACC) to which the aircraft proceeds after landing and where servicing (e.g., baggage handling, fueling, catering, etc.) is conducted. The aircraft then departs from the same terminal/apron for a takeoff runway end. For the air quality analysis, the taxiway assignments were based on the common and forecast routing paths that ground traffic controllers are known to assign and airfield simulation modeling. The series of assigned taxiways is called the taxipath. The aircraft speed for most taxiways was set at 15 knots, some of the acute angle taxiways allow for a higher taxi speed (45 knots). In addition, the speed for the apron taxi lanes (within the non-movement area boundary) was set at 5 knots.

Construction Activities

The construction emissions inventories and dispersion modeling were evaluated using the following regulatory model:

- California Air Pollution Officers Association (CAPCOA) CalEEMod (California Emissions Estimator Model Version 2020.4.0)[27] land use emissions model estimates emissions due to demolition and construction activities and operations for land use development.

- California Air Resources Board's (CARB) EMFAC[28] emissions inventory model. EMFAC is the latest emission inventory model that calculates emission inventories and emission rates for motor vehicles operating on roads in California. This model reflects CARB's current understanding of how vehicles travel and how much they emit. EMFAC can be used to show how California motor vehicle emissions have changed over time and are projected to change in the future.

- CARB OFFROAD[29] emissions inventory model. OFFROAD is the latest emission inventory model that calculates emission inventories and emission rates for off-road equipment such as loaders, excavators, and off-road haul trucks operating in California. This model reflects CARB's current understanding of how equipment operates and how much they emit. OFFROAD can be used to show how California off-road equipment emissions have changed over time and are projected to change in the future.

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27 California Air Pollution Officers Association, *California Emissions Estimator Model User's Guide*, May 2021, http://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/01_user-39-s-guide2020-4-0.pdf?sfvrsn=6

28 California Air Resources Board, EMFAC2021 User's Guide, January 15, 2021, https://ww2.arb.ca.gov/sites/default/files/2021-01/EMFAC202x_Users_Guide_01112021_final.pdf

29 California Air Resources Board, OFFROAD Instructions, http://www.arb.ca.gov/msprog/ordiesel/info_1085/oei_write_up.pdf

Construction equipment activities were treated as an area source. The release height of the off-road equipment exhaust was 5.0 meters (16.4 feet) and an initial vertical dimension of 1.4 meters 4.6 feet), which reflects the height of the equipment plus an additional height of the exhaust plume above the exhaust point to account for plume rise due to buoyancy and momentum. Fugitive dust-generating activities were treated as an area source. The release height of the fugitive dust was 0.0 meters (0.0 feet) and an initial vertical dimension of 1.0 meter (3.3 feet). Haul trucks were treated as a line source (i.e., volume sources placed at regular intervals) located along an access road. The haul trucks were assigned a release height of 5.0 meters (16.4 feet) and an initial vertical dimension of 1.4 meters (4.6 feet), which accounts for dispersion from the movement of vehicles.[30] [31] The on-site asphalt/concrete recycling operations were treated as a circular area source with a release height of 12 meters (39.4 feet) and a radius of 100 meters (330 feet). Typically, construction activities would occur between 5 a.m. and 3 p.m. (ten hours per day), on Monday through Friday.

An on-site asphalt/concrete recycling operation would be expected to be located on the south side of East Avion Street on a partially paved and flat parcel that is, flanked by East Mission Boulevard (and railroad tracks) to the south, and industrial abandoned (industrial) uses on either side (which is within the project site). The recycling operations would reduce the total vehicle miles traveled needed for asphalt/concrete delivery trucks but would require delivery of some raw materials (i.e., asphalt, Portland cement, and aggregate) to mix the materials on-site. The construction emissions inventory includes an analysis of fugitive dust emissions associated with asphalt/concrete recycling operation (i.e., cold milling machine for asphalt and crushing processing equipment for concrete) as well as the exhaust emissions associated with the equipment engines (approximately 170 horsepower) and haul trucks (approximately 20 miles per trip). The asphalt/concrete recycling operation would contain various crusher, conveyors, and screens. These emissions were summed with the construction emissions developed in CalEEMod to represent the total construction emissions for the Proposed Project.

During Phases 1 and 2, the on-site asphalt/concrete recycling operation would have a capacity rating of 650 tons per hour (325 cubic yards per hour) with asphalt recycling at 200 cubic yards per hour and concrete recycling at 125 cubic yards per hour.

30 While haul truck emissions contribute substantially to overall project emissions, they are spread over many miles. Hence, the portion of trucking emissions that would impact one receptor is much smaller than the emissions that the clustered off-road activity at the project site would impact a receptor near the site. For example, the DPM emissions from truck travel within 1,000 feet of the project are less than 1 percent of the total off-road DPM emissions.

31 South Coast Air Quality Management District, Final Localized Significance Threshold Methodology. July 2008, http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2

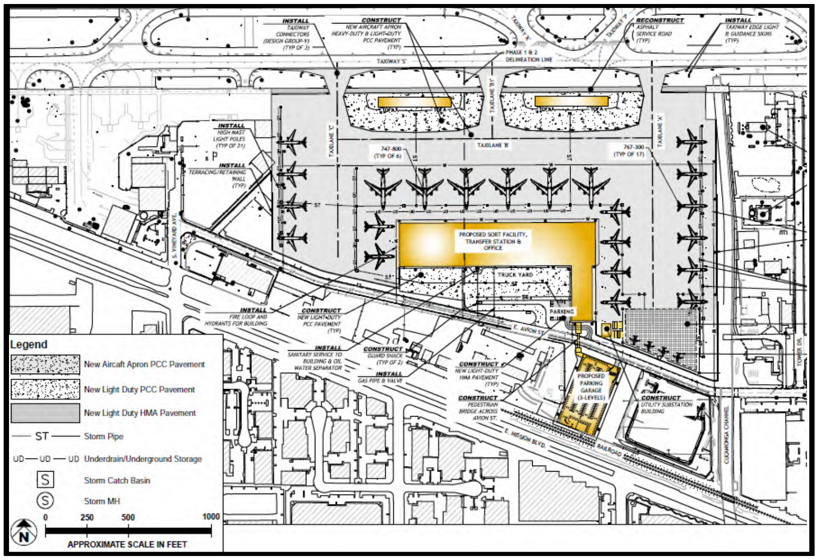
During Phase 1, demolition would involve removal of approximately 2,047,320 square feet of asphalt/concrete, a portion of which would be recycled within the project site and not require offsite haul truck trips (i.e., avoiding up to 2,616 haul truck trips).[32] During Phase 1, the on-site asphalt/concrete recycling operation would be expected to operate for eight hours per day and a total of 23 days.

During Phase 2, demolition would involve removal of approximately 1,045,440 square feet of asphalt/concrete, a portion of which would be recycled within the project site and not require offsite haul truck trips (i.e., avoiding up to 910 haul truck trips).[33] During Phase 2, the on-site asphalt/concrete recycling operation would be expected to operate for eight hours per day and a total of eight days.

[32] Assuming asphalt depth of four inches and concrete depth of eight inches; resulting in 30,510 cubic yards and based on eight cubic yards of haul truck capacity per CalEEMod.

[33] Assuming asphalt depth of four inches and concrete depth of eight inches; resulting in 12,800 cubic yards and based on eight cubic yards of haul truck capacity per CalEEMod.

Ontario International Airport
Proposed South Airport Cargo Center Project
Environmental Impact Report
Air Quality Modeling Protocol



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1. INTRODUCTION

The Ontario International Airport Authority (OIAA) is preparing an Environmental Impact Report (EIR) for the Proposed South Airport Cargo Center Project (proposed project) at Ontario International Airport (Ontario or Airport). In accordance with the California Environmental Quality Act (CEQA), the EIR will address the potential impacts to environmental factors associated with the proposed project, including potential impacts to air quality.

This *Air Quality Modeling Protocol* provides an overview of the technical approach for conducting the air quality analysis in support of the EIR. Notably, the information provided in this protocol is a synopsis of the technical approach to the air quality analysis, which will be expanded upon in the EIR and supporting documentation.

The focus of the air quality analysis will be the air pollutants for which there are ambient air quality standards and for which there are reasonable methods of deriving predicted concentrations of these pollutants. These air pollutants are carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 micrometers (coarse particulate or PM_{10}), particulate matter less than 2.5 micrometers (fine particulate or $PM_{2.5}$), and lead (Pb).

Impact Analysis Overview

To evaluate the potential impacts of the change in conditions at Ontario that would result from the project, the following conditions will be analyzed:

- No Project
- With Project

Three timeframes will be evaluated:

- Baseline Condition (2021)[1]
- Phase 1 (2025)
- Phase 2 (2029)

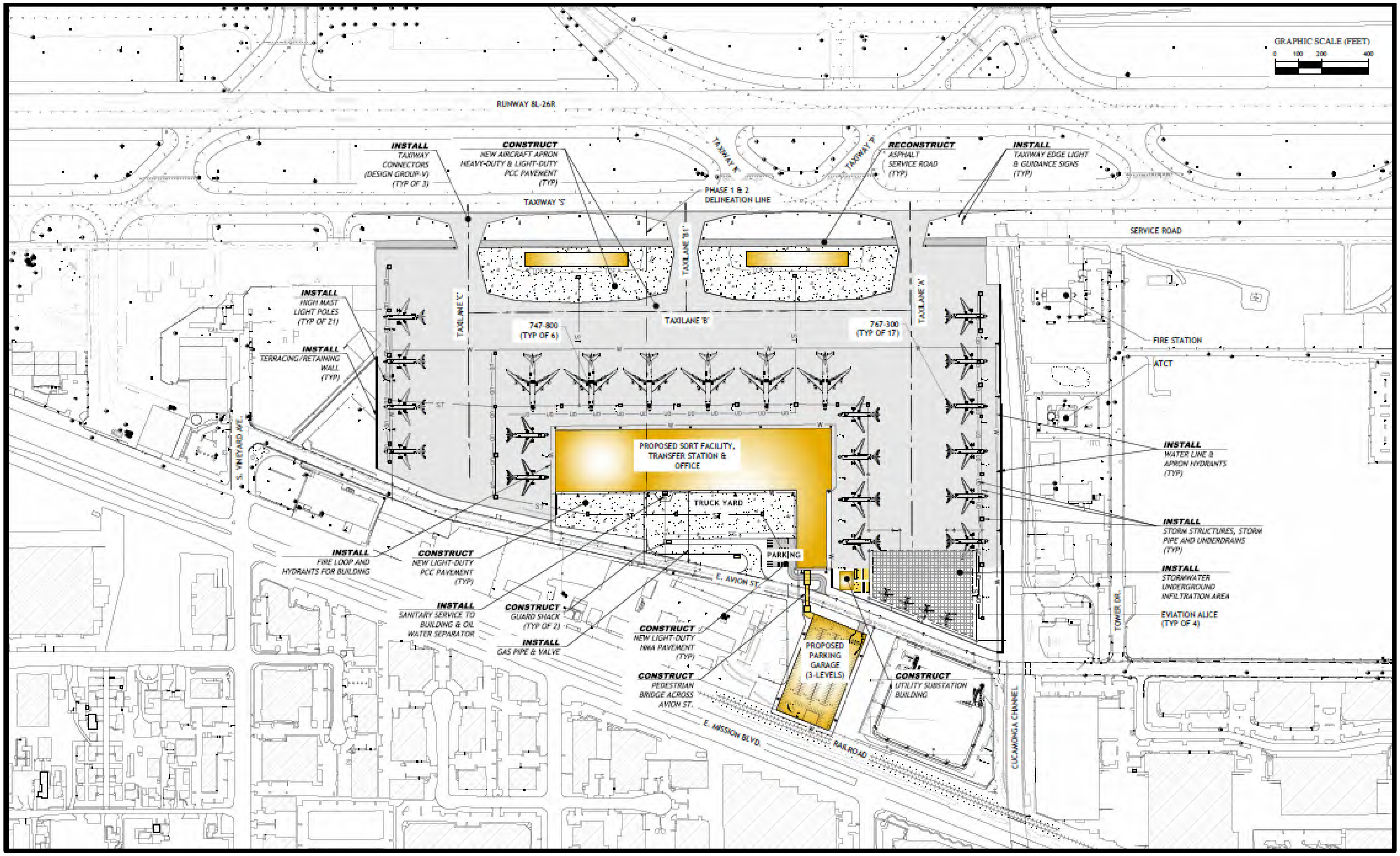
When appropriate, the concurrent construction plus operational impacts will be addressed.

2. PROJECT OVERVIEW

The project site consists of approximately 97 acres located at Ontario International Airport in the City of Ontario, San Bernardino County. The proposed project would replace existing, underutilized airport related buildings and site improvements with an air cargo center. The proposed air cargo center includes a Cargo Sorting Building, truckyard, parking facilities, aircraft parking apron improvements, ground service equipment parking, and aviation support facilities, as shown in **Figure 1**.

[1] The Baseline Condition accounts for aviation activity levels that are historically representative of operations at the Airport and, as such, has been "normalized" to eliminate short-term depressions in activity levels attributable to the COVID-19 pandemic.

Figure 1
Site Plan



Source: CHA, February 2022

The project would include a 857,000-square-foot Cargo Sorting Building and office spaces. A 210,000 square-foot truckyard would be located between the Cargo Sorting Building and East Avion Street and service 224 truck trips per day and 2,520 employee trips per day at Phase 2. The project would include 933 automobile parking stalls, including 900 employee stalls in a parking garage.

The project would introduce new flights to the Airport. At its opening in 2025, the Proposed Project would operate 44 daily flights (22 arrivals and 22 departures) at the Airport (with an annual average of 38 flights per day). These flights would arrive and depart throughout the day, every day of the week. By 2029, 22 daily flights (11 arrivals and 11 departures) would be added (with an annual average of 18 flights per day). At the buildout of Phase 2, the Proposed Project would operate 66 daily flights (33 arrivals and 33 departures) (with an annual average of 56 flights per day).

Construction of Phase 1 is projected to start in March of 2023 and be completed in December of 2024. Construction of Phase 2 is estimated to begin in September of 2025 (demolition), December of 2026 (site preparation), and August of 2027 (building construction), with completion in August of 2028, and would become operational in January of 2029. Typically, construction activities would occur between 5 a.m. and 3 p.m. (ten hours per day), on Monday through Friday.

3. REGULATORY BACKGROUND

This section describes existing air quality conditions in the South Coast Air Basin and identifies the regulatory criteria that will be applied to the results of the air quality analysis.

Attainment / Nonattainment Designations

The South Coast Air Basin is in nonattainment status for the State ozone, PM_{10}, and $PM_{2.5}$; and is in attainment status for CO, NO_2, and SO_2.[2] [3] The South Coast Air Basin is in nonattainment status for the federal ozone, lead (Pb), and $PM_{2.5}$; and in attainment for the federal CO, NO_2, SO_2, and PM_{10}.[4]

Regulatory Standards and Criteria for Air Quality

The regulatory standards and criteria that are relevant to the air quality analysis are discussed in the following sections of this protocol.

Federal and State Standards

Ambient air quality standards are classified as either "primary" or "secondary" standards. Primary standards define levels of air quality, including an adequate margin of safety, necessary

2 California Air Resources Board, Area Designations Maps/State and National, http://www.arb.ca.gov/desig/adm/adm.htm

3 South Coast Air Quality Management District, NAAQS and CAAQS Attainment Status for the South Coast Air Basin, February 2016, http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf

4 United States Environmental Protection Agency, The Green Book Nonattainment Areas for Criteria Pollutants, https://www.epa.gov/green-book

to protect the public health. Secondary ambient air quality standards define levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. California and National Ambient Air Quality Standards (CAAQS and NAAQS) are shown in **Table 1**.

Applicable SCAQMD Regulatory Actions and Requirements

On March 3, 2017, the SCAQMD adopted the 2016 Air Quality Management Plan (AQMP) which includes strategies and measures needed to meet the NAAQS. The AQMP demonstrates attainment of the ozone NAAQS as well as the latest $PM_{2.5}$ standards.[5] Potentially relevant SCAQMD rules and regulations include (but not limited to):

- Rules 201 and 203 (Permits to Construct and Operate)
- Rule 402 (Nuisance)
- Rule 403 (Fugitive Dust)
- Rule 1113 (Architectural Coatings)
- Rule 2202 (Employee Commute Reduction Program Guidelines)
- Rule 2305 (Warehouse Indirect Source Rule)

5 South Coast Air Quality Management District, 2016 Air Quality Management Plan, March 1, 2017, http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan.

Table 1

California and National Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 Hour 8 Hour	0.09 ppm 0.07 ppm	– 0.070 ppm	High concentrations can directly affect lungs, causing irritation. Long–term exposure may cause damage to lung tissue.	Formed when reactive organic gases and nitrogen oxides react in the presence of sunlight. Major sources include on–road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
Carbon Monoxide (CO)	1 Hour 8 Hour	20 ppm 9.0 ppm	35 ppm 9.0 ppm	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline–powered motor vehicles.
Nitrogen Dioxide (NO_2)	1 Hour Annual	0.18 ppm 0.03 ppm	0.10 ppm 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish–brown.	Motor vehicles, petroleum–refining operations, industrial sources, aircraft, ships, and railroads.
Sulfur Dioxide (SO_2)	1 Hour 3 Hour 24 Hour Annual	0.25 ppm – 0.04 ppm –	0.075 ppm 0.5 ppm 0.14 ppm 0.030 ppm	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
Respirable Particulate Matter (PM_{10})	24 Hour Annual	50 μg/m^3 20 μg/m^3	150 μg/m^3 –	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume–producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind–raised dust and ocean sprays).
Fine Particulate Matter ($PM_{2.5}$)	24 Hour Annual	– 12 μg/m^3	35.0 μg/m^3 12.0 μg/m^3	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including nitrogen oxides, sulfur oxides, and organics.
Lead (Pb)	Month Rolling 3 Month	1.5 μg/m^3 –	– 0.15 μg/m^3	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction.	Present sources: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.

Source: California Air Resources Board, Air Quality Standards, https://ww2.arb.ca.gov/resources/background-air-quality-standards.

SCAQMD Thresholds of Significance

SCAQMD has identified thresholds to determine the significance of regional air quality emissions for construction activities and project operation, as shown in **Table 2**.

Table 2
Mass Daily Emissions Thresholds (pounds/day)

Pollutant	Construction	Operation
VOC	75	55
NOx	100	55
CO	550	550
SOx	150	150
PM10	150	150
PM2.5	55	55
Lead	3	3

Source: South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, April 2019, http://www.aqmd.gov/ceqa/hdbk.html

Secondly, the proposed project would result in a significant construction and/or operational air quality impact if the project emissions exceed the South Coast Air Quality Management District (SCAQMD) concentration significance thresholds set forth in **Table 3**.[6] For CO, NO_2, SO_2, and Pb[7], these significance thresholds are reflective of the CAAQS and NAAQS. Background concentrations will be based on existing air monitoring stations near the project site. The project contribution of PM_{10} and $PM_{2.5}$ will be compared to the significance thresholds without adding background concentrations.

The proposed project would also result in a significant health impact if the carcinogenic or toxic air contaminants individually or cumulatively are equal to or exceed the maximum individual cancer risk of ten in one million persons or a chronic and acute hazard index of 1.0.

6 South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, April 2019, http://www.aqmd.gov/ceqa/hdbk.html

7 Airport sources of lead emissions include the use of avgas within piston aircraft. Although Ontario does have piston aircraft operations, the proposed project does not include piston aircraft operations and thus, project impacts of lead would be expected to be minimal. Approximately three percent of the existing airport operations are piston aircraft and therefore, lead emission would be expected to be less than 0.1 tons per year, which is well below the USEPA's ambient monitoring threshold of one ton.

Table 3
Ambient Air Quality Significance Thresholds for Criteria Pollutants

Pollutant	Averaging Period	Pollutant Concentration Threshold
CO	1-hour /8-hour	SCAQMD is in attainment (federal and State); project is significant if it causes or contributes to an exceedance of the attainment standards of 20 ppm (1-hour) and 9 ppm (8-hour)
NO_2	1-hour	SCAQMD is in attainment (federal and State); project is significant if it causes or contributes to an exceedance of the following attainment standard 0.18 ppm (state)
	Annual	0.03 ppm (state) and 0.0534 ppm (federal)
PM_{10}	24-hour	10.4 μg/m^3 (construction) and 2.5 μg/m^3 (operation)
	Annual	1.0 μg/m^3 (construction and operation)
$PM_{2.5}$	24-hour	10.4 μg/m^3 (construction) and 2.5 μg/m^3 (operation)
SO_2	1-hour	0.25 ppm (State) and 0.075 ppm (federal)
	24-hour	0.04 ppm (State)
Lead	30-day Average	1.5 μg/m^3 (State)
	Rolling 3-month Average	0.15 μg/m^3 (federal)

Source: South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, April 2019, http://www.aqmd.gov/ceqa/hdbk.html

4. AIR QUALITY ASSESSMENT METHODOLOGY

Implementation of the proposed project would result in both short-term and long-term air quality impacts. Over the short-term, local air quality conditions could be temporarily affected due to construction activities. Over the long-term, implementation has the potential to affect air quality due to an increase in aircraft and motor vehicle operations. To evaluate the effect of these changes on local and regional air quality conditions, two types of air quality analyses will be performed - emission inventories and dispersion modeling. The emission inventories provide an indication of the change in the amount of air pollutant and pollutant precursor emissions that will be produced with the project. Dispersion modeling provides predicted concentrations of ambient pollutant levels that can be directly compared to the CAAQS and NAAQS.

The air quality analysis will evaluate the potential for air quality impacts in accordance with Federal Aviation Administration (FAA)'s *Aviation Emissions and Air Quality Handbook,*[8] the

[8] Federal Aviation Administration, *Aviation Emissions and Air Quality Handbook Version 3 Update 1, January 2015,* https://www.faa.gov/regulations_policies/policy_guidance/envir_policy/airquality_handbook/

SCAQMD *Modeling Guidance for AERMOD,*[9] the SCAQMD *Air Quality Handbook.*[10] and the United States Environmental Protection Agency (USEPA) *Guideline on Air Quality Models.*[11]

Emission and Dispersion Models

The analysis will be performed using the FAA *Aviation Environmental Design Tool* (AEDT, Version 3d)[12] and USEPA's American Meteorological Society/USEPA Regulatory Model (AERMOD, Version 21112).

AEDT is a software system that dynamically models aircraft performance to compute emissions, fuel burn, and noise and assess their interdependencies. The FAA-requires that the AEDT be used to assess the potential for airport-related air quality impacts. The AEDT will be used to prepare emissions inventories of CO, NOx, SO_2, PM_{10}, $PM_{2.5}$, Pb, and VOC.

Other models that will be used to evaluate the proposed project include the USEPA AERMOD dispersion model for air pollutant concentrations. [13, 14] AERMOD is an atmospheric dispersion model which simulates point, area, volume, and line sources and has the capability to include simple, intermediate, and complex terrains. It also predicts both short-term (1 to 24 hours) and long-term (quarterly or annual) average concentrations of air pollutants. AERMOD is commonly executed to yield one-hour, 24-hour, and annual average concentrations (in micrograms per cubic meter or $\mu g/m^3$) at designated receptors.

The emission sources that will be included in AEDT are aircraft, auxiliary power units (APU), ground support equipment (GSE), motor vehicles, and various stationary sources (e.g., standby generators).

The following models will be used to estimate construction and motor vehicle emissions:

- California Air Pollution Officers Association (CAPCOA) CalEEMod (California Emissions Estimator Model Version 2020.4.0)[15] land use emissions model estimates emissions due to demolition and construction activities and operations for land use development.

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9 South Coast Air Quality Management District, SCAQMD Modeling Guidance for AERMOD, https://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance

10 South Coast Air Quality Management District, CEQA Air Quality Handbook, http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook

11 United States Environmental Protection Agency, Guideline on Air Quality Models (Revised), 40 Code of Federal Regulations, Part 51, Appendix W, November 2005

12 Federal Aviation Administration, *Aviation Environmental Design Tool (AEDT) Users Guide*, https://aedt.faa.gov/. AEDT 3d was released on March 29, 2021

13 United States Environmental Protection Agency Preferred/Recommended Models, *AERMOD Modeling System*, https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models

14 Title 40 CFR Part 51, *Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions; Final Rule,* http://www.epa.gov/ttn/scram/guidance/guide/appw_05.pdf

15 California Air Pollution Officers Association, *California Emissions Estimator Model User's Guide*, May 2021, http://www.caleemod.com/ CalEEMod (Version 2020.4.0) was released in July of 2021

- CARB EMFAC[16] emissions inventory model. EMFAC is the latest emission inventory model that calculates emission inventories and emission rates for motor vehicles operating on roads in California. This model reflects CARB's current understanding of how vehicles travel and how much they emit. EMFAC can be used to show how California motor vehicle emissions have changed over time and are projected to change in the future.
- CARB OFFROAD[17] emissions inventory model. OFFROAD is the latest emission inventory model that calculates emission inventories and emission rates for off-road equipment such as loaders, excavators, and off-road haul trucks operating in California. This model reflects CARB's current understanding of how equipment operates and how much they emit. OFFROAD can be used to show how California off-road equipment emissions have changed over time and are projected to change in the future.

Emissions Inventory

In general terms, an emissions inventory is a quantification of the amount, or weight, of pollutants emitted from a source (or combination of sources) over a period of time. The outcome is a product of source activity levels (i.e., aircraft operations) combined with appropriate emission factors (i.e., grams of pollutant per operation). The results are segregated by pollutant type (i.e., CO, NO_x, SO_2, PM_{10}, $PM_{2.5}$, and VOC), emission source, and project milestone years. Emission inventory results are commonly reported in units of pounds per day and tons per year.

Using AEDT, emission inventories will be prepared for each condition. The aircraft fleet mix, annual operations, runway assignment, gate assignment, taxipath and other modeling parameters used to prepare the inventories will be consistent with the data generated by an airfield simulation model and noise analyses that are also being prepared in support of the EIR.

The emission inventories will be prepared to estimate emissions for the following project-related sources:

- Aircraft (arrivals, departures, ground taxi, and engine startup)
- Ground Support Equipment (GSE) / Auxiliary Power Units (APU
- Stationary sources
- Motor vehicles
- Construction activities

The following highlight certain assumptions and/or methodologies that will be used to prepare the emission inventories.

[16] California Air Resources Board. Mobile Source Emissions Inventory – Modeling Tools, https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/msei-modeling-tools

[17] California Air Resources Board, *Mobile Source Emissions Inventory Documentation – Off Road Diesel Equipment*, https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-documentation-road and https://ww3.arb.ca.gov/msei/ordiesel/ordas_ef_fcf_2017.pdf

Aircraft

The number of annual aircraft operations and the aircraft fleet mix for the Existing and Future conditions will be used in the air quality analysis. [18] AEDT default emission factors were used to estimate aircraft emissions for all aircraft. The factors are provided by aircraft engine type and operational mode (i.e., take-off, climbout, approach, and taxi/idle).[19] Aircraft emissions are described within several operational modes: engine startup, taxi in and taxi out, climb (aboveground within takeoff and climb-out), and descend (aboveground within approach and landing). AEDT default times will be used for each mode except for ground movements. Times in mode for taxi-in (for arrivals) and taxi-out (for departures) will be based on airfield simulation modeling. The proposed project anticipates some operation of electric cargo aircraft.

Ground Support Equipment (GSE) / Auxiliary Power Units (APU)

GSE is a term used to describe the equipment and vehicles that service aircraft after arrival and before departure at an airport. [20] Emissions from these sources are based on the number and type of equipment used to service each aircraft along with the amount of time the equipment is in use per aircraft LTO and the fuel type. The proposed project would include the use and operation of electric-powered equipment, including forklifts, loaders, tugs, ground power units, and ramp support (vans/carts) that would be stored and charged in designated areas in the cargo building and aircraft apron.[21]

APU are small turbine engines used by commercial jet aircraft to start the main engines; provide electrical power to aircraft radios, lights, and other equipment; and to power the onboard air conditioning (heating and cooling) system. When an aircraft arrives at a terminal gate, the pilot has the option of shutting off power to the main jet engines and operating the onboard APU, which is fueled by the aircraft's jet fuel. Alternately, an aircraft can receive electrical power and pre-conditioned air (PCA) from a mobile GPU and air conditioning equipment or receive electrical power (400 Hertz (Hz) and PCA from connections at the gate. Where available, gate power connections are built into the passenger loading bridge used to connect the terminal building to the aircraft for loading and unloading passengers.

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[18] Aircraft operations which are not directly part of the proposed project are included in the analysis because the project aircraft results in changes in taxi movements and speeds for all airport aircraft (passenger and other cargo operations).

[19] For the purposes of the emissions inventories, a landing and take-off cycle is comprised of the following AEDT operational mode categories:

- *Descend Below Mixing Height*: The modes in this category are associated with an aircraft's arrival, beginning at the atmospheric mixing height and including descend emissions below 1,000 feet, the landing ground roll, and arrival taxi (i.e., taxi-in) emissions.
- *Climb Below Mixing Height:* The modes in this category are associated with an aircraft's departure, beginning with startup and including climb taxi (i.e., taxi-out), takeoff ground roll, climb below 1,000 feet and climb to the atmospheric mixing height.

[20] APU/GSE associated with passenger, FedEx and UPS aircraft and other similar activities are not affected by the proposed project and therefore, will not be included in the analysis.

[21] Diesel-powered fuel trucks would be used during Phase 1 and replaced with electric hydrant carts within Phase 2.

Use of a GPU or gate connections eliminates the need for aircraft to use their own power at the gate except for short periods of time during engine start-up and shut-down. Terminal gates without PCA/ground power typically assume an APU operating time of 26 minutes (13 minutes during taxi in and 13 minutes during taxi out). Terminal gates with PCA/ground power typically assume an APU operating time of seven minutes (3.5 minutes during taxi in and 3.5 minutes during taxi out).[22] All of the passenger terminal gates at Ontario provide PCA and power to aircraft. Therefore, APU operating times will be assumed to be seven minutes at all passenger terminal gates. Operations involving non-project cargo or general aviation aircraft will be assumed to require an APU operating time of 26 minutes, where applicable. The proposed project would provide gate power which would reduce APU operating times.

Ground Access Vehicles

Project-related ground access vehicles include employee-owned vehicles and delivery trucks.[23] Emissions factors for this airport source will be obtained from the EMFAC model. For the proposed project, electric charging stations would be provided in the employee and visitor parking lots, and truckyard. The motor vehicle fleet mix and fuel type would be based on information within EMFAC.

Stationary Sources

The proposed project includes several emergency generators.[24] The proposed project would include a 1.5-Megawatt Solar PV Panel system on the rooftop of the Cargo Sorting Building and the option to construct an additional 0.75-Megawatt rooftop system on the parking garage.

Construction

The proposed project would generate additional pollutant emissions as a result of construction activities. An emissions inventory for the proposed project construction period will be prepared. Project construction has the potential to generate air contaminants through the demolition, excavation, and grading of the proposed project site, the use of heavy-duty construction equipment, and through vehicle trips generated by construction workers, as well as construction haul trips traveling to the proposed project site.

The emissions inventory will include CO, NO_x, SO_2, PM_{10}, $PM_{2.5}$, and VOC (as ROG) for each year of construction. The air emission inventory for construction activities will be conducted using CalEEMod, CARB's OFFROAD (nonroad equipment), and EMFAC (motor vehicles) emission models and will incorporate CARB and SCAQMD guidelines of fugitive dust and entrained roadway dust; based on the equipment schedule, number of pieces of equipment, the types and sizes of equipment, estimation of disturbed area, and the construction duration. If applicable,

22 Federal Aviation Administration, *Aviation Emissions and Air Quality Handbook Version 3 Update 1, January 2015,* https://www.faa.gov/regulations_policies/policy_guidance/envir_policy/airquality_handbook/

23 Airport passenger associated motor vehicles, terminal deliveries, FedEx and UPS delivery trucks, and other similar activities are not affected by the proposed project and therefore, will not be included in the analysis.

24 Passenger terminal (as well as FedEx and UPS) boilers, generators, and other stationary sources are not affected by the proposed project and therefore, will not be included in the analysis.

information associated with onsite processing plants such as concrete batch plant would be included.

5. DISPERSION MODELING

Atmospheric dispersion modeling will be conducted to predict the effects of the proposed project on local air quality conditions. The dispersion modeling analysis will be completed in accordance with the FAA's *Aviation Emissions and Air Quality Handbook*[25] and USEPA's *Guideline on Air Quality Models.*[26]

A dispersion analysis will be performed to predict ambient (i.e., outdoor) pollutant concentrations of CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and Pb both on and off the airport (i.e., public access) for each alternative. The results of the dispersion analysis will be used to indicate whether airport-related emissions would cause or contribute to violations of the CAAQS and NAAQS for these pollutants. The analysis will be performed using USEPA's AERMOD dispersion model for the following pollutants and averaging times:

- CO – 1-hour and 8-hour
- NO_2 – 1-hour and annual
- SO_2 – 1-hour and 24-hour
- PM_{10} – 24-hour and annual
- $PM_{2.5}$ – 24-hour
- Pb – 30-day average and three-month rolling average

All standard approaches to the dispersion modeling will be used except where project-specific conditions and inputs are more appropriate and allowable under SCAQMD and USEPA guidance. Because O_3 is a regional pollutant and emissions and concentrations of O_3 cannot be computed directly using AEDT, AERMOD, or other conventional models[27], VOC and NO_x (the primary precursors to O_3 formation) will be used as surrogates for this pollutant. Specifically, the results of the emissions inventories for VOC and NO_x will be compared to the appropriate emission thresholds.

American Meteorological Society/USEPA Regulatory Model (AERMOD) Options

AERMOD will be executed using the regulatory default options (e.g., stack-tip downwash, elevated terrain effects, calm wind speeds processing routine, missing data processing routine, buoyancy-induced dispersion, and final plume rise), default wind speed profile categories, default potential temperature gradients, and, with the exception of the NO_x to NO_2 analysis, no

25 Federal Aviation Administration, *Aviation Emissions and Air Quality Handbook Version 3 Update 1, January 2015,* https://www.faa.gov/regulations_policies/policy_guidance/envir_policy/airquality_handbook/

26 United States Environmental Protection Agency, 40 CFR Part 51 Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions; Final Rule, November 9, 2005, https://www3.epa.gov/scram001/guidance/guide/appw_05.pdf

27 The complexity of O_3 formation and the health implications of O_3 warrant evaluation on a regional basis using a regional model and cannot be meaningfully addressed on a project-specific level.

pollutant decay. AERMOD is the appropriate model for this analysis based on the model's coverage of simple (i.e., flat), intermediate, and complex (i.e., above emission-source elevation) terrain. For this evaluation, the terrain will be assumed to be flat.

When executing AERMOD, the selection of appropriate dispersion coefficients depends on the land use within three kilometers (km) of a source. This land-use typing is based on a classification method defined by Auer,[28] using pertinent U.S. Geological Survey (USGS) 1:24,000 scale (7.5 minute) topographic maps of the area. If the Auer land use types of heavy industrial, light-to-moderate industrial, commercial, and compact residential account for 50 percent or more of the total area, the USEPA Guideline on Air Quality Models[29] recommends using urban dispersion coefficients; otherwise, using the appropriate rural coefficients is advised. Ontario International Airport in an urban area, therefore, urban dispersion coefficients will be used for this analysis. For this project, all emissions sources were modeled with urban effects using the population of 2,035,210 for San Bernardino County.[30]

Background Concentrations

Because the dispersion modeling will address emissions from project-related sources only, background concentrations will be added to the results to account for air emission sources not included in the dispersion modeling.

The SCAQMD maintains a network of monitoring stations within the Air Basin that monitor air quality and compliance with applicable ambient standards. The nearest air monitoring station which measures CO, NO_2, and PM_{10} is located at 1350 San Bernardino Road in Upland (Northwest San Bernardino Valley, Station # 5175), four miles to the north of the project site. The nearest air monitoring station which measures SO_2 and $PM_{2.5}$ is located at 14360 Arrow Boulevard in Fontana (Central San Bernardino Valley 1, Station # 5197), seven miles to the northeast of the project site. These background concentrations will be derived from existing air monitoring data collected in 2018, 2019, and 2020 as the maximum values within the last three years.

To account for the variance in background NO_2 concentrations over time, seasonal/temporal background concentrations for NO_2 from the Northwest San Bernardino Valley monitoring station from 2018 through 2020 were derived following USEPA guidance.[31] As shown in **Table 4**, the estimated NO_2 one-hour background concentrations vary by season and by time of day with a tendency for higher concentrations during fall and winter and nighttime periods. These

[28] Auer, August H., 1978: *Correlation of Land Use and Cover with Meteorological Anomalies*. J. Appl. Meteor., 17, 636–643 http://journals.ametsoc.org/doi/pdf/10.1175/1520-0450%281978%29017%3C0636%3ACOLUAC%3E2.0.CO%3B2

[29] Appendix W to Part 51 – Guideline on Air Quality Models, http://www.ecfr.gov/cgi-bin/text-idx?SID=e6a5b817b94abf58460f48c032d9a39c&node=40:2.0.1.1.2.23.11.5.37&rgn=div9

[30] South Coast Air Quality Management District, *SCAQMD Modeling Guidance for AERMOD*, https://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance

[31] Additional Clarification Regarding Application of Appendix W Modeling Guidance for the one-hour NO_2 National Ambient Air Quality Standard, March 1, 2011 (https://www.epa.gov/sites/production/files/2015-07/documents/appwno2_2.pdf) and Clarification on the Use of AERMOD Dispersion Modeling for Demonstrating Compliance with the NO_2 National Ambient Air Quality Standard, September 30, 2014 (https://www.epa.gov/sites/default/files/2020-10/documents/no2_clarification_memo-20140930.pdf)

seasonal/temporal NO_2 background concentrations will be used for the one-hour NO_2 dispersion analysis.

Table 4
One-Hour NO^2 Seasonal/Temporal Background Concentrations (µg/m³)

Hour	Winter	Spring	Summer	Fall	Annual
1	71.2	46.2	55.2	74.8	78.0
2	71.2	45.1	53.5	67.6	71.8
3	71.3	41.7	56.9	64.4	71.3
4	66.2	47.1	57.7	64.5	69.3
5	64.1	62.1	62.0	65.3	68.1
6	68.6	66.8	70.8	70.9	73.3
7	70.8	66.9	72.8	74.1	77.4
8	69.6	72.0	81.4	70.7	81.4
9	75.3	77.1	84.6	81.4	90.3
10	76.9	67.1	81.9	84.4	85.8
11	78.2	54.7	72.1	87.3	87.3
12	73.8	37.3	52.6	79.4	82.2
13	67.8	37.9	38.6	65.8	74.8
14	54.4	29.8	31.5	53.2	57.1
15	56.6	25.1	28.1	62.0	62.3
16	62.9	29.2	32.5	71.0	71.7
17	70.0	28.7	52.8	84.8	87.3
18	88.0	35.0	58.3	90.2	98.9
19	98.6	35.8	54.4	91.7	104.6
20	92.6	42.3	53.5	95.1	101.1
21	88.0	46.3	54.0	94.0	100.2
22	84.1	48.5	60.7	94.3	95.1
23	76.9	54.5	59.7	89.1	89.1
24	73.1	49.5	57.6	82.3	82.3

Source: Analysis of USEPA ambient monitoring data (*AIRData – Monitor Values Reports*, http://www.epa.gov/air/data/index.html), 2021.

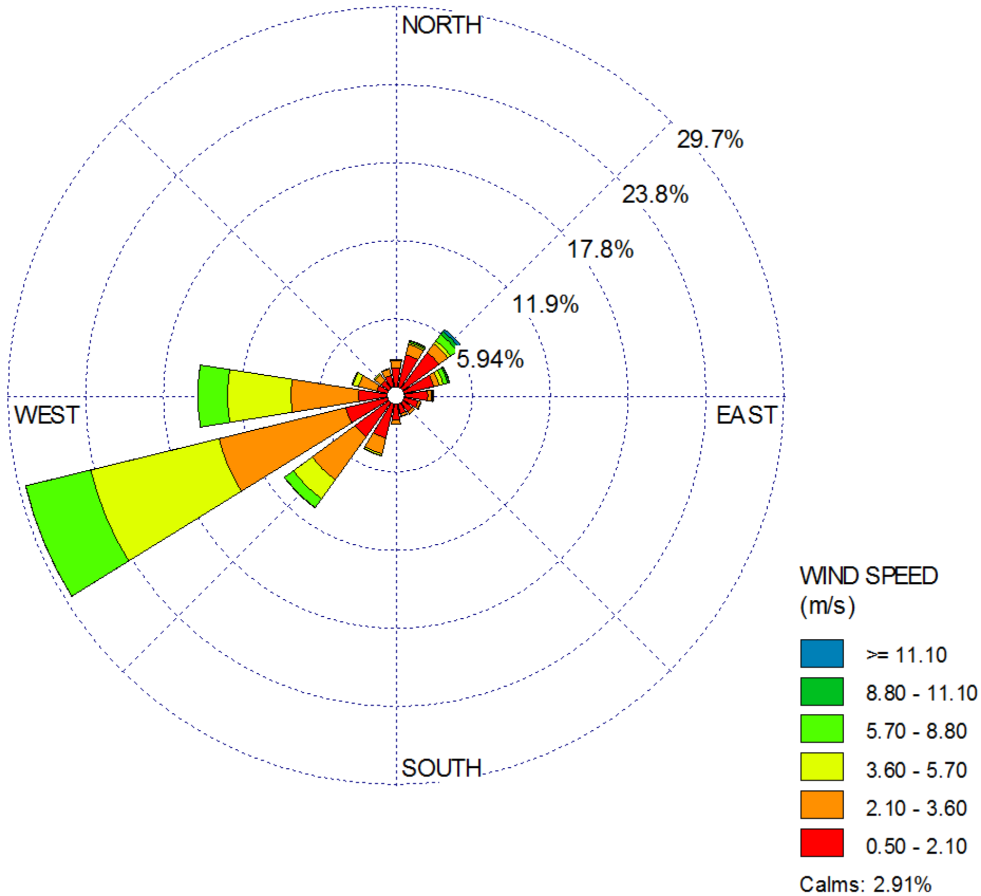
Meteorological Data

AERMOD uses both surface and upper air meteorological conditions. The dispersion modeling analysis will use hourly meteorological data collected at Ontario International Airport by the National Weather Service for a five-year period (2012 through 2016) and provided by SCAQMD.[32] **Figure 2** provides the wind rose for this time period. As shown, wind directions are predominately from the west-southwest with light or moderate wind speed condition of 6.4 miles per hour (2.9 meters per second). A value of 2,402 feet will be used for the mixing height.[33] Notably, the mixing height is used by AEDT in the calculation of air pollutant/pollutant precursor emissions inventories. The mixing height value is not specifically used within the AERMOD dispersion model.

32 South Coast Air Quality Management District, SCAQMD Modeling Guidance for AERMOD, https://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance

33 South Coast Air Quality Management District, Draft Aircraft Emissions Inventory For South Coast Air Quality Management District, August 2016, http://www.aqmd.gov/docs/default-source/planning/fbmsm-docs/aircraft-emissions-inventory-for-the-south-coast-air-quality-management-district.pdf

Figure 2
Windrose for 2012 through 2016



Source: South Coast Air Quality Management District, 2021.

A screening analysis will be conducted to determine which year of meteorological data will result in the greatest predicted pollutant concentrations. Because it is anticipated that the predicted concentrations of NO_2 will be closest to the CAAQS and NAAQS for this pollutant, the screening analysis will be performed for the proposed project during Phase 2 for both the determination of the one-hour and annual NO_2 concentrations. The meteorological year resulting in the highest NO_2 concentrations will then be used to evaluate all other pollutants/averaging periods and alternatives.[34]

[34] The emission distribution for NOx will be similar to the emission distribution for CO, SO_2, PM_{10}, and $PM_{2.5}$ because the majority of the emissions result from aircraft and the temporal operational profiles for aircraft are the same regardless of pollutant. It is also anticipated that both the 1-hour and annual NO_2 concentration will be worst-case

Receptors

For the air quality dispersion analysis, concentrations will be predicted at a sufficient number of locations (referred to as receptors)[35] to identify maximum concentrations. Because the AEDT/AERMOD run time is significant when a large number of receptors are evaluated, a strategy will be developed to balance the number of receptors while optimizing the fidelity of the results. The following lists the types of receptors that will be evaluated:

- **Boundary receptors —** Boundary receptors will be located in areas along the Airport boundary at a spacing of approximately 10 degrees. This distribution of receptors is standard when conducting an airport air quality assessment. **Figure 3** displays the boundary receptors. Additional receptors may be assigned surrounding the location of the maximum concentration to further augment the receptor grid and in-line with the runway ends/beyond the Airport boundary at a spacing recommended within the Modeling Guidance for AERMOD.
- **Sensitive receptors —** Sensitive receptors will include schools, parks, residential areas and health-/day-care centers located in the vicinity of the Airport. Sensitive receptors also include offsite workers as well as onsite workers which are not located within secured areas such as the passenger terminals.
- **Worst-case receptors —** Worst-case receptors will also be selected in close proximity to air emissions sources such as near runway ends. These receptors represent sites where the pollutant concentrations are expected to be the highest and the public would reasonably be expected to occupy the area for a period of one hour or more.

The maximum project-related concentrations are expected to occur in-line and directly beyond the runway ends and nearest to the project site and along the Airport boundary. As such, receptors will generally be limited to within ½ mile of the Airport boundary, in-line with the runway ends, and near the project site (i.e., on the south side of the Airport). There are no residential receptors within ½ miles of the eastern Airport boundary and within ½ miles of the project site.

For the AAQS, the height of each receptor will be assumed to be ground level consistent with SCAQMD modeling guidance. For the health risk assessment, the height of each receptor will be assumed to be 1.8 meters above ground (average breathing height) consistent with OEHHA guidance.

for the same meteorological year. As such, the worst-case concentrations of CO, SO_2, PM_{10}, and $PM_{2.5}$ for both short- and long-term averaging periods would occur in the same year. Of note, based on experience, the percentage of the airport/project contribution to the total concentration (airport/project plus background) will be highest for NO_2 and the closest to the AAQS compared to the other pollutants. Therefore, it is unlikely that use of a different year of meteorological data would substantially change the resulting conclusions for CO, SO_2, PM_{10}, $PM_{2.5}$, or Pb.

35 The term *receptor* generically describes outdoor land uses or activities which it can be reasonably expected that the public would occupy for a period ranging from one hour to one year.

Figure 3
Air Dispersion Modeling Boundary Receptors

Operational Profile

An operational profile, which is comprised of temporal factors, will be used to describe the relationship of one period of time to another period of time (i.e., the relationship of the activity during one-hour to the activity during a 24-hour period). In AEDT, temporal factors are applied to represent varying levels of activity as a fraction of a peak hour. The use of temporal factors gives the model the ability to more accurately reflect real world conditions.

To represent actual aircraft activity at the Airport throughout the entire calendar year, hour-of-day, day-of-week, and month-of-year operational profiles will be used in the analysis. These profiles will be used by AEDT in its dispersion mode to calculate concentrations for each hour of the evaluated years at receptor locations.

The hour of the day, day of the week, and monthly operational profiles for the Existing Condition were developed using airport-specific activity data from FAA's Operations and Performance Data (OPSNET) for the years of 2018 through 2020 (**Table 5)**. Future year operational profiles for non-project aircraft operations will be assigned as the same as for the Existing Condition. Project aircraft operational profiles will be based on anticipated operating schedules and reflective a greater number of nighttime/early morning operations for the project compared to non-project operations.

Table 5
Aircraft Operational Profiles

Hour Ending	Profile
1	0.4851
2	0.1963
3	0.3351
4	0.2693
5	0.2391
6	0.4288
7	0.8790
8	0.8763
9	0.7457
10	0.7758
11	0.7586
Noon	0.7093
1	0.6565
2	0.5982
3	0.5832
4	0.7090
5	0.7382
6	0.7871
7	**1.0000**
8	0.7767
9	0.6031
10	0.7159
11	0.5651
Midnight	0.3937

Day	Profile
Sunday	0.5950
Monday	0.7726
Tuesday	**1.0000**
Wednesday	0.9938
Thursday	0.9844
Friday	0.8723
Saturday	0.6262

Month	Profile
January	0.9042
February	0.8359
March	0.8852
April	0.7950
May	0.8355
June	0.8746
July	0.8995
August	0.9417
September	0.8806
October	0.9436
November	0.9065
December	**1.0000**

Source: FAA Operation and Performance Data, 2021.

Nitrogen Oxides (NO_x) to Nitrogen Dioxide (NO_2) Conversion

The results of the dispersion modeling will provide predicted concentrations of NO_x which, for comparison to the NAAQS, will be converted to concentrations of NO_2. While AERMOD is generally considered a non-chemistry model, it offers three methods for modeling NO_2 formation from NO_x emissions: (i) the Ambient Ratio Method (ARM-2), (ii) the Ozone Limiting Method (OLM), and (iii) the Plume Volume Molar Ratio Method (PVMRM). As discussed in USEPA's Appendix W, PVMRM is most appropriate for analyses with relatively isolated and elevated sources. OLM is more appropriate for analyses with area sources, near-surface releases, or where plume overlap from multiple sources will occur. Moreover, USEPA's *Guideline on Air Quality Models*[36], recommends a three-tiered screening approach to estimate ambient concentrations of NO_2:

- *Tier 1* – Assumes complete (100 percent) conversion of all emitted NO_x to NO_2 based on application of an appropriate refined modeling technique under *Section 4.2.2 of Appendix W* (of the USEPA's Guideline) to estimate ambient NO_x concentrations.
- *Tier 2* – Ambient Ratio Method (ARM-2), where model predicted NO_x concentrations are multiplied by a NO_2/NO_x ambient ratio, derived from ambient monitoring data.

  ARM-2 incorporates a variable ambient ratio that is a function of model predicted one-hour NO_x concentration, based on an analysis of nationwide hourly ambient NO_x monitoring data from approximately 580 stations over the period 2001 through 2010.
- *Tier 3* – Performs a detailed analysis on a case-by-case basis by employing the OLM or PVMRM. These methods require the most detailed level of analysis and produce the least conservative, and presumably the most representative results. Tier 3 requires information such as in stack NO_2/NO_x ratio and ambient ozone concentrations.

The dispersion modeling will be performed using the ARM-2 and using the USEPA default NO_2 to NOx ambient ratios of 0.5 to 0.9 per SCAQMD and USEPA guidance. The dispersion modeling will also be performed using NO_2 to NOx ambient ratios of 0.2 to 0.9 (for informational purposes only); as several studies have shown that a minimum ambient ratio of 0.2 better represents aircraft exhaust environments.

Gate Assignments, Runways, Taxiways, Taxipaths, Airfield Capacity, and Operating Configurations

In AEDT, the capacity of the airfield, which can affect emissions via ground travel delay, is defined as the highest number of hourly departures, which can occur during the peak hour of arrivals and the highest number of hourly arrivals, which can occur during the peak hour of departures. Airfield capacity values will be incorporated in AEDT.

The runway use percentages will be based on the airfield simulation modeling. This information is used to distribute aircraft arrival and departure operations to each runway end. As required by AEDT, the runway usage by aircraft size (small, large, and heavy) and configuration (day/evening and night) will be used for the air quality analysis. Operating

36 Appendix W to Part 51 – Guideline on Air Quality Models, http://www.ecfr.gov/cgi-bin/text-idx?SID=e6a5b817b94abf58460f48c032d9a39c&node=40:2.0.1.1.2.23.11.5.37&rgn=div9

configurations specify the pattern of aircraft arrivals and departures on specific runways over the course of a year, depending on weather conditions and airfield capacity. Specifying configurations allows for aircraft to be assigned to runways based on aircraft size (i.e., small, large, and heavy), a similar method to that employed in an actual airport operating environment.

The runway usage, terminal/apron assignment, and taxiway assignment define the taxipath that aircraft take while traveling on the ground. AEDT uses input data to develop an aircraft taxipath and, along with aircraft travel speeds, the corresponding ground taxi times. Each aircraft is assigned a terminal/apron location to which the aircraft proceeds after landing and where servicing (e.g., baggage handling, fueling, catering, etc.) is conducted. The aircraft then departs from the same terminal/apron for a takeoff runway end. For the air quality analysis, the taxiway assignments will be based on the common and forecast routing paths that ground traffic controllers are known to assign and airfield simulation modeling.

Analysis Scenarios

For the emissions inventory, in order to determine the proposed project-related operational impacts associated with air pollutant emissions, the total emissions associated with the proposed project that will occur in Phase 1 and Phase 2 including other aircraft operations not associated with the project will be compared to the 2021 baseline emissions. The difference between these two conditions will be used to determine the significance of the proposed project when compared to the SCAQMD thresholds.

- Year 2025 with project operations compared to the 2021 baseline condition
- Year 2029 with project operations compared to the 2021 baseline condition

However, this comparison will be influenced by factors that are not attributable to the project itself. Specifically, the comparison will contain future aircraft operations from background growth that are projected to occur with or without the proposed project. In order to remove the contribution of background growth, for CEQA purposes, a second comparison will be provided for the proposed future project and the proposed future without project. This comparison will be made for informational purposes only and in which the significance of the project impacts will not be based.

- Year 2025 with project operations compared to the Year 2025 without project operations
- Year 2029 with project operations compared to the Year 2029 without project operations

For the air dispersion modeling, in order to evaluate impacts associated with the proposed project in isolation (i.e., without including impacts associated with existing airport operations), concentrations associated with the 2021 baseline condition will be subtracted from future year with project concentrations (i.e., project-related concentrations). Then, in order to determine the total concentrations for CO, SO_2, and NO_2, these project-related concentrations will be added to a background concentration (i.e., representing other nearby emission sources not associated with the airport or the project) based on nearby existing ambient monitoring station(s). For CO, SO_2, and NO_2, these total concentrations will be compared to the California and National AAQS. Per SCAQMD guidance, the project-related concentrations of PM_{10} and $PM_{2.5}$ will be compared to the

SCAQMD significance thresholds for PM_{10} and $PM_{2.5}$ (without adding background concentrations).

- Year 2025 with project operations compared to the 2021 baseline condition
- Year 2029 with project operations compared to the 2021 baseline condition

As with the emissions results, a second comparison will be made in order to remove the influence of background airport growth by comparing the concentrations from future year with proposed project and the future year without proposed project. This comparison will be made for informational purposes only and in which the significance of the project impacts will not be based.

- Year 2025 with project operations compared to the Year 2025 without project operations
- Year 2029 with project operations compared to the Year 2029 without project operations

Under SCAQMD's guidance, "projects that exceed the project-specific significance thresholds are considered by SCAQMD to be cumulatively considerable. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant." Consistent with this guidance, the potential for the proposed project to results in cumulative impacts from regional emissions will be assessed based on SCAQMD thresholds through a qualitative discussion.

6. HEALTH RISK ASSESSMENT

Hazardous Air Pollutants (HAP) comprise gaseous organic and inorganic chemicals and particulate matter with known or suspected potential to cause cancer (carcinogenic) or other serious health effects (non-carcinogenic). They are commonly emitted by a wide range of airport and non-airport sources, including aircraft, ground support equipment, motor vehicles, home furnaces, evaporating fuel and paints, wood burning, carpets, dry-cleaning of clothing, and industrial facilities.

For most airport emission inventories, formaldehyde occurs in the greatest amounts followed by acetaldehyde, acrolein, and 1,3-butadiene. These compounds are emitted in the exhaust of aircraft, APU, GSE, and ground access vehicles and, to a lesser extent, from boilers, fuel facilities, and other stationary sources. Compounds such as benzene, ethylbenzene, naphthalene, toluene, hexane, styrene, and xylene also occur, but in far lesser amounts.

The USEPA and the FAA developed organic gas speciation profiles and best practices for use in HAP emission inventories of aircraft equipped with turbofan, turbojet, and turboprop engines fueled with kerosene-based jet-A fuel. The development of these profiles and guidance was the combined work of both agencies, taking into account the most recent data and information available.

- *Recommended Best Practice for Quantifying Speciated Organic Gas Emissions from Aircraft Equipped with Turbofan, Turbojet, and Turboprop Engines.*[37]

  The aircraft-related speciation profile developed from this initiative was used to update the organic gas profile for aircraft in the USEPA SPECIATE database – the agency's multi-sector repository for such data. In this application, a *speciation profile* is the amount of organic gases emitted based on the amount of VOC emitted by an emission source.

The FAA also published a document providing an approach to, and technical guidance for, preparing speciated organic gas emission inventories for airport sources.

- *Guidance for Quantifying Speciated Organic Gas Emissions from Airport Sources.*[38]

  This guidance is intended to help ensure that OG/HAPs emission inventories prepared in support of environmental documents prepared by, or on behalf of, the FAA are done so consistently. Importantly, it points out that emission inventories of aviation-related organic gases; which include the organic gases identified by the USEPA to be HAP and the organic gases listed in the USEPA Integrated Risk Information System, are not required by current USEPA regulations. However, in those cases where it is necessary to prepare an aviation-related HAP emissions inventory, the inventory must be prepared following this guidance and using AEDT.

AEDT calculates emissions for approximately 400 different air toxics. Of these air toxics approximately 45 compounds are classified as HAP.

The health risk assessment will focus on potential impacts on any existing residences and other sensitive populations located near to the Project site from emissions of toxic air contaminants (TAC)[39] such as diesel particulate matter (DPM)[40] emissions from construction equipment and haul trucks associated with the proposed project construction activities as well as air toxics emissions from aircraft. The HRA will be conducted to determine the health impacts, in terms of excess cancer risk and noncancer hazards, using the significance levels identified by the

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37 Federal Aviation Administration and United States Environmental Protection Agency, *Recommended Best Practice for Quantifying Speciated Organic Gas Emissions from Aircraft Equipped with Turbofan, Turbojet, and Turboprop Engines (Version 1.0)*, May 2009, http://www.epa.gov/nonroad/aviation/420r09901.pdf

38 Federal Aviation Administration, *Guidance for Quantifying Speciated Organic Gas Emissions from Airport Sources,* Version 1, September 2, 2009, http://www.faa.gov/regulations_policies/policy_guidance/envir_policy/media/Guidance%20for%20Quantifying%20Speciated%20Organic%20Gas%20Emissions%20from%20Airport%20Sources.pdf

39 Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality. TAC are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., gasoline service stations, dry cleaners). TAC are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TAC are regulated at the regional, state, and Federal level.

40 In 1998, the California Air Resources Board classified diesel particulate matter as a toxic air contaminant, citing its potential to cause cancer and other health problems. The United States Environmental Protection Agency concluded that long-term exposure to diesel engine exhaust is likely to pose a lung cancer hazard to humans and can also contribute to other acute and chronic health effects.

SCAQMD.[41] The HRA will be prepared based on the California Office of Environmental Health Hazard Assessment (OEHHA)'s *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*.[42]

7. GREENHOUSE GAS EMISSIONS

GHG emissions associated with aviation are principally in the form of CO_2 and are generated by aircraft, APU, GSE, motor vehicles and an assortment of stationary sources. For the most part, CO_2 emissions from these sources arise from the combustion of fossil fuels (e.g., jet fuel, avgas, diesel, gasoline, and compressed natural gas) and are emitted as by-products contained in the engine exhausts. Other GHG associated with airport operations include methane and nitric oxides, water vapor, soot, and sulfates - but are emitted by airports to a far lesser extent than CO_2.

Fuel burn and GHG emissions will be calculated in much the same way as criteria air pollutants using AEDT. Input data included activity levels or material throughput (i.e., fuel use, vehicle miles traveled, electrical consumption, etc.). Appropriate emission factors will be applied to the input data (i.e., in units of GHG emissions per gallon of fuel).

41 South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, April 2019, http://www.aqmd.gov/ceqa/hdbk.html.

42 Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, February 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html.

1-Hour CO Concentrations (µg/m³) from Operational Activities - Project Compared to Baseline

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	-2017.7	-1529	442,500	3,767,000	13	32
2	-1767.7	-1529	442,750	3,767,000	16	52
3	-1517.7	-1529	443,000	3,767,000	14	67
4	-1267.7	-1529	443,250	3,767,000	17	78
5	-1017.7	-1529	443,500	3,767,000	25	89
6	-767.7	-1529	443,750	3,767,000	23	87
7	-517.7	-1529	444,000	3,767,000	21	79
8	-267.7	-1529	444,250	3,767,000	25	73
9	-17.7	-1529	444,500	3,767,000	21	53
10	232.3	-1529	444,750	3,767,000	26	30
11	482.3	-1529	445,000	3,767,000	35	35
12	732.3	-1529	445,250	3,767,000	58	55
13	982.3	-1529	445,500	3,767,000	29	50
14	1232.3	-1529	445,750	3,767,000	31	66
15	1482.3	-1529	446,000	3,767,000	37	68
16	1732.3	-1529	446,250	3,767,000	47	66
17	1982.3	-1529	446,500	3,767,000	(5)	13
18	2232.3	-1529	446,750	3,767,000	18	13
19	2482.3	-1529	447,000	3,767,000	39	19
20	2732.3	-1529	447,250	3,767,000	7	(6)
21	2982.3	-1529	447,500	3,767,000	(19)	(15)
22	3232.3	-1529	447,750	3,767,000	11	4
23	3482.3	-1529	448,000	3,767,000	46	41
24	3732.3	-1529	448,250	3,767,000	58	53
25	3982.3	-1529	448,500	3,767,000	48	45
26	4232.3	-1529	448,750	3,767,000	29	26
27	4482.3	-1529	449,000	3,767,000	19	24
28	-2017.7	-1279	442,500	3,767,250	21	28
29	-1767.7	-1279	442,750	3,767,250	19	35
30	-1517.7	-1279	443,000	3,767,250	20	53
31	-1267.7	-1279	443,250	3,767,250	23	77
32	-1017.7	-1279	443,500	3,767,250	27	97
33	-767.7	-1279	443,750	3,767,250	25	105
34	-517.7	-1279	444,000	3,767,250	20	102
35	-267.7	-1279	444,250	3,767,250	22	98
36	-17.7	-1279	444,500	3,767,250	28	90
37	232.3	-1279	444,750	3,767,250	28	67
38	482.3	-1279	445,000	3,767,250	40	53
39	732.3	-1279	445,250	3,767,250	71	64
40	982.3	-1279	445,500	3,767,250	37	56
41	1232.3	-1279	445,750	3,767,250	34	78
42	1482.3	-1279	446,000	3,767,250	37	68
43	1732.3	-1279	446,250	3,767,250	57	73

44	1982.3	-1279	446,500	3,767,250	(14)	8
45	2232.3	-1279	446,750	3,767,250	49	34
46	2482.3	-1279	447,000	3,767,250	16	(5)
47	2732.3	-1279	447,250	3,767,250	(25)	(19)
48	2982.3	-1279	447,500	3,767,250	13	7
49	3232.3	-1279	447,750	3,767,250	60	56
50	3482.3	-1279	448,000	3,767,250	67	63
51	3732.3	-1279	448,250	3,767,250	46	42
52	3982.3	-1279	448,500	3,767,250	26	40
53	4232.3	-1279	448,750	3,767,250	22	43
54	4482.3	-1279	449,000	3,767,250	22	40
55	-2017.7	-1029	442,500	3,767,500	24	23
56	-1767.7	-1029	442,750	3,767,500	26	25
57	-1517.7	-1029	443,000	3,767,500	29	38
58	-1267.7	-1029	443,250	3,767,500	30	57
59	-1017.7	-1029	443,500	3,767,500	35	94
60	-767.7	-1029	443,750	3,767,500	33	116
61	-517.7	-1029	444,000	3,767,500	28	128
62	-267.7	-1029	444,250	3,767,500	27	133
63	-17.7	-1029	444,500	3,767,500	30	128
64	232.3	-1029	444,750	3,767,500	34	114
65	482.3	-1029	445,000	3,767,500	49	103
66	732.3	-1029	445,250	3,767,500	80	103
67	982.3	-1029	445,500	3,767,500	54	72
68	1232.3	-1029	445,750	3,767,500	38	90
69	1482.3	-1029	446,000	3,767,500	44	74
70	1732.3	-1029	446,250	3,767,500	75	88
71	1982.3	-1029	446,500	3,767,500	(1)	1
72	2232.3	-1029	446,750	3,767,500	27	2
73	2482.3	-1029	447,000	3,767,500	(30)	(23)
74	2732.3	-1029	447,250	3,767,500	17	12
75	2982.3	-1029	447,500	3,767,500	84	80
76	3232.3	-1029	447,750	3,767,500	76	71
77	3482.3	-1029	448,000	3,767,500	41	66
78	3732.3	-1029	448,250	3,767,500	44	63
79	3982.3	-1029	448,500	3,767,500	44	58
80	4232.3	-1029	448,750	3,767,500	43	52
81	4482.3	-1029	449,000	3,767,500	40	45
82	-3017.7	-779	441,500	3,767,750	25	18
83	-2767.7	-779	441,750	3,767,750	30	22
84	-2517.7	-779	442,000	3,767,750	32	22
85	-2267.7	-779	442,250	3,767,750	33	23
86	-2017.7	-779	442,500	3,767,750	36	26
87	-1767.7	-779	442,750	3,767,750	41	34
88	-1517.7	-779	443,000	3,767,750	42	39

89	-1267.7	-779	443,250	3,767,750	39	39
90	-1017.7	-779	443,500	3,767,750	58	69
91	-767.7	-779	443,750	3,767,750	59	119
92	-517.7	-779	444,000	3,767,750	51	151
93	732.3	-779	445,250	3,767,750	86	162
94	982.3	-779	445,500	3,767,750	77	135
95	1232.3	-779	445,750	3,767,750	56	109
96	1482.3	-779	446,000	3,767,750	56	92
97	1732.3	-779	446,250	3,767,750	90	120
98	1982.3	-779	446,500	3,767,750	30	9
99	2232.3	-779	446,750	3,767,750	(53)	(39)
100	2482.3	-779	447,000	3,767,750	8	5
101	2732.3	-779	447,250	3,767,750	112	107
102	2982.3	-779	447,500	3,767,750	68	97
103	3732.3	-779	448,250	3,767,750	56	57
104	3982.3	-779	448,500	3,767,750	50	47
105	4232.3	-779	448,750	3,767,750	44	38
106	4482.3	-779	449,000	3,767,750	36	29
107	-3517.7	-529	441,000	3,768,000	7	45
108	-3267.7	-529	441,250	3,768,000	5	44
109	-3017.7	-529	441,500	3,768,000	7	43
110	-2767.7	-529	441,750	3,768,000	8	41
111	-2517.7	-529	442,000	3,768,000	10	38
112	-2267.7	-529	442,250	3,768,000	13	35
113	-2017.7	-529	442,500	3,768,000	17	31
114	-1767.7	-529	442,750	3,768,000	24	25
115	-1517.7	-529	443,000	3,768,000	40	23
116	-1267.7	-529	443,250	3,768,000	102	71
117	732.3	-529	445,250	3,768,000	34	210
118	982.3	-529	445,500	3,768,000	34	185
119	1232.3	-529	445,750	3,768,000	30	171
120	1482.3	-529	446,000	3,768,000	(1)	142
121	1732.3	-529	446,250	3,768,000	105	202
122	1982.3	-529	446,500	3,768,000	(109)	(107)
123	2232.3	-529	446,750	3,768,000	(36)	(31)
124	2482.3	-529	447,000	3,768,000	101	121
125	2732.3	-529	447,250	3,768,000	72	66
126	3482.3	-529	448,000	3,768,000	50	24
127	3732.3	-529	448,250	3,768,000	50	26
128	3982.3	-529	448,500	3,768,000	49	27
129	4232.3	-529	448,750	3,768,000	48	27
130	4482.3	-529	449,000	3,768,000	46	26
131	-3517.7	-279	441,000	3,768,250	32	79
132	-3267.7	-279	441,250	3,768,250	31	82
133	-3017.7	-279	441,500	3,768,250	30	85

134	-2767.7	-279	441,750	3,768,250	29	89
135	-2517.7	-279	442,000	3,768,250	26	91
136	-2267.7	-279	442,250	3,768,250	25	96
137	-2017.7	-279	442,500	3,768,250	27	108
138	3482.3	-279	448,000	3,768,250	27	1
139	3732.3	-279	448,250	3,768,250	32	5
140	3982.3	-279	448,500	3,768,250	34	8
141	4232.3	-279	448,750	3,768,250	35	10
142	4482.3	-279	449,000	3,768,250	35	11
143	-3517.7	-29	441,000	3,768,500	60	89
144	-3267.7	-29	441,250	3,768,500	63	97
145	-3017.7	-29	441,500	3,768,500	70	109
146	-2767.7	-29	441,750	3,768,500	80	125
147	-2517.7	-29	442,000	3,768,500	88	141
148	3482.3	-29	448,000	3,768,500	5	(20)
149	3732.3	-29	448,250	3,768,500	7	(16)
150	3982.3	-29	448,500	3,768,500	9	(12)
151	4232.3	-29	448,750	3,768,500	11	(9)
152	4482.3	-29	449,000	3,768,500	12	(6)
153	-3517.7	221	441,000	3,768,750	52	61
154	-3267.7	221	441,250	3,768,750	61	70
155	-3017.7	221	441,500	3,768,750	74	82
156	3482.3	221	448,000	3,768,750	(3)	(10)
157	3732.3	221	448,250	3,768,750	(5)	(12)
158	3982.3	221	448,500	3,768,750	(6)	(12)
159	4232.3	221	448,750	3,768,750	(6)	(11)
160	4482.3	221	449,000	3,768,750	(6)	(11)
161	-3517.7	471	441,000	3,769,000	70	46
162	-3267.7	471	441,250	3,769,000	79	53
163	-3017.7	471	441,500	3,769,000	90	61
164	-2767.7	471	441,750	3,769,000	103	71
165	-2517.7	471	442,000	3,769,000	107	75
166	-2267.7	471	442,250	3,769,000	84	58
167	3232.3	471	447,750	3,769,000	9	32
168	3482.3	471	448,000	3,769,000	10	24
169	3732.3	471	448,250	3,769,000	9	16
170	3982.3	471	448,500	3,769,000	6	9
171	4232.3	471	448,750	3,769,000	0	0
172	4482.3	471	449,000	3,769,000	(4)	(2)
173	-3517.7	721	441,000	3,769,250	50	49
174	-3267.7	721	441,250	3,769,250	53	52
175	-3017.7	721	441,500	3,769,250	56	55
176	-2767.7	721	441,750	3,769,250	56	56
177	-2517.7	721	442,000	3,769,250	52	53
178	-2267.7	721	442,250	3,769,250	49	50

179	2482.3	721	447,000	3,769,250	92	72
180	2732.3	721	447,250	3,769,250	52	50
181	2982.3	721	447,500	3,769,250	30	52
182	3232.3	721	447,750	3,769,250	21	48
183	3482.3	721	448,000	3,769,250	14	41
184	3732.3	721	448,250	3,769,250	13	34
185	3982.3	721	448,500	3,769,250	12	27
186	4232.3	721	448,750	3,769,250	10	21
187	4482.3	721	449,000	3,769,250	8	14
188	-3267.7	971	441,250	3,769,500	37	34
189	-3017.7	971	441,500	3,769,500	37	29
190	-2767.7	971	441,750	3,769,500	35	24
191	-2517.7	971	442,000	3,769,500	31	19
192	-2267.7	971	442,250	3,769,500	28	26
193	-2017.7	971	442,500	3,769,500	25	35
194	-1767.7	971	442,750	3,769,500	23	44
195	-1517.7	971	443,000	3,769,500	22	52
196	-1267.7	971	443,250	3,769,500	26	57
197	-1017.7	971	443,500	3,769,500	17	51
198	-767.7	971	443,750	3,769,500	17	31
199	-517.7	971	444,000	3,769,500	37	7
200	-267.7	971	444,250	3,769,500	50	12
201	-17.7	971	444,500	3,769,500	48	20
202	232.3	971	444,750	3,769,500	30	30
203	482.3	971	445,000	3,769,500	14	41
204	732.3	971	445,250	3,769,500	14	44
205	982.3	971	445,500	3,769,500	31	55
206	1232.3	971	445,750	3,769,500	40	43
207	1482.3	971	446,000	3,769,500	46	49
208	1732.3	971	446,250	3,769,500	9	51
209	1982.3	971	446,500	3,769,500	47	75
210	2232.3	971	446,750	3,769,500	73	76
211	2482.3	971	447,000	3,769,500	83	68
212	2732.3	971	447,250	3,769,500	80	61
213	2982.3	971	447,500	3,769,500	69	52
214	3232.3	971	447,750	3,769,500	47	35
215	3482.3	971	448,000	3,769,500	31	39
216	3732.3	971	448,250	3,769,500	23	41
217	-3267.7	1221	441,250	3,769,750	26	12
218	-3017.7	1221	441,500	3,769,750	23	12
219	-2767.7	1221	441,750	3,769,750	21	20
220	-2517.7	1221	442,000	3,769,750	18	27
221	-2267.7	1221	442,250	3,769,750	17	35
222	-2017.7	1221	442,500	3,769,750	20	42
223	-1767.7	1221	442,750	3,769,750	23	49

224	-1517.7	1221	443,000	3,769,750	19	46
225	-1267.7	1221	443,250	3,769,750	15	35
226	-1017.7	1221	443,500	3,769,750	15	17
227	-767.7	1221	443,750	3,769,750	28	8
228	-517.7	1221	444,000	3,769,750	38	8
229	-267.7	1221	444,250	3,769,750	39	16
230	-17.7	1221	444,500	3,769,750	29	23
231	232.3	1221	444,750	3,769,750	18	30
232	482.3	1221	445,000	3,769,750	13	34
233	732.3	1221	445,250	3,769,750	34	32
234	982.3	1221	445,500	3,769,750	34	32
235	1232.3	1221	445,750	3,769,750	39	41
236	1482.3	1221	446,000	3,769,750	43	45
237	1732.3	1221	446,250	3,769,750	15	42
238	1982.3	1221	446,500	3,769,750	11	40
239	2232.3	1221	446,750	3,769,750	37	70
240	2482.3	1221	447,000	3,769,750	53	68
241	2732.3	1221	447,250	3,769,750	58	58
242	2982.3	1221	447,500	3,769,750	62	52
243	3232.3	1221	447,750	3,769,750	62	47
244	3482.3	1221	448,000	3,769,750	55	37
245	3732.3	1221	448,250	3,769,750	41	25
246	-2828.12	251.91	441,690	3,768,781	91	89
247	-2793.79	238.18	441,724	3,768,767	91	94
248	-2786.92	330.88	441,731	3,768,860	105	75
249	-2550.03	325.73	441,968	3,768,855	131	94
250	-2503.68	329.16	442,014	3,768,858	139	98
251	-2414.42	346.32	442,103	3,768,875	153	104
252	-2290.83	348.04	442,227	3,768,877	168	119
253	-2175.82	342.89	442,342	3,768,872	173	126
254	-2186.12	456.19	442,332	3,768,985	82	56
255	-2270.23	469.92	442,248	3,768,999	84	58
256	-2201.57	517.98	442,316	3,769,047	72	60
257	-2141.49	590.08	442,376	3,769,119	68	68
258	-2043.64	645.01	442,474	3,769,174	54	60
259	-1962.96	658.74	442,555	3,769,188	51	55
260	-1820.49	650.16	442,697	3,769,179	50	53
261	-1509.79	658.74	443,008	3,769,188	44	47
262	-1123.56	672.47	443,394	3,769,201	37	61
263	-915.85	655.31	443,602	3,769,184	40	63
264	-809.43	657.02	443,708	3,769,186	38	61
265	-579.4	686.21	443,938	3,769,215	14	57
266	-291.02	694.79	444,227	3,769,224	45	38
267	-9.5	711.95	444,508	3,769,241	73	19
268	373.29	710.24	444,891	3,769,239	49	42

269	718.33	717.1	445,236	3,769,246	3	61
270	1056.49	735.99	445,574	3,769,265	1	64
271	1516.53	761.74	446,034	3,769,291	31	69
272	1949.11	777.18	446,467	3,769,306	81	83
273	2330.19	784.05	446,848	3,769,313	118	86
274	2359.37	615.83	446,877	3,769,145	102	80
275	2692.39	614.11	447,210	3,769,143	29	53
276	2809.11	588.36	447,327	3,769,117	21	52
277	2932.71	514.55	447,450	3,769,043	11	44
278	2967.04	488.8	447,485	3,769,018	9	42
279	3083.77	346.32	447,602	3,768,875	10	26
280	3112.95	202.13	447,631	3,768,731	3	(2)
281	3291.47	195.27	447,809	3,768,724	(1)	(10)
282	3286.32	-86.25	447,804	3,768,443	5	(21)
283	3279.46	-278.51	447,797	3,768,250	21	(5)
284	3274.31	-415.83	447,792	3,768,113	65	29
285	3303.49	-536	447,821	3,767,993	48	29
286	3391.03	-656.16	447,909	3,767,873	51	48
287	3495.74	-699.07	448,013	3,767,830	52	52
288	3595.31	-700.79	448,113	3,767,828	49	47
289	3560.97	-860.43	448,079	3,767,668	85	92
290	3339.54	-867.29	447,857	3,767,662	89	104
291	3131.83	-867.29	447,650	3,767,662	99	120
292	3102.65	-841.55	447,620	3,767,687	77	103
293	3104.36	-702.5	447,622	3,767,826	65	78
294	3106.08	-542.86	447,624	3,767,986	48	39
295	2886.36	-536	447,404	3,767,993	60	52
296	2869.19	-475.91	447,387	3,768,053	59	33
297	2634.02	-477.63	447,152	3,768,051	70	53
298	2355.94	-472.48	446,874	3,768,056	117	123
299	1974.86	-467.33	446,493	3,768,061	(55)	(41)
300	1509.67	-455.32	446,027	3,768,074	50	193
301	1092.54	-455.32	445,610	3,768,074	23	223
302	733.78	-450.17	445,252	3,768,079	5	239
303	735.49	-683.62	445,253	3,767,845	56	165
304	728.63	-856.99	445,246	3,767,672	204	240
305	469.42	-853.56	444,987	3,767,675	143	214
306	110.66	-839.83	444,628	3,767,689	93	210
307	110.66	-1020.07	444,628	3,767,509	34	127
308	-138.24	-935.96	444,380	3,767,593	35	152
309	-397.45	-829.53	444,120	3,767,699	47	156
310	-646.35	-724.82	443,871	3,767,804	60	136
311	-914.14	-620.11	443,604	3,767,909	150	136
312	-1274.62	-465.62	443,243	3,768,063	48	36
313	-1659.13	-307.69	442,859	3,768,221	(4)	122

314	-1880.57	-216.71	442,637	3,768,312	57	139
315	-2211.87	-87.97	442,306	3,768,441	92	150
316	-2512.27	42.49	442,005	3,768,571	87	139
317	-2622.13	87.12	441,896	3,768,616	85	128
318	-2737.14	128.32	441,781	3,768,657	81	115
319	-2833.27	169.52	441,684	3,768,698	76	102

8-Hour CO Concentrations (µg/m³) from Operational Activities - Project Compared to Baseline

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	-2017.7	-1529	442,500	3,767,000	5	6
2	-1767.7	-1529	442,750	3,767,000	7	9
3	-1517.7	-1529	443,000	3,767,000	7	12
4	-1267.7	-1529	443,250	3,767,000	7	16
5	-1017.7	-1529	443,500	3,767,000	10	20
6	-767.7	-1529	443,750	3,767,000	10	20
7	-517.7	-1529	444,000	3,767,000	8	19
8	-267.7	-1529	444,250	3,767,000	8	19
9	-17.7	-1529	444,500	3,767,000	9	19
10	232.3	-1529	444,750	3,767,000	11	15
11	482.3	-1529	445,000	3,767,000	12	17
12	732.3	-1529	445,250	3,767,000	19	27
13	982.3	-1529	445,500	3,767,000	12	26
14	1232.3	-1529	445,750	3,767,000	10	25
15	1482.3	-1529	446,000	3,767,000	7	20
16	1732.3	-1529	446,250	3,767,000	8	18
17	1982.3	-1529	446,500	3,767,000	13	16
18	2232.3	-1529	446,750	3,767,000	17	22
19	2482.3	-1529	447,000	3,767,000	12	20
20	2732.3	-1529	447,250	3,767,000	6	15
21	2982.3	-1529	447,500	3,767,000	2	8
22	3232.3	-1529	447,750	3,767,000	(0)	1
23	3482.3	-1529	448,000	3,767,000	3	5
24	3732.3	-1529	448,250	3,767,000	5	7
25	3982.3	-1529	448,500	3,767,000	5	6
26	4232.3	-1529	448,750	3,767,000	6	6
27	4482.3	-1529	449,000	3,767,000	6	5
28	-2017.7	-1279	442,500	3,767,250	7	6
29	-1767.7	-1279	442,750	3,767,250	8	6
30	-1517.7	-1279	443,000	3,767,250	8	9
31	-1267.7	-1279	443,250	3,767,250	7	13
32	-1017.7	-1279	443,500	3,767,250	10	19
33	-767.7	-1279	443,750	3,767,250	10	22
34	-517.7	-1279	444,000	3,767,250	9	21
35	-267.7	-1279	444,250	3,767,250	9	22
36	-17.7	-1279	444,500	3,767,250	9	23
37	232.3	-1279	444,750	3,767,250	13	21
38	482.3	-1279	445,000	3,767,250	14	20
39	732.3	-1279	445,250	3,767,250	22	30
40	982.3	-1279	445,500	3,767,250	14	29
41	1232.3	-1279	445,750	3,767,250	11	29
42	1482.3	-1279	446,000	3,767,250	10	25
43	1732.3	-1279	446,250	3,767,250	11	22

44	1982.3	-1279	446,500	3,767,250	16	20
45	2232.3	-1279	446,750	3,767,250	18	25
46	2482.3	-1279	447,000	3,767,250	11	20
47	2732.3	-1279	447,250	3,767,250	4	13
48	2982.3	-1279	447,500	3,767,250	1	3
49	3232.3	-1279	447,750	3,767,250	7	9
50	3482.3	-1279	448,000	3,767,250	7	9
51	3732.3	-1279	448,250	3,767,250	8	9
52	3982.3	-1279	448,500	3,767,250	8	7
53	4232.3	-1279	448,750	3,767,250	8	6
54	4482.3	-1279	449,000	3,767,250	8	5
55	-2017.7	-1029	442,500	3,767,500	10	10
56	-1767.7	-1029	442,750	3,767,500	10	8
57	-1517.7	-1029	443,000	3,767,500	9	5
58	-1267.7	-1029	443,250	3,767,500	9	9
59	-1017.7	-1029	443,500	3,767,500	11	16
60	-767.7	-1029	443,750	3,767,500	12	22
61	-517.7	-1029	444,000	3,767,500	11	24
62	-267.7	-1029	444,250	3,767,500	11	25
63	-17.7	-1029	444,500	3,767,500	11	27
64	232.3	-1029	444,750	3,767,500	15	29
65	482.3	-1029	445,000	3,767,500	20	25
66	732.3	-1029	445,250	3,767,500	28	35
67	982.3	-1029	445,500	3,767,500	19	33
68	1232.3	-1029	445,750	3,767,500	18	36
69	1482.3	-1029	446,000	3,767,500	14	31
70	1732.3	-1029	446,250	3,767,500	17	29
71	1982.3	-1029	446,500	3,767,500	23	30
72	2232.3	-1029	446,750	3,767,500	19	29
73	2482.3	-1029	447,000	3,767,500	8	20
74	2732.3	-1029	447,250	3,767,500	5	8
75	2982.3	-1029	447,500	3,767,500	12	15
76	3232.3	-1029	447,750	3,767,500	11	14
77	3482.3	-1029	448,000	3,767,500	12	12
78	3732.3	-1029	448,250	3,767,500	13	11
79	3982.3	-1029	448,500	3,767,500	13	10
80	4232.3	-1029	448,750	3,767,500	12	9
81	4482.3	-1029	449,000	3,767,500	11	8
82	-3017.7	-779	441,500	3,767,750	2	5
83	-2767.7	-779	441,750	3,767,750	3	8
84	-2517.7	-779	442,000	3,767,750	5	9
85	-2267.7	-779	442,250	3,767,750	8	11
86	-2017.7	-779	442,500	3,767,750	12	15
87	-1767.7	-779	442,750	3,767,750	11	14
88	-1517.7	-779	443,000	3,767,750	12	12

89	-1267.7	-779	443,250	3,767,750	11	7
90	-1017.7	-779	443,500	3,767,750	14	10
91	-767.7	-779	443,750	3,767,750	16	20
92	-517.7	-779	444,000	3,767,750	15	27
93	732.3	-779	445,250	3,767,750	29	42
94	982.3	-779	445,500	3,767,750	25	41
95	1232.3	-779	445,750	3,767,750	26	41
96	1482.3	-779	446,000	3,767,750	19	36
97	1732.3	-779	446,250	3,767,750	28	43
98	1982.3	-779	446,500	3,767,750	28	40
99	2232.3	-779	446,750	3,767,750	15	28
100	2482.3	-779	447,000	3,767,750	8	14
101	2732.3	-779	447,250	3,767,750	15	22
102	2982.3	-779	447,500	3,767,750	13	18
103	3732.3	-779	448,250	3,767,750	14	10
104	3982.3	-779	448,500	3,767,750	13	9
105	4232.3	-779	448,750	3,767,750	12	9
106	4482.3	-779	449,000	3,767,750	10	8
107	-3517.7	-529	441,000	3,768,000	2	7
108	-3267.7	-529	441,250	3,768,000	2	7
109	-3017.7	-529	441,500	3,768,000	2	6
110	-2767.7	-529	441,750	3,768,000	3	6
111	-2517.7	-529	442,000	3,768,000	4	6
112	-2267.7	-529	442,250	3,768,000	4	6
113	-2017.7	-529	442,500	3,768,000	4	7
114	-1767.7	-529	442,750	3,768,000	5	9
115	-1517.7	-529	443,000	3,768,000	8	13
116	-1267.7	-529	443,250	3,768,000	23	20
117	732.3	-529	445,250	3,768,000	30	59
118	982.3	-529	445,500	3,768,000	31	60
119	1232.3	-529	445,750	3,768,000	27	62
120	1482.3	-529	446,000	3,768,000	33	71
121	1732.3	-529	446,250	3,768,000	29	88
122	1982.3	-529	446,500	3,768,000	5	30
123	2232.3	-529	446,750	3,768,000	14	25
124	2482.3	-529	447,000	3,768,000	18	32
125	2732.3	-529	447,250	3,768,000	16	11
126	3482.3	-529	448,000	3,768,000	10	7
127	3732.3	-529	448,250	3,768,000	9	7
128	3982.3	-529	448,500	3,768,000	8	6
129	4232.3	-529	448,750	3,768,000	7	5
130	4482.3	-529	449,000	3,768,000	6	5
131	-3517.7	-279	441,000	3,768,250	4	11
132	-3267.7	-279	441,250	3,768,250	4	12
133	-3017.7	-279	441,500	3,768,250	5	12

134	-2767.7	-279	441,750	3,768,250	6	12
135	-2517.7	-279	442,000	3,768,250	8	12
136	-2267.7	-279	442,250	3,768,250	9	13
137	-2017.7	-279	442,500	3,768,250	11	14
138	3482.3	-279	448,000	3,768,250	11	10
139	3732.3	-279	448,250	3,768,250	10	10
140	3982.3	-279	448,500	3,768,250	9	10
141	4232.3	-279	448,750	3,768,250	9	9
142	4482.3	-279	449,000	3,768,250	8	9
143	-3517.7	-29	441,000	3,768,500	8	15
144	-3267.7	-29	441,250	3,768,500	8	15
145	-3017.7	-29	441,500	3,768,500	9	17
146	-2767.7	-29	441,750	3,768,500	10	19
147	-2517.7	-29	442,000	3,768,500	12	21
148	3482.3	-29	448,000	3,768,500	15	12
149	3732.3	-29	448,250	3,768,500	15	12
150	3982.3	-29	448,500	3,768,500	14	12
151	4232.3	-29	448,750	3,768,500	14	11
152	4482.3	-29	449,000	3,768,500	13	11
153	-3517.7	221	441,000	3,768,750	9	11
154	-3267.7	221	441,250	3,768,750	10	12
155	-3017.7	221	441,500	3,768,750	12	14
156	3482.3	221	448,000	3,768,750	11	13
157	3732.3	221	448,250	3,768,750	14	14
158	3982.3	221	448,500	3,768,750	13	13
159	4232.3	221	448,750	3,768,750	13	11
160	4482.3	221	449,000	3,768,750	12	10
161	-3517.7	471	441,000	3,769,000	12	7
162	-3267.7	471	441,250	3,769,000	15	8
163	-3017.7	471	441,500	3,769,000	18	9
164	-2767.7	471	441,750	3,769,000	22	11
165	-2517.7	471	442,000	3,769,000	26	11
166	-2267.7	471	442,250	3,769,000	25	6
167	3232.3	471	447,750	3,769,000	3	18
168	3482.3	471	448,000	3,769,000	3	16
169	3732.3	471	448,250	3,769,000	3	14
170	3982.3	471	448,500	3,769,000	4	12
171	4232.3	471	448,750	3,769,000	6	11
172	4482.3	471	449,000	3,769,000	8	9
173	-3517.7	721	441,000	3,769,250	14	6
174	-3267.7	721	441,250	3,769,250	15	6
175	-3017.7	721	441,500	3,769,250	16	6
176	-2767.7	721	441,750	3,769,250	15	5
177	-2517.7	721	442,000	3,769,250	14	4
178	-2267.7	721	442,250	3,769,250	14	7

179	2482.3	721	447,000	3,769,250	14	28
180	2732.3	721	447,250	3,769,250	11	24
181	2982.3	721	447,500	3,769,250	8	21
182	3232.3	721	447,750	3,769,250	6	18
183	3482.3	721	448,000	3,769,250	4	17
184	3732.3	721	448,250	3,769,250	3	15
185	3982.3	721	448,500	3,769,250	3	14
186	4232.3	721	448,750	3,769,250	2	12
187	4482.3	721	449,000	3,769,250	2	11
188	-3267.7	971	441,250	3,769,500	11	4
189	-3017.7	971	441,500	3,769,500	10	4
190	-2767.7	971	441,750	3,769,500	9	4
191	-2517.7	971	442,000	3,769,500	8	5
192	-2267.7	971	442,250	3,769,500	6	7
193	-2017.7	971	442,500	3,769,500	5	8
194	-1767.7	971	442,750	3,769,500	3	8
195	-1517.7	971	443,000	3,769,500	2	8
196	-1267.7	971	443,250	3,769,500	4	10
197	-1017.7	971	443,500	3,769,500	5	11
198	-767.7	971	443,750	3,769,500	8	12
199	-517.7	971	444,000	3,769,500	10	10
200	-267.7	971	444,250	3,769,500	11	8
201	-17.7	971	444,500	3,769,500	18	11
202	232.3	971	444,750	3,769,500	19	12
203	482.3	971	445,000	3,769,500	16	11
204	732.3	971	445,250	3,769,500	8	11
205	982.3	971	445,500	3,769,500	8	13
206	1232.3	971	445,750	3,769,500	14	12
207	1482.3	971	446,000	3,769,500	12	10
208	1732.3	971	446,250	3,769,500	10	11
209	1982.3	971	446,500	3,769,500	13	12
210	2232.3	971	446,750	3,769,500	15	16
211	2482.3	971	447,000	3,769,500	13	17
212	2732.3	971	447,250	3,769,500	11	17
213	2982.3	971	447,500	3,769,500	9	17
214	3232.3	971	447,750	3,769,500	7	16
215	3482.3	971	448,000	3,769,500	6	15
216	3732.3	971	448,250	3,769,500	5	14
217	-3267.7	1221	441,250	3,769,750	6	3
218	-3017.7	1221	441,500	3,769,750	5	3
219	-2767.7	1221	441,750	3,769,750	4	4
220	-2517.7	1221	442,000	3,769,750	3	5
221	-2267.7	1221	442,250	3,769,750	2	7
222	-2017.7	1221	442,500	3,769,750	2	7
223	-1767.7	1221	442,750	3,769,750	3	8

224	-1517.7	1221	443,000	3,769,750	4	9
225	-1267.7	1221	443,250	3,769,750	6	10
226	-1017.7	1221	443,500	3,769,750	8	10
227	-767.7	1221	443,750	3,769,750	8	7
228	-517.7	1221	444,000	3,769,750	8	5
229	-267.7	1221	444,250	3,769,750	10	7
230	-17.7	1221	444,500	3,769,750	15	9
231	232.3	1221	444,750	3,769,750	16	11
232	482.3	1221	445,000	3,769,750	14	9
233	732.3	1221	445,250	3,769,750	10	10
234	982.3	1221	445,500	3,769,750	8	10
235	1232.3	1221	445,750	3,769,750	10	10
236	1482.3	1221	446,000	3,769,750	10	8
237	1732.3	1221	446,250	3,769,750	8	9
238	1982.3	1221	446,500	3,769,750	5	10
239	2232.3	1221	446,750	3,769,750	12	14
240	2482.3	1221	447,000	3,769,750	12	13
241	2732.3	1221	447,250	3,769,750	10	10
242	2982.3	1221	447,500	3,769,750	9	11
243	3232.3	1221	447,750	3,769,750	7	12
244	3482.3	1221	448,000	3,769,750	6	12
245	3732.3	1221	448,250	3,769,750	6	12
246	-2828.12	251.91	441,690	3,768,781	15	15
247	-2793.79	238.18	441,724	3,768,767	15	15
248	-2786.92	330.88	441,731	3,768,860	19	12
249	-2550.03	325.73	441,968	3,768,855	25	15
250	-2503.68	329.16	442,014	3,768,858	27	16
251	-2414.42	346.32	442,103	3,768,875	31	16
252	-2290.83	348.04	442,227	3,768,877	36	17
253	-2175.82	342.89	442,342	3,768,872	40	17
254	-2186.12	456.19	442,332	3,768,985	26	6
255	-2270.23	469.92	442,248	3,768,999	25	6
256	-2201.57	517.98	442,316	3,769,047	20	5
257	-2141.49	590.08	442,376	3,769,119	17	8
258	-2043.64	645.01	442,474	3,769,174	16	11
259	-1962.96	658.74	442,555	3,769,188	15	10
260	-1820.49	650.16	442,697	3,769,179	15	11
261	-1509.79	658.74	443,008	3,769,188	12	10
262	-1123.56	672.47	443,394	3,769,201	8	10
263	-915.85	655.31	443,602	3,769,184	6	12
264	-809.43	657.02	443,708	3,769,186	6	12
265	-579.4	686.21	443,938	3,769,215	6	11
266	-291.02	694.79	444,227	3,769,224	10	13
267	-9.5	711.95	444,508	3,769,241	23	13
268	373.29	710.24	444,891	3,769,239	22	13

269	718.33	717.1	445,236	3,769,246	4	18
270	1056.49	735.99	445,574	3,769,265	4	23
271	1516.53	761.74	446,034	3,769,291	12	12
272	1949.11	777.18	446,467	3,769,306	15	21
273	2330.19	784.05	446,848	3,769,313	19	28
274	2359.37	615.83	446,877	3,769,145	22	38
275	2692.39	614.11	447,210	3,769,143	10	25
276	2809.11	588.36	447,327	3,769,117	8	24
277	2932.71	514.55	447,450	3,769,043	6	21
278	2967.04	488.8	447,485	3,769,018	5	21
279	3083.77	346.32	447,602	3,768,875	4	18
280	3112.95	202.13	447,631	3,768,731	8	16
281	3291.47	195.27	447,809	3,768,724	10	15
282	3286.32	-86.25	447,804	3,768,443	15	11
283	3279.46	-278.51	447,797	3,768,250	12	11
284	3274.31	-415.83	447,792	3,768,113	9	7
285	3303.49	-536	447,821	3,767,993	11	7
286	3391.03	-656.16	447,909	3,767,873	13	9
287	3495.74	-699.07	448,013	3,767,830	13	9
288	3595.31	-700.79	448,113	3,767,828	13	9
289	3560.97	-860.43	448,079	3,767,668	22	18
290	3339.54	-867.29	447,857	3,767,662	23	21
291	3131.83	-867.29	447,650	3,767,662	22	24
292	3102.65	-841.55	447,620	3,767,687	19	21
293	3104.36	-702.5	447,622	3,767,826	14	15
294	3106.08	-542.86	447,624	3,767,986	12	8
295	2886.36	-536	447,404	3,767,993	14	9
296	2869.19	-475.91	447,387	3,768,053	13	8
297	2634.02	-477.63	447,152	3,768,051	16	12
298	2355.94	-472.48	446,874	3,768,056	32	43
299	1974.86	-467.33	446,493	3,768,061	(1)	44
300	1509.67	-455.32	446,027	3,768,074	36	80
301	1092.54	-455.32	445,610	3,768,074	36	80
302	733.78	-450.17	445,252	3,768,079	38	75
303	735.49	-683.62	445,253	3,767,845	22	42
304	728.63	-856.99	445,246	3,767,672	56	60
305	469.42	-853.56	444,987	3,767,675	44	50
306	110.66	-839.83	444,628	3,767,689	23	40
307	110.66	-1020.07	444,628	3,767,509	12	28
308	-138.24	-935.96	444,380	3,767,593	13	29
309	-397.45	-829.53	444,120	3,767,699	13	26
310	-646.35	-724.82	443,871	3,767,804	18	25
311	-914.14	-620.11	443,604	3,767,909	39	29
312	-1274.62	-465.62	443,243	3,768,063	15	14
313	-1659.13	-307.69	442,859	3,768,221	9	14

314	-1880.57	-216.71	442,637	3,768,312	13	17
315	-2211.87	-87.97	442,306	3,768,441	16	20
316	-2512.27	42.49	442,005	3,768,571	13	22
317	-2622.13	87.12	441,896	3,768,616	13	21
318	-2737.14	128.32	441,781	3,768,657	13	19
319	-2833.27	169.52	441,684	3,768,698	13	17

1-Hour NO2 Concentrations (µg/m³) from Operational Activities - Project Compared to Baseline

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	-2017.7	-1529	442,500	3,767,000	79	105
2	-1767.7	-1529	442,750	3,767,000	82	103
3	-1517.7	-1529	443,000	3,767,000	94	114
4	-1267.7	-1529	443,250	3,767,000	110	126
5	-1017.7	-1529	443,500	3,767,000	116	129
6	-767.7	-1529	443,750	3,767,000	113	122
7	-517.7	-1529	444,000	3,767,000	111	115
8	-267.7	-1529	444,250	3,767,000	101	104
9	-17.7	-1529	444,500	3,767,000	92	94
10	232.3	-1529	444,750	3,767,000	87	91
11	482.3	-1529	445,000	3,767,000	86	86
12	732.3	-1529	445,250	3,767,000	74	83
13	982.3	-1529	445,500	3,767,000	66	91
14	1232.3	-1529	445,750	3,767,000	73	100
15	1482.3	-1529	446,000	3,767,000	91	111
16	1732.3	-1529	446,250	3,767,000	75	95
17	1982.3	-1529	446,500	3,767,000	68	73
18	2232.3	-1529	446,750	3,767,000	77	91
19	2482.3	-1529	447,000	3,767,000	97	102
20	2732.3	-1529	447,250	3,767,000	102	107
21	2982.3	-1529	447,500	3,767,000	100	105
22	3232.3	-1529	447,750	3,767,000	104	109
23	3482.3	-1529	448,000	3,767,000	108	112
24	3732.3	-1529	448,250	3,767,000	112	116
25	3982.3	-1529	448,500	3,767,000	110	119
26	4232.3	-1529	448,750	3,767,000	103	121
27	4482.3	-1529	449,000	3,767,000	98	114
28	-2017.7	-1279	442,500	3,767,250	77	109
29	-1767.7	-1279	442,750	3,767,250	76	105
30	-1517.7	-1279	443,000	3,767,250	78	101
31	-1267.7	-1279	443,250	3,767,250	83	102
32	-1017.7	-1279	443,500	3,767,250	94	112
33	-767.7	-1279	443,750	3,767,250	107	123
34	-517.7	-1279	444,000	3,767,250	106	120
35	-267.7	-1279	444,250	3,767,250	104	115
36	-17.7	-1279	444,500	3,767,250	97	102
37	232.3	-1279	444,750	3,767,250	88	94
38	482.3	-1279	445,000	3,767,250	85	92
39	732.3	-1279	445,250	3,767,250	87	88
40	982.3	-1279	445,500	3,767,250	69	101
41	1232.3	-1279	445,750	3,767,250	73	130
42	1482.3	-1279	446,000	3,767,250	87	116
43	1732.3	-1279	446,250	3,767,250	74	102

44	1982.3	-1279	446,500	3,767,250	75	81
45	2232.3	-1279	446,750	3,767,250	96	97
46	2482.3	-1279	447,000	3,767,250	102	102
47	2732.3	-1279	447,250	3,767,250	98	101
48	2982.3	-1279	447,500	3,767,250	101	102
49	3232.3	-1279	447,750	3,767,250	103	106
50	3482.3	-1279	448,000	3,767,250	104	108
51	3732.3	-1279	448,250	3,767,250	106	117
52	3982.3	-1279	448,500	3,767,250	99	119
53	4232.3	-1279	448,750	3,767,250	98	118
54	4482.3	-1279	449,000	3,767,250	95	113
55	-2017.7	-1029	442,500	3,767,500	102	116
56	-1767.7	-1029	442,750	3,767,500	90	110
57	-1517.7	-1029	443,000	3,767,500	79	103
58	-1267.7	-1029	443,250	3,767,500	79	99
59	-1017.7	-1029	443,500	3,767,500	85	98
60	-767.7	-1029	443,750	3,767,500	89	104
61	-517.7	-1029	444,000	3,767,500	92	111
62	-267.7	-1029	444,250	3,767,500	100	119
63	-17.7	-1029	444,500	3,767,500	98	115
64	232.3	-1029	444,750	3,767,500	100	106
65	482.3	-1029	445,000	3,767,500	95	96
66	732.3	-1029	445,250	3,767,500	92	96
67	982.3	-1029	445,500	3,767,500	81	112
68	1232.3	-1029	445,750	3,767,500	51	141
69	1482.3	-1029	446,000	3,767,500	109	152
70	1732.3	-1029	446,250	3,767,500	80	131
71	1982.3	-1029	446,500	3,767,500	71	92
72	2232.3	-1029	446,750	3,767,500	101	112
73	2482.3	-1029	447,000	3,767,500	105	123
74	2732.3	-1029	447,250	3,767,500	109	128
75	2982.3	-1029	447,500	3,767,500	102	109
76	3232.3	-1029	447,750	3,767,500	99	104
77	3482.3	-1029	448,000	3,767,500	101	117
78	3732.3	-1029	448,250	3,767,500	98	116
79	3982.3	-1029	448,500	3,767,500	98	115
80	4232.3	-1029	448,750	3,767,500	99	107
81	4482.3	-1029	449,000	3,767,500	102	98
82	-3017.7	-779	441,500	3,767,750	121	115
83	-2767.7	-779	441,750	3,767,750	119	112
84	-2517.7	-779	442,000	3,767,750	118	110
85	-2267.7	-779	442,250	3,767,750	118	112
86	-2017.7	-779	442,500	3,767,750	119	116
87	-1767.7	-779	442,750	3,767,750	115	118
88	-1517.7	-779	443,000	3,767,750	106	111

89	-1267.7	-779	443,250	3,767,750	95	111
90	-1017.7	-779	443,500	3,767,750	87	117
91	-767.7	-779	443,750	3,767,750	86	121
92	-517.7	-779	444,000	3,767,750	90	120
93	732.3	-779	445,250	3,767,750	137	126
94	982.3	-779	445,500	3,767,750	119	108
95	1232.3	-779	445,750	3,767,750	50	148
96	1482.3	-779	446,000	3,767,750	96	179
97	1732.3	-779	446,250	3,767,750	79	148
98	1982.3	-779	446,500	3,767,750	82	134
99	2232.3	-779	446,750	3,767,750	150	177
100	2482.3	-779	447,000	3,767,750	151	176
101	2732.3	-779	447,250	3,767,750	110	127
102	2982.3	-779	447,500	3,767,750	99	109
103	3732.3	-779	448,250	3,767,750	94	100
104	3982.3	-779	448,500	3,767,750	98	91
105	4232.3	-779	448,750	3,767,750	103	97
106	4482.3	-779	449,000	3,767,750	106	103
107	-3517.7	-529	441,000	3,768,000	119	135
108	-3267.7	-529	441,250	3,768,000	118	129
109	-3017.7	-529	441,500	3,768,000	115	122
110	-2767.7	-529	441,750	3,768,000	110	113
111	-2517.7	-529	442,000	3,768,000	105	107
112	-2267.7	-529	442,250	3,768,000	108	106
113	-2017.7	-529	442,500	3,768,000	116	107
114	-1767.7	-529	442,750	3,768,000	122	110
115	-1517.7	-529	443,000	3,768,000	127	113
116	-1267.7	-529	443,250	3,768,000	131	112
117	732.3	-529	445,250	3,768,000	188	226
118	982.3	-529	445,500	3,768,000	176	169
119	1232.3	-529	445,750	3,768,000	141	151
120	1482.3	-529	446,000	3,768,000	55	219
121	1732.3	-529	446,250	3,768,000	74	178
122	1982.3	-529	446,500	3,768,000	199	243
123	2232.3	-529	446,750	3,768,000	216	253
124	2482.3	-529	447,000	3,768,000	128	162
125	2732.3	-529	447,250	3,768,000	93	99
126	3482.3	-529	448,000	3,768,000	93	93
127	3732.3	-529	448,250	3,768,000	101	101
128	3982.3	-529	448,500	3,768,000	111	110
129	4232.3	-529	448,750	3,768,000	110	108
130	4482.3	-529	449,000	3,768,000	110	106
131	-3517.7	-279	441,000	3,768,250	99	127
132	-3267.7	-279	441,250	3,768,250	98	123
133	-3017.7	-279	441,500	3,768,250	99	120

134	-2767.7	-279	441,750	3,768,250	97	125
135	-2517.7	-279	442,000	3,768,250	99	137
136	-2267.7	-279	442,250	3,768,250	101	155
137	-2017.7	-279	442,500	3,768,250	106	156
138	3482.3	-279	448,000	3,768,250	102	86
139	3732.3	-279	448,250	3,768,250	102	85
140	3982.3	-279	448,500	3,768,250	102	84
141	4232.3	-279	448,750	3,768,250	104	84
142	4482.3	-279	449,000	3,768,250	105	84
143	-3517.7	-29	441,000	3,768,500	80	103
144	-3267.7	-29	441,250	3,768,500	78	99
145	-3017.7	-29	441,500	3,768,500	75	93
146	-2767.7	-29	441,750	3,768,500	72	86
147	-2517.7	-29	442,000	3,768,500	69	92
148	3482.3	-29	448,000	3,768,500	96	89
149	3732.3	-29	448,250	3,768,500	97	90
150	3982.3	-29	448,500	3,768,500	98	92
151	4232.3	-29	448,750	3,768,500	100	94
152	4482.3	-29	449,000	3,768,500	100	95
153	-3517.7	221	441,000	3,768,750	72	90
154	-3267.7	221	441,250	3,768,750	71	88
155	-3017.7	221	441,500	3,768,750	70	86
156	3482.3	221	448,000	3,768,750	93	100
157	3732.3	221	448,250	3,768,750	92	100
158	3982.3	221	448,500	3,768,750	89	101
159	4232.3	221	448,750	3,768,750	89	101
160	4482.3	221	449,000	3,768,750	90	100
161	-3517.7	471	441,000	3,769,000	79	91
162	-3267.7	471	441,250	3,769,000	84	88
163	-3017.7	471	441,500	3,769,000	88	86
164	-2767.7	471	441,750	3,769,000	90	85
165	-2517.7	471	442,000	3,769,000	88	83
166	-2267.7	471	442,250	3,769,000	81	80
167	3232.3	471	447,750	3,769,000	89	101
168	3482.3	471	448,000	3,769,000	89	100
169	3732.3	471	448,250	3,769,000	89	97
170	3982.3	471	448,500	3,769,000	87	95
171	4232.3	471	448,750	3,769,000	90	98
172	4482.3	471	449,000	3,769,000	92	100
173	-3517.7	721	441,000	3,769,250	87	86
174	-3267.7	721	441,250	3,769,250	87	84
175	-3017.7	721	441,500	3,769,250	87	83
176	-2767.7	721	441,750	3,769,250	85	82
177	-2517.7	721	442,000	3,769,250	83	81
178	-2267.7	721	442,250	3,769,250	82	80

179	2482.3	721	447,000	3,769,250	112	125
180	2732.3	721	447,250	3,769,250	105	122
181	2982.3	721	447,500	3,769,250	95	101
182	3232.3	721	447,750	3,769,250	86	97
183	3482.3	721	448,000	3,769,250	82	100
184	3732.3	721	448,250	3,769,250	87	103
185	3982.3	721	448,500	3,769,250	94	108
186	4232.3	721	448,750	3,769,250	95	105
187	4482.3	721	449,000	3,769,250	91	96
188	-3267.7	971	441,250	3,769,500	92	86
189	-3017.7	971	441,500	3,769,500	90	86
190	-2767.7	971	441,750	3,769,500	89	87
191	-2517.7	971	442,000	3,769,500	88	88
192	-2267.7	971	442,250	3,769,500	88	89
193	-2017.7	971	442,500	3,769,500	88	91
194	-1767.7	971	442,750	3,769,500	89	93
195	-1517.7	971	443,000	3,769,500	91	96
196	-1267.7	971	443,250	3,769,500	94	103
197	-1017.7	971	443,500	3,769,500	96	103
198	-767.7	971	443,750	3,769,500	92	99
199	-517.7	971	444,000	3,769,500	92	99
200	-267.7	971	444,250	3,769,500	94	100
201	-17.7	971	444,500	3,769,500	98	109
202	232.3	971	444,750	3,769,500	109	121
203	482.3	971	445,000	3,769,500	110	121
204	732.3	971	445,250	3,769,500	96	106
205	982.3	971	445,500	3,769,500	88	81
206	1232.3	971	445,750	3,769,500	100	91
207	1482.3	971	446,000	3,769,500	85	84
208	1732.3	971	446,250	3,769,500	85	87
209	1982.3	971	446,500	3,769,500	108	114
210	2232.3	971	446,750	3,769,500	86	105
211	2482.3	971	447,000	3,769,500	95	100
212	2732.3	971	447,250	3,769,500	122	119
213	2982.3	971	447,500	3,769,500	118	106
214	3232.3	971	447,750	3,769,500	107	103
215	3482.3	971	448,000	3,769,500	94	102
216	3732.3	971	448,250	3,769,500	85	103
217	-3267.7	1221	441,250	3,769,750	99	96
218	-3017.7	1221	441,500	3,769,750	99	99
219	-2767.7	1221	441,750	3,769,750	99	101
220	-2517.7	1221	442,000	3,769,750	98	103
221	-2267.7	1221	442,250	3,769,750	98	104
222	-2017.7	1221	442,500	3,769,750	93	99
223	-1767.7	1221	442,750	3,769,750	92	104

224	-1517.7	1221	443,000	3,769,750	97	108
225	-1267.7	1221	443,250	3,769,750	99	108
226	-1017.7	1221	443,500	3,769,750	99	108
227	-767.7	1221	443,750	3,769,750	101	109
228	-517.7	1221	444,000	3,769,750	105	111
229	-267.7	1221	444,250	3,769,750	108	125
230	-17.7	1221	444,500	3,769,750	112	127
231	232.3	1221	444,750	3,769,750	115	128
232	482.3	1221	445,000	3,769,750	104	112
233	732.3	1221	445,250	3,769,750	97	84
234	982.3	1221	445,500	3,769,750	92	85
235	1232.3	1221	445,750	3,769,750	104	95
236	1482.3	1221	446,000	3,769,750	76	81
237	1732.3	1221	446,250	3,769,750	79	86
238	1982.3	1221	446,500	3,769,750	104	115
239	2232.3	1221	446,750	3,769,750	102	122
240	2482.3	1221	447,000	3,769,750	86	104
241	2732.3	1221	447,250	3,769,750	95	107
242	2982.3	1221	447,500	3,769,750	125	128
243	3232.3	1221	447,750	3,769,750	136	129
244	3482.3	1221	448,000	3,769,750	124	119
245	3732.3	1221	448,250	3,769,750	110	113
246	-2828.12	251.91	441,690	3,768,781	71	87
247	-2793.79	238.18	441,724	3,768,767	69	85
248	-2786.92	330.88	441,731	3,768,860	87	92
249	-2550.03	325.73	441,968	3,768,855	93	92
250	-2503.68	329.16	442,014	3,768,858	94	92
251	-2414.42	346.32	442,103	3,768,875	94	89
252	-2290.83	348.04	442,227	3,768,877	92	86
253	-2175.82	342.89	442,342	3,768,872	91	83
254	-2186.12	456.19	442,332	3,768,985	78	78
255	-2270.23	469.92	442,248	3,768,999	82	80
256	-2201.57	517.98	442,316	3,769,047	77	78
257	-2141.49	590.08	442,376	3,769,119	79	79
258	-2043.64	645.01	442,474	3,769,174	79	79
259	-1962.96	658.74	442,555	3,769,188	79	79
260	-1820.49	650.16	442,697	3,769,179	79	78
261	-1509.79	658.74	443,008	3,769,188	79	79
262	-1123.56	672.47	443,394	3,769,201	80	81
263	-915.85	655.31	443,602	3,769,184	80	81
264	-809.43	657.02	443,708	3,769,186	81	82
265	-579.4	686.21	443,938	3,769,215	84	86
266	-291.02	694.79	444,227	3,769,224	87	92
267	-9.5	711.95	444,508	3,769,241	87	89
268	373.29	710.24	444,891	3,769,239	93	102

269	718.33	717.1	445,236	3,769,246	105	111
270	1056.49	735.99	445,574	3,769,265	100	93
271	1516.53	761.74	446,034	3,769,291	89	89
272	1949.11	777.18	446,467	3,769,306	104	131
273	2330.19	784.05	446,848	3,769,313	98	99
274	2359.37	615.83	446,877	3,769,145	110	151
275	2692.39	614.11	447,210	3,769,143	99	133
276	2809.11	588.36	447,327	3,769,117	93	116
277	2932.71	514.55	447,450	3,769,043	87	94
278	2967.04	488.8	447,485	3,769,018	86	93
279	3083.77	346.32	447,602	3,768,875	90	98
280	3112.95	202.13	447,631	3,768,731	94	100
281	3291.47	195.27	447,809	3,768,724	93	100
282	3286.32	-86.25	447,804	3,768,443	97	86
283	3279.46	-278.51	447,797	3,768,250	101	88
284	3274.31	-415.83	447,792	3,768,113	101	95
285	3303.49	-536	447,821	3,767,993	89	91
286	3391.03	-656.16	447,909	3,767,873	89	98
287	3495.74	-699.07	448,013	3,767,830	91	99
288	3595.31	-700.79	448,113	3,767,828	92	97
289	3560.97	-860.43	448,079	3,767,668	95	110
290	3339.54	-867.29	447,857	3,767,662	100	113
291	3131.83	-867.29	447,650	3,767,662	103	113
292	3102.65	-841.55	447,620	3,767,687	101	112
293	3104.36	-702.5	447,622	3,767,826	95	106
294	3106.08	-542.86	447,624	3,767,986	84	96
295	2886.36	-536	447,404	3,767,993	89	98
296	2869.19	-475.91	447,387	3,768,053	85	95
297	2634.02	-477.63	447,152	3,768,051	92	96
298	2355.94	-472.48	446,874	3,768,056	159	192
299	1974.86	-467.33	446,493	3,768,061	238	292
300	1509.67	-455.32	446,027	3,768,074	57	243
301	1092.54	-455.32	445,610	3,768,074	187	183
302	733.78	-450.17	445,252	3,768,079	183	239
303	735.49	-683.62	445,253	3,767,845	161	156
304	728.63	-856.99	445,246	3,767,672	132	122
305	469.42	-853.56	444,987	3,767,675	130	124
306	110.66	-839.83	444,628	3,767,689	113	141
307	110.66	-1020.07	444,628	3,767,509	101	111
308	-138.24	-935.96	444,380	3,767,593	96	122
309	-397.45	-829.53	444,120	3,767,699	91	106
310	-646.35	-724.82	443,871	3,767,804	88	131
311	-914.14	-620.11	443,604	3,767,909	111	139
312	-1274.62	-465.62	443,243	3,768,063	136	129
313	-1659.13	-307.69	442,859	3,768,221	171	182

314	-1880.57	-216.71	442,637	3,768,312	125	193
315	-2211.87	-87.97	442,306	3,768,441	87	136
316	-2512.27	42.49	442,005	3,768,571	63	77
317	-2622.13	87.12	441,896	3,768,616	61	76
318	-2737.14	128.32	441,781	3,768,657	62	79
319	-2833.27	169.52	441,684	3,768,698	64	81

Annual NO2 Concentrations (µg/m³) from Operational Activities - Project Compared to Baseline

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	-2017.7	-1529	442,500	3,767,000	0.4	0.9
2	-1767.7	-1529	442,750	3,767,000	0.5	1.0
3	-1517.7	-1529	443,000	3,767,000	0.6	1.1
4	-1267.7	-1529	443,250	3,767,000	0.6	1.3
5	-1017.7	-1529	443,500	3,767,000	0.8	1.4
6	-767.7	-1529	443,750	3,767,000	0.8	1.6
7	-517.7	-1529	444,000	3,767,000	0.9	1.8
8	-267.7	-1529	444,250	3,767,000	0.9	1.9
9	-17.7	-1529	444,500	3,767,000	1.0	2.0
10	232.3	-1529	444,750	3,767,000	1.0	2.1
11	482.3	-1529	445,000	3,767,000	1.0	2.1
12	732.3	-1529	445,250	3,767,000	1.1	2.0
13	982.3	-1529	445,500	3,767,000	0.9	1.8
14	1232.3	-1529	445,750	3,767,000	0.9	1.6
15	1482.3	-1529	446,000	3,767,000	0.8	1.5
16	1732.3	-1529	446,250	3,767,000	0.8	1.3
17	1982.3	-1529	446,500	3,767,000	0.7	1.1
18	2232.3	-1529	446,750	3,767,000	0.6	1.0
19	2482.3	-1529	447,000	3,767,000	0.5	0.8
20	2732.3	-1529	447,250	3,767,000	0.4	0.7
21	2982.3	-1529	447,500	3,767,000	0.3	0.6
22	3232.3	-1529	447,750	3,767,000	0.3	0.5
23	3482.3	-1529	448,000	3,767,000	0.3	0.5
24	3732.3	-1529	448,250	3,767,000	0.2	0.5
25	3982.3	-1529	448,500	3,767,000	0.2	0.4
26	4232.3	-1529	448,750	3,767,000	0.2	0.4
27	4482.3	-1529	449,000	3,767,000	0.2	0.4
28	-2017.7	-1279	442,500	3,767,250	0.5	0.9
29	-1767.7	-1279	442,750	3,767,250	0.5	1.0
30	-1517.7	-1279	443,000	3,767,250	0.6	1.2
31	-1267.7	-1279	443,250	3,767,250	0.7	1.4
32	-1017.7	-1279	443,500	3,767,250	0.8	1.6
33	-767.7	-1279	443,750	3,767,250	0.9	1.8
34	-517.7	-1279	444,000	3,767,250	1.0	2.0
35	-267.7	-1279	444,250	3,767,250	1.1	2.2
36	-17.7	-1279	444,500	3,767,250	1.2	2.4
37	232.3	-1279	444,750	3,767,250	1.2	2.5
38	482.3	-1279	445,000	3,767,250	1.3	2.6
39	732.3	-1279	445,250	3,767,250	1.3	2.6
40	982.3	-1279	445,500	3,767,250	1.2	2.4
41	1232.3	-1279	445,750	3,767,250	1.1	2.1
42	1482.3	-1279	446,000	3,767,250	1.0	1.8
43	1732.3	-1279	446,250	3,767,250	0.9	1.6

44	1982.3	-1279	446,500	3,767,250	0.8	1.4
45	2232.3	-1279	446,750	3,767,250	0.7	1.1
46	2482.3	-1279	447,000	3,767,250	0.5	0.9
47	2732.3	-1279	447,250	3,767,250	0.4	0.8
48	2982.3	-1279	447,500	3,767,250	0.4	0.7
49	3232.3	-1279	447,750	3,767,250	0.3	0.6
50	3482.3	-1279	448,000	3,767,250	0.3	0.6
51	3732.3	-1279	448,250	3,767,250	0.3	0.5
52	3982.3	-1279	448,500	3,767,250	0.3	0.5
53	4232.3	-1279	448,750	3,767,250	0.3	0.5
54	4482.3	-1279	449,000	3,767,250	0.2	0.4
55	-2017.7	-1029	442,500	3,767,500	0.5	1.0
56	-1767.7	-1029	442,750	3,767,500	0.5	1.1
57	-1517.7	-1029	443,000	3,767,500	0.6	1.3
58	-1267.7	-1029	443,250	3,767,500	0.8	1.5
59	-1017.7	-1029	443,500	3,767,500	0.9	1.7
60	-767.7	-1029	443,750	3,767,500	1.1	2.0
61	-517.7	-1029	444,000	3,767,500	1.2	2.3
62	-267.7	-1029	444,250	3,767,500	1.3	2.6
63	-17.7	-1029	444,500	3,767,500	1.4	2.9
64	232.3	-1029	444,750	3,767,500	1.5	3.0
65	482.3	-1029	445,000	3,767,500	1.6	3.2
66	732.3	-1029	445,250	3,767,500	1.8	3.4
67	982.3	-1029	445,500	3,767,500	1.7	3.3
68	1232.3	-1029	445,750	3,767,500	1.5	2.9
69	1482.3	-1029	446,000	3,767,500	1.4	2.4
70	1732.3	-1029	446,250	3,767,500	1.2	2.0
71	1982.3	-1029	446,500	3,767,500	1.0	1.6
72	2232.3	-1029	446,750	3,767,500	0.8	1.3
73	2482.3	-1029	447,000	3,767,500	0.6	1.0
74	2732.3	-1029	447,250	3,767,500	0.5	0.9
75	2982.3	-1029	447,500	3,767,500	0.4	0.8
76	3232.3	-1029	447,750	3,767,500	0.4	0.7
77	3482.3	-1029	448,000	3,767,500	0.4	0.7
78	3732.3	-1029	448,250	3,767,500	0.4	0.6
79	3982.3	-1029	448,500	3,767,500	0.4	0.6
80	4232.3	-1029	448,750	3,767,500	0.3	0.5
81	4482.3	-1029	449,000	3,767,500	0.3	0.5
82	-3017.7	-779	441,500	3,767,750	0.3	0.5
83	-2767.7	-779	441,750	3,767,750	0.3	0.6
84	-2517.7	-779	442,000	3,767,750	0.4	0.8
85	-2267.7	-779	442,250	3,767,750	0.5	0.9
86	-2017.7	-779	442,500	3,767,750	0.6	1.0
87	-1767.7	-779	442,750	3,767,750	0.6	1.2
88	-1517.7	-779	443,000	3,767,750	0.7	1.4

89	-1267.7	-779	443,250	3,767,750	0.9	1.6
90	-1017.7	-779	443,500	3,767,750	1.1	2.0
91	-767.7	-779	443,750	3,767,750	1.3	2.4
92	-517.7	-779	444,000	3,767,750	1.5	2.8
93	732.3	-779	445,250	3,767,750	2.3	4.4
94	982.3	-779	445,500	3,767,750	2.4	4.5
95	1232.3	-779	445,750	3,767,750	2.2	4.3
96	1482.3	-779	446,000	3,767,750	1.9	3.5
97	1732.3	-779	446,250	3,767,750	1.6	2.7
98	1982.3	-779	446,500	3,767,750	1.2	2.0
99	2232.3	-779	446,750	3,767,750	0.9	1.5
100	2482.3	-779	447,000	3,767,750	0.8	1.3
101	2732.3	-779	447,250	3,767,750	0.6	1.1
102	2982.3	-779	447,500	3,767,750	0.6	1.0
103	3732.3	-779	448,250	3,767,750	0.5	0.7
104	3982.3	-779	448,500	3,767,750	0.5	0.7
105	4232.3	-779	448,750	3,767,750	0.4	0.6
106	4482.3	-779	449,000	3,767,750	0.4	0.6
107	-3517.7	-529	441,000	3,768,000	0.2	0.4
108	-3267.7	-529	441,250	3,768,000	0.3	0.4
109	-3017.7	-529	441,500	3,768,000	0.3	0.5
110	-2767.7	-529	441,750	3,768,000	0.3	0.6
111	-2517.7	-529	442,000	3,768,000	0.4	0.7
112	-2267.7	-529	442,250	3,768,000	0.5	0.9
113	-2017.7	-529	442,500	3,768,000	0.6	1.1
114	-1767.7	-529	442,750	3,768,000	0.8	1.3
115	-1517.7	-529	443,000	3,768,000	0.9	1.6
116	-1267.7	-529	443,250	3,768,000	1.1	1.9
117	732.3	-529	445,250	3,768,000	3.0	5.8
118	982.3	-529	445,500	3,768,000	3.2	6.1
119	1232.3	-529	445,750	3,768,000	3.2	6.2
120	1482.3	-529	446,000	3,768,000	3.0	5.7
121	1732.3	-529	446,250	3,768,000	2.2	3.9
122	1982.3	-529	446,500	3,768,000	1.5	2.7
123	2232.3	-529	446,750	3,768,000	1.1	2.0
124	2482.3	-529	447,000	3,768,000	1.0	1.6
125	2732.3	-529	447,250	3,768,000	0.9	1.4
126	3482.3	-529	448,000	3,768,000	0.6	1.0
127	3732.3	-529	448,250	3,768,000	0.6	0.9
128	3982.3	-529	448,500	3,768,000	0.5	0.8
129	4232.3	-529	448,750	3,768,000	0.5	0.7
130	4482.3	-529	449,000	3,768,000	0.4	0.7
131	-3517.7	-279	441,000	3,768,250	0.2	0.4
132	-3267.7	-279	441,250	3,768,250	0.3	0.4
133	-3017.7	-279	441,500	3,768,250	0.3	0.5

134	-2767.7	-279	441,750	3,768,250	0.4	0.6
135	-2517.7	-279	442,000	3,768,250	0.4	0.7
136	-2267.7	-279	442,250	3,768,250	0.6	1.0
137	-2017.7	-279	442,500	3,768,250	0.7	1.2
138	3482.3	-279	448,000	3,768,250	0.9	1.3
139	3732.3	-279	448,250	3,768,250	0.8	1.2
140	3982.3	-279	448,500	3,768,250	0.7	1.0
141	4232.3	-279	448,750	3,768,250	0.6	0.9
142	4482.3	-279	449,000	3,768,250	0.6	0.8
143	-3517.7	-29	441,000	3,768,500	0.3	0.4
144	-3267.7	-29	441,250	3,768,500	0.3	0.4
145	-3017.7	-29	441,500	3,768,500	0.3	0.5
146	-2767.7	-29	441,750	3,768,500	0.4	0.5
147	-2517.7	-29	442,000	3,768,500	0.4	0.7
148	3482.3	-29	448,000	3,768,500	1.3	1.9
149	3732.3	-29	448,250	3,768,500	1.1	1.6
150	3982.3	-29	448,500	3,768,500	0.9	1.4
151	4232.3	-29	448,750	3,768,500	0.8	1.2
152	4482.3	-29	449,000	3,768,500	0.7	1.1
153	-3517.7	221	441,000	3,768,750	0.2	0.4
154	-3267.7	221	441,250	3,768,750	0.2	0.4
155	-3017.7	221	441,500	3,768,750	0.3	0.4
156	3482.3	221	448,000	3,768,750	1.7	2.6
157	3732.3	221	448,250	3,768,750	1.4	2.2
158	3982.3	221	448,500	3,768,750	1.2	1.8
159	4232.3	221	448,750	3,768,750	1.0	1.6
160	4482.3	221	449,000	3,768,750	0.9	1.4
161	-3517.7	471	441,000	3,769,000	0.2	0.3
162	-3267.7	471	441,250	3,769,000	0.2	0.4
163	-3017.7	471	441,500	3,769,000	0.2	0.4
164	-2767.7	471	441,750	3,769,000	0.2	0.5
165	-2517.7	471	442,000	3,769,000	0.3	0.5
166	-2267.7	471	442,250	3,769,000	0.3	0.6
167	3232.3	471	447,750	3,769,000	2.3	3.7
168	3482.3	471	448,000	3,769,000	1.9	3.1
169	3732.3	471	448,250	3,769,000	1.6	2.6
170	3982.3	471	448,500	3,769,000	1.4	2.2
171	4232.3	471	448,750	3,769,000	1.2	1.9
172	4482.3	471	449,000	3,769,000	1.0	1.6
173	-3517.7	721	441,000	3,769,250	0.2	0.3
174	-3267.7	721	441,250	3,769,250	0.2	0.3
175	-3017.7	721	441,500	3,769,250	0.2	0.4
176	-2767.7	721	441,750	3,769,250	0.2	0.4
177	-2517.7	721	442,000	3,769,250	0.2	0.4
178	-2267.7	721	442,250	3,769,250	0.2	0.5

179	2482.3	721	447,000	3,769,250	2.6	4.3
180	2732.3	721	447,250	3,769,250	2.5	4.1
181	2982.3	721	447,500	3,769,250	2.3	3.8
182	3232.3	721	447,750	3,769,250	2.1	3.5
183	3482.3	721	448,000	3,769,250	1.9	3.1
184	3732.3	721	448,250	3,769,250	1.7	2.7
185	3982.3	721	448,500	3,769,250	1.5	2.3
186	4232.3	721	448,750	3,769,250	1.3	2.0
187	4482.3	721	449,000	3,769,250	1.1	1.8
188	-3267.7	971	441,250	3,769,500	0.2	0.3
189	-3017.7	971	441,500	3,769,500	0.2	0.3
190	-2767.7	971	441,750	3,769,500	0.2	0.4
191	-2517.7	971	442,000	3,769,500	0.2	0.4
192	-2267.7	971	442,250	3,769,500	0.2	0.4
193	-2017.7	971	442,500	3,769,500	0.2	0.5
194	-1767.7	971	442,750	3,769,500	0.2	0.5
195	-1517.7	971	443,000	3,769,500	0.3	0.6
196	-1267.7	971	443,250	3,769,500	0.3	0.6
197	-1017.7	971	443,500	3,769,500	0.4	0.7
198	-767.7	971	443,750	3,769,500	0.5	0.8
199	-517.7	971	444,000	3,769,500	0.5	0.9
200	-267.7	971	444,250	3,769,500	0.6	1.1
201	-17.7	971	444,500	3,769,500	0.7	1.2
202	232.3	971	444,750	3,769,500	0.8	1.3
203	482.3	971	445,000	3,769,500	0.8	1.5
204	732.3	971	445,250	3,769,500	0.9	1.6
205	982.3	971	445,500	3,769,500	1.0	1.8
206	1232.3	971	445,750	3,769,500	1.1	2.0
207	1482.3	971	446,000	3,769,500	1.2	2.2
208	1732.3	971	446,250	3,769,500	1.3	2.4
209	1982.3	971	446,500	3,769,500	1.5	2.6
210	2232.3	971	446,750	3,769,500	1.6	2.8
211	2482.3	971	447,000	3,769,500	1.8	3.0
212	2732.3	971	447,250	3,769,500	1.8	3.0
213	2982.3	971	447,500	3,769,500	1.8	3.0
214	3232.3	971	447,750	3,769,500	1.8	2.9
215	3482.3	971	448,000	3,769,500	1.7	2.7
216	3732.3	971	448,250	3,769,500	1.5	2.5
217	-3267.7	1221	441,250	3,769,750	0.1	0.3
218	-3017.7	1221	441,500	3,769,750	0.1	0.3
219	-2767.7	1221	441,750	3,769,750	0.1	0.3
220	-2517.7	1221	442,000	3,769,750	0.2	0.4
221	-2267.7	1221	442,250	3,769,750	0.2	0.4
222	-2017.7	1221	442,500	3,769,750	0.2	0.4
223	-1767.7	1221	442,750	3,769,750	0.2	0.4

224	-1517.7	1221	443,000	3,769,750	0.2	0.5
225	-1267.7	1221	443,250	3,769,750	0.3	0.5
226	-1017.7	1221	443,500	3,769,750	0.3	0.6
227	-767.7	1221	443,750	3,769,750	0.4	0.7
228	-517.7	1221	444,000	3,769,750	0.4	0.7
229	-267.7	1221	444,250	3,769,750	0.5	0.8
230	-17.7	1221	444,500	3,769,750	0.5	0.9
231	232.3	1221	444,750	3,769,750	0.6	1.0
232	482.3	1221	445,000	3,769,750	0.6	1.1
233	732.3	1221	445,250	3,769,750	0.7	1.2
234	982.3	1221	445,500	3,769,750	0.7	1.3
235	1232.3	1221	445,750	3,769,750	0.8	1.5
236	1482.3	1221	446,000	3,769,750	0.9	1.6
237	1732.3	1221	446,250	3,769,750	0.9	1.7
238	1982.3	1221	446,500	3,769,750	1.0	1.8
239	2232.3	1221	446,750	3,769,750	1.1	2.0
240	2482.3	1221	447,000	3,769,750	1.2	2.1
241	2732.3	1221	447,250	3,769,750	1.3	2.2
242	2982.3	1221	447,500	3,769,750	1.3	2.2
243	3232.3	1221	447,750	3,769,750	1.4	2.2
244	3482.3	1221	448,000	3,769,750	1.3	2.2
245	3732.3	1221	448,250	3,769,750	1.3	2.1
246	-2828.12	251.91	441,690	3,768,781	0.3	0.5
247	-2793.79	238.18	441,724	3,768,767	0.3	0.5
248	-2786.92	330.88	441,731	3,768,860	0.3	0.5
249	-2550.03	325.73	441,968	3,768,855	0.3	0.5
250	-2503.68	329.16	442,014	3,768,858	0.3	0.5
251	-2414.42	346.32	442,103	3,768,875	0.3	0.6
252	-2290.83	348.04	442,227	3,768,877	0.4	0.6
253	-2175.82	342.89	442,342	3,768,872	0.4	0.7
254	-2186.12	456.19	442,332	3,768,985	0.3	0.6
255	-2270.23	469.92	442,248	3,768,999	0.3	0.6
256	-2201.57	517.98	442,316	3,769,047	0.3	0.6
257	-2141.49	590.08	442,376	3,769,119	0.3	0.6
258	-2043.64	645.01	442,474	3,769,174	0.3	0.6
259	-1962.96	658.74	442,555	3,769,188	0.3	0.6
260	-1820.49	650.16	442,697	3,769,179	0.3	0.6
261	-1509.79	658.74	443,008	3,769,188	0.4	0.7
262	-1123.56	672.47	443,394	3,769,201	0.6	0.9
263	-915.85	655.31	443,602	3,769,184	0.6	1.1
264	-809.43	657.02	443,708	3,769,186	0.7	1.2
265	-579.4	686.21	443,938	3,769,215	0.8	1.3
266	-291.02	694.79	444,227	3,769,224	0.9	1.5
267	-9.5	711.95	444,508	3,769,241	1.0	1.6
268	373.29	710.24	444,891	3,769,239	1.1	2.0

269	718.33	717.1	445,236	3,769,246	1.3	2.3
270	1056.49	735.99	445,574	3,769,265	1.5	2.7
271	1516.53	761.74	446,034	3,769,291	1.7	3.1
272	1949.11	777.18	446,467	3,769,306	2.0	3.6
273	2330.19	784.05	446,848	3,769,313	2.3	3.9
274	2359.37	615.83	446,877	3,769,145	3.1	5.1
275	2692.39	614.11	447,210	3,769,143	2.9	4.7
276	2809.11	588.36	447,327	3,769,117	2.8	4.6
277	2932.71	514.55	447,450	3,769,043	2.8	4.5
278	2967.04	488.8	447,485	3,769,018	2.8	4.4
279	3083.77	346.32	447,602	3,768,875	2.5	4.0
280	3112.95	202.13	447,631	3,768,731	2.3	3.5
281	3291.47	195.27	447,809	3,768,724	1.9	3.0
282	3286.32	-86.25	447,804	3,768,443	1.4	2.1
283	3279.46	-278.51	447,797	3,768,250	1.0	1.5
284	3274.31	-415.83	447,792	3,768,113	0.8	1.2
285	3303.49	-536	447,821	3,767,993	0.7	1.1
286	3391.03	-656.16	447,909	3,767,873	0.6	0.9
287	3495.74	-699.07	448,013	3,767,830	0.5	0.9
288	3595.31	-700.79	448,113	3,767,828	0.5	0.8
289	3560.97	-860.43	448,079	3,767,668	0.6	0.8
290	3339.54	-867.29	447,857	3,767,662	0.7	1.0
291	3131.83	-867.29	447,650	3,767,662	0.7	1.0
292	3102.65	-841.55	447,620	3,767,687	0.6	1.0
293	3104.36	-702.5	447,622	3,767,826	0.6	1.0
294	3106.08	-542.86	447,624	3,767,986	0.7	1.2
295	2886.36	-536	447,404	3,767,993	0.8	1.3
296	2869.19	-475.91	447,387	3,768,053	0.9	1.4
297	2634.02	-477.63	447,152	3,768,051	1.0	1.6
298	2355.94	-472.48	446,874	3,768,056	1.3	2.1
299	1974.86	-467.33	446,493	3,768,061	1.7	3.1
300	1509.67	-455.32	446,027	3,768,074	3.5	6.6
301	1092.54	-455.32	445,610	3,768,074	3.6	7.0
302	733.78	-450.17	445,252	3,768,079	3.3	6.5
303	735.49	-683.62	445,253	3,767,845	2.5	4.8
304	728.63	-856.99	445,246	3,767,672	2.4	4.2
305	469.42	-853.56	444,987	3,767,675	2.4	4.1
306	110.66	-839.83	444,628	3,767,689	2.1	3.9
307	110.66	-1020.07	444,628	3,767,509	1.5	3.0
308	-138.24	-935.96	444,380	3,767,593	1.5	3.0
309	-397.45	-829.53	444,120	3,767,699	1.5	2.9
310	-646.35	-724.82	443,871	3,767,804	1.5	2.7
311	-914.14	-620.11	443,604	3,767,909	1.7	2.6
312	-1274.62	-465.62	443,243	3,768,063	1.2	1.9
313	-1659.13	-307.69	442,859	3,768,221	1.1	1.6

314	-1880.57	-216.71	442,637	3,768,312	0.9	1.3
315	-2211.87	-87.97	442,306	3,768,441	0.7	1.1
316	-2512.27	42.49	442,005	3,768,571	0.4	0.6
317	-2622.13	87.12	441,896	3,768,616	0.4	0.6
318	-2737.14	128.32	441,781	3,768,657	0.3	0.5
319	-2833.27	169.52	441,684	3,768,698	0.3	0.5

24-Hour PM2.5 Concentrations (µg/m³) from Operational Activities - Project Compared to Baseline

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	-2017.7	-1529	442,500	3,767,000	0.03	0.07
2	-1767.7	-1529	442,750	3,767,000	0.05	0.10
3	-1517.7	-1529	443,000	3,767,000	0.07	0.13
4	-1267.7	-1529	443,250	3,767,000	0.08	0.14
5	-1017.7	-1529	443,500	3,767,000	0.10	0.15
6	-767.7	-1529	443,750	3,767,000	0.11	0.14
7	-517.7	-1529	444,000	3,767,000	0.09	0.15
8	-267.7	-1529	444,250	3,767,000	0.09	0.18
9	-17.7	-1529	444,500	3,767,000	0.11	0.17
10	232.3	-1529	444,750	3,767,000	0.09	0.14
11	482.3	-1529	445,000	3,767,000	0.08	0.13
12	732.3	-1529	445,250	3,767,000	0.12	0.16
13	982.3	-1529	445,500	3,767,000	0.06	0.10
14	1232.3	-1529	445,750	3,767,000	0.06	0.10
15	1482.3	-1529	446,000	3,767,000	0.06	0.10
16	1732.3	-1529	446,250	3,767,000	0.05	0.08
17	1982.3	-1529	446,500	3,767,000	0.05	0.06
18	2232.3	-1529	446,750	3,767,000	0.05	0.06
19	2482.3	-1529	447,000	3,767,000	0.03	0.05
20	2732.3	-1529	447,250	3,767,000	0.04	0.05
21	2982.3	-1529	447,500	3,767,000	0.04	0.04
22	3232.3	-1529	447,750	3,767,000	0.04	0.04
23	3482.3	-1529	448,000	3,767,000	0.04	0.04
24	3732.3	-1529	448,250	3,767,000	0.03	0.04
25	3982.3	-1529	448,500	3,767,000	0.03	0.03
26	4232.3	-1529	448,750	3,767,000	0.02	0.03
27	4482.3	-1529	449,000	3,767,000	0.02	0.02
28	-2017.7	-1279	442,500	3,767,250	0.04	0.05
29	-1767.7	-1279	442,750	3,767,250	0.04	0.08
30	-1517.7	-1279	443,000	3,767,250	0.06	0.13
31	-1267.7	-1279	443,250	3,767,250	0.09	0.17
32	-1017.7	-1279	443,500	3,767,250	0.11	0.19
33	-767.7	-1279	443,750	3,767,250	0.14	0.20
34	-517.7	-1279	444,000	3,767,250	0.14	0.20
35	-267.7	-1279	444,250	3,767,250	0.12	0.24
36	-17.7	-1279	444,500	3,767,250	0.13	0.24
37	232.3	-1279	444,750	3,767,250	0.09	0.19
38	482.3	-1279	445,000	3,767,250	0.09	0.14
39	732.3	-1279	445,250	3,767,250	0.13	0.16
40	982.3	-1279	445,500	3,767,250	0.07	0.12
41	1232.3	-1279	445,750	3,767,250	0.07	0.12
42	1482.3	-1279	446,000	3,767,250	0.07	0.12
43	1732.3	-1279	446,250	3,767,250	0.06	0.09

44	1982.3	-1279	446,500	3,767,250	0.06	0.07
45	2232.3	-1279	446,750	3,767,250	0.05	0.07
46	2482.3	-1279	447,000	3,767,250	0.04	0.07
47	2732.3	-1279	447,250	3,767,250	0.04	0.06
48	2982.3	-1279	447,500	3,767,250	0.05	0.06
49	3232.3	-1279	447,750	3,767,250	0.04	0.05
50	3482.3	-1279	448,000	3,767,250	0.04	0.04
51	3732.3	-1279	448,250	3,767,250	0.03	0.03
52	3982.3	-1279	448,500	3,767,250	0.03	0.03
53	4232.3	-1279	448,750	3,767,250	0.03	0.03
54	4482.3	-1279	449,000	3,767,250	0.02	0.02
55	-2017.7	-1029	442,500	3,767,500	0.05	0.08
56	-1767.7	-1029	442,750	3,767,500	0.06	0.08
57	-1517.7	-1029	443,000	3,767,500	0.06	0.11
58	-1267.7	-1029	443,250	3,767,500	0.09	0.18
59	-1017.7	-1029	443,500	3,767,500	0.13	0.23
60	-767.7	-1029	443,750	3,767,500	0.18	0.26
61	-517.7	-1029	444,000	3,767,500	0.20	0.29
62	-267.7	-1029	444,250	3,767,500	0.20	0.37
63	-17.7	-1029	444,500	3,767,500	0.21	0.42
64	232.3	-1029	444,750	3,767,500	0.11	0.27
65	482.3	-1029	445,000	3,767,500	0.10	0.13
66	732.3	-1029	445,250	3,767,500	0.12	0.16
67	982.3	-1029	445,500	3,767,500	0.11	0.16
68	1232.3	-1029	445,750	3,767,500	0.10	0.16
69	1482.3	-1029	446,000	3,767,500	0.10	0.16
70	1732.3	-1029	446,250	3,767,500	0.09	0.12
71	1982.3	-1029	446,500	3,767,500	0.08	0.10
72	2232.3	-1029	446,750	3,767,500	0.08	0.11
73	2482.3	-1029	447,000	3,767,500	0.06	0.09
74	2732.3	-1029	447,250	3,767,500	0.07	0.08
75	2982.3	-1029	447,500	3,767,500	0.06	0.06
76	3232.3	-1029	447,750	3,767,500	0.05	0.05
77	3482.3	-1029	448,000	3,767,500	0.05	0.05
78	3732.3	-1029	448,250	3,767,500	0.05	0.04
79	3982.3	-1029	448,500	3,767,500	0.04	0.04
80	4232.3	-1029	448,750	3,767,500	0.04	0.04
81	4482.3	-1029	449,000	3,767,500	0.04	0.03
82	-3017.7	-779	441,500	3,767,750	0.04	0.05
83	-2767.7	-779	441,750	3,767,750	0.05	0.06
84	-2517.7	-779	442,000	3,767,750	0.05	0.07
85	-2267.7	-779	442,250	3,767,750	0.05	0.08
86	-2017.7	-779	442,500	3,767,750	0.05	0.09
87	-1767.7	-779	442,750	3,767,750	0.06	0.11
88	-1517.7	-779	443,000	3,767,750	0.08	0.12

89	-1267.7	-779	443,250	3,767,750	0.11	0.17
90	-1017.7	-779	443,500	3,767,750	0.16	0.29
91	-767.7	-779	443,750	3,767,750	0.26	0.40
92	-517.7	-779	444,000	3,767,750	0.28	0.48
93	732.3	-779	445,250	3,767,750	0.12	0.16
94	982.3	-779	445,500	3,767,750	0.13	0.19
95	1232.3	-779	445,750	3,767,750	0.14	0.20
96	1482.3	-779	446,000	3,767,750	0.14	0.21
97	1732.3	-779	446,250	3,767,750	0.12	0.17
98	1982.3	-779	446,500	3,767,750	0.10	0.15
99	2232.3	-779	446,750	3,767,750	0.09	0.13
100	2482.3	-779	447,000	3,767,750	0.09	0.11
101	2732.3	-779	447,250	3,767,750	0.06	0.06
102	2982.3	-779	447,500	3,767,750	0.05	0.05
103	3732.3	-779	448,250	3,767,750	0.05	0.04
104	3982.3	-779	448,500	3,767,750	0.05	0.05
105	4232.3	-779	448,750	3,767,750	0.05	0.05
106	4482.3	-779	449,000	3,767,750	0.04	0.05
107	-3517.7	-529	441,000	3,768,000	0.04	0.06
108	-3267.7	-529	441,250	3,768,000	0.04	0.07
109	-3017.7	-529	441,500	3,768,000	0.05	0.07
110	-2767.7	-529	441,750	3,768,000	0.06	0.08
111	-2517.7	-529	442,000	3,768,000	0.07	0.09
112	-2267.7	-529	442,250	3,768,000	0.07	0.10
113	-2017.7	-529	442,500	3,768,000	0.09	0.11
114	-1767.7	-529	442,750	3,768,000	0.10	0.15
115	-1517.7	-529	443,000	3,768,000	0.14	0.20
116	-1267.7	-529	443,250	3,768,000	0.24	0.32
117	732.3	-529	445,250	3,768,000	0.09	0.15
118	982.3	-529	445,500	3,768,000	0.10	0.16
119	1232.3	-529	445,750	3,768,000	0.12	0.19
120	1482.3	-529	446,000	3,768,000	0.13	0.23
121	1732.3	-529	446,250	3,768,000	0.13	0.18
122	1982.3	-529	446,500	3,768,000	0.09	0.17
123	2232.3	-529	446,750	3,768,000	0.09	0.15
124	2482.3	-529	447,000	3,768,000	0.05	0.05
125	2732.3	-529	447,250	3,768,000	0.04	0.04
126	3482.3	-529	448,000	3,768,000	0.03	0.04
127	3732.3	-529	448,250	3,768,000	0.04	0.04
128	3982.3	-529	448,500	3,768,000	0.05	0.04
129	4232.3	-529	448,750	3,768,000	0.05	0.04
130	4482.3	-529	449,000	3,768,000	0.05	0.04
131	-3517.7	-279	441,000	3,768,250	0.03	0.06
132	-3267.7	-279	441,250	3,768,250	0.04	0.06
133	-3017.7	-279	441,500	3,768,250	0.04	0.06

134	-2767.7	-279	441,750	3,768,250	0.05	0.07
135	-2517.7	-279	442,000	3,768,250	0.06	0.08
136	-2267.7	-279	442,250	3,768,250	0.07	0.09
137	-2017.7	-279	442,500	3,768,250	0.09	0.11
138	3482.3	-279	448,000	3,768,250	0.07	0.06
139	3732.3	-279	448,250	3,768,250	0.06	0.06
140	3982.3	-279	448,500	3,768,250	0.06	0.05
141	4232.3	-279	448,750	3,768,250	0.05	0.05
142	4482.3	-279	449,000	3,768,250	0.05	0.05
143	-3517.7	-29	441,000	3,768,500	0.05	0.05
144	-3267.7	-29	441,250	3,768,500	0.05	0.05
145	-3017.7	-29	441,500	3,768,500	0.05	0.05
146	-2767.7	-29	441,750	3,768,500	0.05	0.05
147	-2517.7	-29	442,000	3,768,500	0.05	0.06
148	3482.3	-29	448,000	3,768,500	0.06	0.08
149	3732.3	-29	448,250	3,768,500	0.06	0.07
150	3982.3	-29	448,500	3,768,500	0.05	0.06
151	4232.3	-29	448,750	3,768,500	0.05	0.06
152	4482.3	-29	449,000	3,768,500	0.05	0.05
153	-3517.7	221	441,000	3,768,750	0.03	0.02
154	-3267.7	221	441,250	3,768,750	0.03	0.02
155	-3017.7	221	441,500	3,768,750	0.03	0.02
156	3482.3	221	448,000	3,768,750	0.05	0.05
157	3732.3	221	448,250	3,768,750	0.05	0.05
158	3982.3	221	448,500	3,768,750	0.04	0.05
159	4232.3	221	448,750	3,768,750	0.04	0.05
160	4482.3	221	449,000	3,768,750	0.04	0.05
161	-3517.7	471	441,000	3,769,000	0.03	0.02
162	-3267.7	471	441,250	3,769,000	0.03	0.02
163	-3017.7	471	441,500	3,769,000	0.04	0.02
164	-2767.7	471	441,750	3,769,000	0.04	0.03
165	-2517.7	471	442,000	3,769,000	0.05	0.04
166	-2267.7	471	442,250	3,769,000	0.05	0.05
167	3232.3	471	447,750	3,769,000	0.05	0.08
168	3482.3	471	448,000	3,769,000	0.05	0.06
169	3732.3	471	448,250	3,769,000	0.05	0.05
170	3982.3	471	448,500	3,769,000	0.04	0.04
171	4232.3	471	448,750	3,769,000	0.04	0.04
172	4482.3	471	449,000	3,769,000	0.04	0.04
173	-3517.7	721	441,000	3,769,250	0.03	0.02
174	-3267.7	721	441,250	3,769,250	0.03	0.02
175	-3017.7	721	441,500	3,769,250	0.03	0.03
176	-2767.7	721	441,750	3,769,250	0.03	0.03
177	-2517.7	721	442,000	3,769,250	0.03	0.04
178	-2267.7	721	442,250	3,769,250	0.03	0.05

179	2482.3	721	447,000	3,769,250	0.05	0.10
180	2732.3	721	447,250	3,769,250	0.05	0.10
181	2982.3	721	447,500	3,769,250	0.04	0.10
182	3232.3	721	447,750	3,769,250	0.04	0.10
183	3482.3	721	448,000	3,769,250	0.04	0.09
184	3732.3	721	448,250	3,769,250	0.04	0.08
185	3982.3	721	448,500	3,769,250	0.04	0.06
186	4232.3	721	448,750	3,769,250	0.04	0.05
187	4482.3	721	449,000	3,769,250	0.03	0.04
188	-3267.7	971	441,250	3,769,500	0.02	0.02
189	-3017.7	971	441,500	3,769,500	0.02	0.03
190	-2767.7	971	441,750	3,769,500	0.02	0.03
191	-2517.7	971	442,000	3,769,500	0.02	0.04
192	-2267.7	971	442,250	3,769,500	0.02	0.04
193	-2017.7	971	442,500	3,769,500	0.02	0.04
194	-1767.7	971	442,750	3,769,500	0.02	0.03
195	-1517.7	971	443,000	3,769,500	0.02	0.04
196	-1267.7	971	443,250	3,769,500	0.03	0.05
197	-1017.7	971	443,500	3,769,500	0.04	0.04
198	-767.7	971	443,750	3,769,500	0.04	0.04
199	-517.7	971	444,000	3,769,500	0.03	0.04
200	-267.7	971	444,250	3,769,500	0.02	0.03
201	-17.7	971	444,500	3,769,500	0.03	0.02
202	232.3	971	444,750	3,769,500	0.03	0.03
203	482.3	971	445,000	3,769,500	0.03	0.04
204	732.3	971	445,250	3,769,500	0.03	0.04
205	982.3	971	445,500	3,769,500	0.04	0.03
206	1232.3	971	445,750	3,769,500	0.05	0.05
207	1482.3	971	446,000	3,769,500	0.03	0.05
208	1732.3	971	446,250	3,769,500	0.03	0.05
209	1982.3	971	446,500	3,769,500	0.04	0.06
210	2232.3	971	446,750	3,769,500	0.05	0.08
211	2482.3	971	447,000	3,769,500	0.05	0.08
212	2732.3	971	447,250	3,769,500	0.04	0.06
213	2982.3	971	447,500	3,769,500	0.04	0.07
214	3232.3	971	447,750	3,769,500	0.04	0.07
215	3482.3	971	448,000	3,769,500	0.03	0.08
216	3732.3	971	448,250	3,769,500	0.03	0.07
217	-3267.7	1221	441,250	3,769,750	0.02	0.02
218	-3017.7	1221	441,500	3,769,750	0.01	0.03
219	-2767.7	1221	441,750	3,769,750	0.01	0.03
220	-2517.7	1221	442,000	3,769,750	0.01	0.04
221	-2267.7	1221	442,250	3,769,750	0.01	0.03
222	-2017.7	1221	442,500	3,769,750	0.01	0.03
223	-1767.7	1221	442,750	3,769,750	0.02	0.03

224	-1517.7	1221	443,000	3,769,750	0.02	0.04
225	-1267.7	1221	443,250	3,769,750	0.03	0.04
226	-1017.7	1221	443,500	3,769,750	0.03	0.04
227	-767.7	1221	443,750	3,769,750	0.03	0.04
228	-517.7	1221	444,000	3,769,750	0.02	0.03
229	-267.7	1221	444,250	3,769,750	0.02	0.02
230	-17.7	1221	444,500	3,769,750	0.02	0.02
231	232.3	1221	444,750	3,769,750	0.02	0.03
232	482.3	1221	445,000	3,769,750	0.02	0.03
233	732.3	1221	445,250	3,769,750	0.03	0.03
234	982.3	1221	445,500	3,769,750	0.03	0.03
235	1232.3	1221	445,750	3,769,750	0.03	0.04
236	1482.3	1221	446,000	3,769,750	0.03	0.05
237	1732.3	1221	446,250	3,769,750	0.03	0.05
238	1982.3	1221	446,500	3,769,750	0.03	0.05
239	2232.3	1221	446,750	3,769,750	0.04	0.06
240	2482.3	1221	447,000	3,769,750	0.04	0.07
241	2732.3	1221	447,250	3,769,750	0.03	0.07
242	2982.3	1221	447,500	3,769,750	0.03	0.06
243	3232.3	1221	447,750	3,769,750	0.03	0.05
244	3482.3	1221	448,000	3,769,750	0.03	0.05
245	3732.3	1221	448,250	3,769,750	0.03	0.06
246	-2828.12	251.91	441,690	3,768,781	0.03	0.02
247	-2793.79	238.18	441,724	3,768,767	0.03	0.02
248	-2786.92	330.88	441,731	3,768,860	0.04	0.02
249	-2550.03	325.73	441,968	3,768,855	0.05	0.03
250	-2503.68	329.16	442,014	3,768,858	0.05	0.03
251	-2414.42	346.32	442,103	3,768,875	0.05	0.04
252	-2290.83	348.04	442,227	3,768,877	0.06	0.05
253	-2175.82	342.89	442,342	3,768,872	0.07	0.06
254	-2186.12	456.19	442,332	3,768,985	0.05	0.06
255	-2270.23	469.92	442,248	3,768,999	0.05	0.05
256	-2201.57	517.98	442,316	3,769,047	0.04	0.06
257	-2141.49	590.08	442,376	3,769,119	0.03	0.06
258	-2043.64	645.01	442,474	3,769,174	0.03	0.05
259	-1962.96	658.74	442,555	3,769,188	0.03	0.05
260	-1820.49	650.16	442,697	3,769,179	0.03	0.05
261	-1509.79	658.74	443,008	3,769,188	0.03	0.05
262	-1123.56	672.47	443,394	3,769,201	0.05	0.07
263	-915.85	655.31	443,602	3,769,184	0.05	0.07
264	-809.43	657.02	443,708	3,769,186	0.06	0.06
265	-579.4	686.21	443,938	3,769,215	0.05	0.04
266	-291.02	694.79	444,227	3,769,224	0.04	0.03
267	-9.5	711.95	444,508	3,769,241	0.03	0.03
268	373.29	710.24	444,891	3,769,239	0.03	0.05

269	718.33	717.1	445,236	3,769,246	0.05	0.05
270	1056.49	735.99	445,574	3,769,265	0.06	0.05
271	1516.53	761.74	446,034	3,769,291	0.04	0.06
272	1949.11	777.18	446,467	3,769,306	0.05	0.07
273	2330.19	784.05	446,848	3,769,313	0.07	0.11
274	2359.37	615.83	446,877	3,769,145	0.09	0.15
275	2692.39	614.11	447,210	3,769,143	0.05	0.11
276	2809.11	588.36	447,327	3,769,117	0.05	0.12
277	2932.71	514.55	447,450	3,769,043	0.06	0.12
278	2967.04	488.8	447,485	3,769,018	0.06	0.11
279	3083.77	346.32	447,602	3,768,875	0.06	0.07
280	3112.95	202.13	447,631	3,768,731	0.06	0.06
281	3291.47	195.27	447,809	3,768,724	0.06	0.06
282	3286.32	-86.25	447,804	3,768,443	0.07	0.08
283	3279.46	-278.51	447,797	3,768,250	0.07	0.06
284	3274.31	-415.83	447,792	3,768,113	0.05	0.04
285	3303.49	-536	447,821	3,767,993	0.03	0.04
286	3391.03	-656.16	447,909	3,767,873	0.04	0.03
287	3495.74	-699.07	448,013	3,767,830	0.04	0.04
288	3595.31	-700.79	448,113	3,767,828	0.04	0.04
289	3560.97	-860.43	448,079	3,767,668	0.10	0.09
290	3339.54	-867.29	447,857	3,767,662	0.11	0.11
291	3131.83	-867.29	447,650	3,767,662	0.11	0.11
292	3102.65	-841.55	447,620	3,767,687	0.09	0.08
293	3104.36	-702.5	447,622	3,767,826	0.04	0.04
294	3106.08	-542.86	447,624	3,767,986	0.04	0.03
295	2886.36	-536	447,404	3,767,993	0.04	0.04
296	2869.19	-475.91	447,387	3,768,053	0.04	0.04
297	2634.02	-477.63	447,152	3,768,051	0.04	0.04
298	2355.94	-472.48	446,874	3,768,056	0.08	0.08
299	1974.86	-467.33	446,493	3,768,061	0.11	0.17
300	1509.67	-455.32	446,027	3,768,074	0.15	0.25
301	1092.54	-455.32	445,610	3,768,074	0.10	0.18
302	733.78	-450.17	445,252	3,768,079	0.09	0.17
303	735.49	-683.62	445,253	3,767,845	0.10	0.14
304	728.63	-856.99	445,246	3,767,672	0.28	0.30
305	469.42	-853.56	444,987	3,767,675	0.24	0.27
306	110.66	-839.83	444,628	3,767,689	0.39	0.83
307	110.66	-1020.07	444,628	3,767,509	0.20	0.37
308	-138.24	-935.96	444,380	3,767,593	0.26	0.56
309	-397.45	-829.53	444,120	3,767,699	0.26	0.46
310	-646.35	-724.82	443,871	3,767,804	0.30	0.51
311	-914.14	-620.11	443,604	3,767,909	0.38	0.57
312	-1274.62	-465.62	443,243	3,768,063	0.21	0.30
313	-1659.13	-307.69	442,859	3,768,221	0.09	0.15

314	-1880.57	-216.71	442,637	3,768,312	0.09	0.12
315	-2211.87	-87.97	442,306	3,768,441	0.07	0.08
316	-2512.27	42.49	442,005	3,768,571	0.04	0.04
317	-2622.13	87.12	441,896	3,768,616	0.04	0.03
318	-2737.14	128.32	441,781	3,768,657	0.04	0.03
319	-2833.27	169.52	441,684	3,768,698	0.03	0.02

24-Hour PM10 Concentrations (µg/m³) from Operational Activities - Project Compared to Baseline

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	-2017.7	-1529	442,500	3,767,000	0.05	0.09
2	-1767.7	-1529	442,750	3,767,000	0.07	0.12
3	-1517.7	-1529	443,000	3,767,000	0.10	0.16
4	-1267.7	-1529	443,250	3,767,000	0.11	0.17
5	-1017.7	-1529	443,500	3,767,000	0.14	0.20
6	-767.7	-1529	443,750	3,767,000	0.15	0.19
7	-517.7	-1529	444,000	3,767,000	0.13	0.18
8	-267.7	-1529	444,250	3,767,000	0.13	0.22
9	-17.7	-1529	444,500	3,767,000	0.15	0.21
10	232.3	-1529	444,750	3,767,000	0.13	0.18
11	482.3	-1529	445,000	3,767,000	0.13	0.18
12	732.3	-1529	445,250	3,767,000	0.23	0.27
13	982.3	-1529	445,500	3,767,000	0.11	0.15
14	1232.3	-1529	445,750	3,767,000	0.10	0.15
15	1482.3	-1529	446,000	3,767,000	0.10	0.14
16	1732.3	-1529	446,250	3,767,000	0.09	0.11
17	1982.3	-1529	446,500	3,767,000	0.09	0.10
18	2232.3	-1529	446,750	3,767,000	0.09	0.10
19	2482.3	-1529	447,000	3,767,000	0.07	0.09
20	2732.3	-1529	447,250	3,767,000	0.07	0.09
21	2982.3	-1529	447,500	3,767,000	0.07	0.07
22	3232.3	-1529	447,750	3,767,000	0.07	0.08
23	3482.3	-1529	448,000	3,767,000	0.07	0.07
24	3732.3	-1529	448,250	3,767,000	0.06	0.07
25	3982.3	-1529	448,500	3,767,000	0.06	0.06
26	4232.3	-1529	448,750	3,767,000	0.05	0.05
27	4482.3	-1529	449,000	3,767,000	0.04	0.04
28	-2017.7	-1279	442,500	3,767,250	0.06	0.07
29	-1767.7	-1279	442,750	3,767,250	0.07	0.11
30	-1517.7	-1279	443,000	3,767,250	0.09	0.16
31	-1267.7	-1279	443,250	3,767,250	0.12	0.20
32	-1017.7	-1279	443,500	3,767,250	0.16	0.24
33	-767.7	-1279	443,750	3,767,250	0.19	0.25
34	-517.7	-1279	444,000	3,767,250	0.18	0.25
35	-267.7	-1279	444,250	3,767,250	0.16	0.29
36	-17.7	-1279	444,500	3,767,250	0.18	0.29
37	232.3	-1279	444,750	3,767,250	0.14	0.24
38	482.3	-1279	445,000	3,767,250	0.15	0.20
39	732.3	-1279	445,250	3,767,250	0.25	0.29
40	982.3	-1279	445,500	3,767,250	0.14	0.18
41	1232.3	-1279	445,750	3,767,250	0.12	0.17
42	1482.3	-1279	446,000	3,767,250	0.13	0.18
43	1732.3	-1279	446,250	3,767,250	0.11	0.14

44	1982.3	-1279	446,500	3,767,250	0.11	0.12
45	2232.3	-1279	446,750	3,767,250	0.10	0.12
46	2482.3	-1279	447,000	3,767,250	0.09	0.12
47	2732.3	-1279	447,250	3,767,250	0.09	0.10
48	2982.3	-1279	447,500	3,767,250	0.09	0.10
49	3232.3	-1279	447,750	3,767,250	0.08	0.08
50	3482.3	-1279	448,000	3,767,250	0.08	0.08
51	3732.3	-1279	448,250	3,767,250	0.07	0.07
52	3982.3	-1279	448,500	3,767,250	0.07	0.07
53	4232.3	-1279	448,750	3,767,250	0.06	0.06
54	4482.3	-1279	449,000	3,767,250	0.05	0.05
55	-2017.7	-1029	442,500	3,767,500	0.07	0.10
56	-1767.7	-1029	442,750	3,767,500	0.08	0.10
57	-1517.7	-1029	443,000	3,767,500	0.09	0.14
58	-1267.7	-1029	443,250	3,767,500	0.13	0.22
59	-1017.7	-1029	443,500	3,767,500	0.19	0.28
60	-767.7	-1029	443,750	3,767,500	0.23	0.32
61	-517.7	-1029	444,000	3,767,500	0.25	0.35
62	-267.7	-1029	444,250	3,767,500	0.25	0.42
63	-17.7	-1029	444,500	3,767,500	0.27	0.48
64	232.3	-1029	444,750	3,767,500	0.18	0.34
65	482.3	-1029	445,000	3,767,500	0.18	0.21
66	732.3	-1029	445,250	3,767,500	0.25	0.30
67	982.3	-1029	445,500	3,767,500	0.20	0.25
68	1232.3	-1029	445,750	3,767,500	0.19	0.24
69	1482.3	-1029	446,000	3,767,500	0.18	0.24
70	1732.3	-1029	446,250	3,767,500	0.16	0.20
71	1982.3	-1029	446,500	3,767,500	0.15	0.17
72	2232.3	-1029	446,750	3,767,500	0.15	0.18
73	2482.3	-1029	447,000	3,767,500	0.13	0.16
74	2732.3	-1029	447,250	3,767,500	0.13	0.14
75	2982.3	-1029	447,500	3,767,500	0.12	0.12
76	3232.3	-1029	447,750	3,767,500	0.11	0.11
77	3482.3	-1029	448,000	3,767,500	0.11	0.11
78	3732.3	-1029	448,250	3,767,500	0.10	0.10
79	3982.3	-1029	448,500	3,767,500	0.10	0.10
80	4232.3	-1029	448,750	3,767,500	0.10	0.10
81	4482.3	-1029	449,000	3,767,500	0.09	0.08
82	-3017.7	-779	441,500	3,767,750	0.06	0.06
83	-2767.7	-779	441,750	3,767,750	0.07	0.07
84	-2517.7	-779	442,000	3,767,750	0.07	0.08
85	-2267.7	-779	442,250	3,767,750	0.07	0.10
86	-2017.7	-779	442,500	3,767,750	0.07	0.12
87	-1767.7	-779	442,750	3,767,750	0.08	0.14
88	-1517.7	-779	443,000	3,767,750	0.12	0.16

89	-1267.7	-779	443,250	3,767,750	0.15	0.22
90	-1017.7	-779	443,500	3,767,750	0.24	0.37
91	-767.7	-779	443,750	3,767,750	0.34	0.48
92	-517.7	-779	444,000	3,767,750	0.35	0.55
93	732.3	-779	445,250	3,767,750	0.24	0.28
94	982.3	-779	445,500	3,767,750	0.26	0.31
95	1232.3	-779	445,750	3,767,750	0.26	0.32
96	1482.3	-779	446,000	3,767,750	0.25	0.32
97	1732.3	-779	446,250	3,767,750	0.22	0.27
98	1982.3	-779	446,500	3,767,750	0.19	0.24
99	2232.3	-779	446,750	3,767,750	0.18	0.22
100	2482.3	-779	447,000	3,767,750	0.18	0.21
101	2732.3	-779	447,250	3,767,750	0.14	0.14
102	2982.3	-779	447,500	3,767,750	0.12	0.12
103	3732.3	-779	448,250	3,767,750	0.12	0.11
104	3982.3	-779	448,500	3,767,750	0.12	0.11
105	4232.3	-779	448,750	3,767,750	0.11	0.12
106	4482.3	-779	449,000	3,767,750	0.10	0.10
107	-3517.7	-529	441,000	3,768,000	0.05	0.08
108	-3267.7	-529	441,250	3,768,000	0.06	0.08
109	-3017.7	-529	441,500	3,768,000	0.07	0.09
110	-2767.7	-529	441,750	3,768,000	0.08	0.10
111	-2517.7	-529	442,000	3,768,000	0.09	0.11
112	-2267.7	-529	442,250	3,768,000	0.10	0.12
113	-2017.7	-529	442,500	3,768,000	0.11	0.14
114	-1767.7	-529	442,750	3,768,000	0.13	0.18
115	-1517.7	-529	443,000	3,768,000	0.18	0.24
116	-1267.7	-529	443,250	3,768,000	0.36	0.44
117	732.3	-529	445,250	3,768,000	0.14	0.21
118	982.3	-529	445,500	3,768,000	0.15	0.21
119	1232.3	-529	445,750	3,768,000	0.18	0.25
120	1482.3	-529	446,000	3,768,000	0.19	0.28
121	1732.3	-529	446,250	3,768,000	0.18	0.23
122	1982.3	-529	446,500	3,768,000	0.15	0.22
123	2232.3	-529	446,750	3,768,000	0.15	0.21
124	2482.3	-529	447,000	3,768,000	0.10	0.11
125	2732.3	-529	447,250	3,768,000	0.09	0.09
126	3482.3	-529	448,000	3,768,000	0.08	0.08
127	3732.3	-529	448,250	3,768,000	0.08	0.08
128	3982.3	-529	448,500	3,768,000	0.09	0.08
129	4232.3	-529	448,750	3,768,000	0.09	0.08
130	4482.3	-529	449,000	3,768,000	0.08	0.07
131	-3517.7	-279	441,000	3,768,250	0.06	0.08
132	-3267.7	-279	441,250	3,768,250	0.06	0.08
133	-3017.7	-279	441,500	3,768,250	0.07	0.09

134	-2767.7	-279	441,750	3,768,250	0.08	0.10
135	-2517.7	-279	442,000	3,768,250	0.09	0.11
136	-2267.7	-279	442,250	3,768,250	0.11	0.13
137	-2017.7	-279	442,500	3,768,250	0.14	0.17
138	3482.3	-279	448,000	3,768,250	0.10	0.09
139	3732.3	-279	448,250	3,768,250	0.09	0.09
140	3982.3	-279	448,500	3,768,250	0.09	0.09
141	4232.3	-279	448,750	3,768,250	0.08	0.08
142	4482.3	-279	449,000	3,768,250	0.08	0.07
143	-3517.7	-29	441,000	3,768,500	0.09	0.09
144	-3267.7	-29	441,250	3,768,500	0.08	0.08
145	-3017.7	-29	441,500	3,768,500	0.08	0.09
146	-2767.7	-29	441,750	3,768,500	0.09	0.10
147	-2517.7	-29	442,000	3,768,500	0.10	0.10
148	3482.3	-29	448,000	3,768,500	0.09	0.10
149	3732.3	-29	448,250	3,768,500	0.09	0.10
150	3982.3	-29	448,500	3,768,500	0.08	0.09
151	4232.3	-29	448,750	3,768,500	0.08	0.08
152	4482.3	-29	449,000	3,768,500	0.07	0.08
153	-3517.7	221	441,000	3,768,750	0.04	0.04
154	-3267.7	221	441,250	3,768,750	0.05	0.04
155	-3017.7	221	441,500	3,768,750	0.05	0.04
156	3482.3	221	448,000	3,768,750	0.08	0.08
157	3732.3	221	448,250	3,768,750	0.07	0.08
158	3982.3	221	448,500	3,768,750	0.07	0.07
159	4232.3	221	448,750	3,768,750	0.06	0.07
160	4482.3	221	449,000	3,768,750	0.06	0.07
161	-3517.7	471	441,000	3,769,000	0.04	0.03
162	-3267.7	471	441,250	3,769,000	0.04	0.03
163	-3017.7	471	441,500	3,769,000	0.05	0.04
164	-2767.7	471	441,750	3,769,000	0.06	0.05
165	-2517.7	471	442,000	3,769,000	0.06	0.06
166	-2267.7	471	442,250	3,769,000	0.07	0.07
167	3232.3	471	447,750	3,769,000	0.07	0.11
168	3482.3	471	448,000	3,769,000	0.07	0.09
169	3732.3	471	448,250	3,769,000	0.07	0.07
170	3982.3	471	448,500	3,769,000	0.06	0.06
171	4232.3	471	448,750	3,769,000	0.06	0.06
172	4482.3	471	449,000	3,769,000	0.06	0.05
173	-3517.7	721	441,000	3,769,250	0.04	0.03
174	-3267.7	721	441,250	3,769,250	0.04	0.03
175	-3017.7	721	441,500	3,769,250	0.04	0.04
176	-2767.7	721	441,750	3,769,250	0.04	0.04
177	-2517.7	721	442,000	3,769,250	0.04	0.05
178	-2267.7	721	442,250	3,769,250	0.04	0.06

179	2482.3	721	447,000	3,769,250	0.09	0.13
180	2732.3	721	447,250	3,769,250	0.07	0.12
181	2982.3	721	447,500	3,769,250	0.06	0.12
182	3232.3	721	447,750	3,769,250	0.06	0.12
183	3482.3	721	448,000	3,769,250	0.06	0.11
184	3732.3	721	448,250	3,769,250	0.06	0.10
185	3982.3	721	448,500	3,769,250	0.05	0.08
186	4232.3	721	448,750	3,769,250	0.05	0.07
187	4482.3	721	449,000	3,769,250	0.05	0.06
188	-3267.7	971	441,250	3,769,500	0.03	0.03
189	-3017.7	971	441,500	3,769,500	0.03	0.04
190	-2767.7	971	441,750	3,769,500	0.03	0.04
191	-2517.7	971	442,000	3,769,500	0.03	0.05
192	-2267.7	971	442,250	3,769,500	0.03	0.06
193	-2017.7	971	442,500	3,769,500	0.03	0.05
194	-1767.7	971	442,750	3,769,500	0.03	0.05
195	-1517.7	971	443,000	3,769,500	0.03	0.06
196	-1267.7	971	443,250	3,769,500	0.04	0.06
197	-1017.7	971	443,500	3,769,500	0.05	0.06
198	-767.7	971	443,750	3,769,500	0.05	0.05
199	-517.7	971	444,000	3,769,500	0.04	0.05
200	-267.7	971	444,250	3,769,500	0.04	0.04
201	-17.7	971	444,500	3,769,500	0.04	0.04
202	232.3	971	444,750	3,769,500	0.04	0.05
203	482.3	971	445,000	3,769,500	0.04	0.05
204	732.3	971	445,250	3,769,500	0.05	0.05
205	982.3	971	445,500	3,769,500	0.06	0.05
206	1232.3	971	445,750	3,769,500	0.06	0.06
207	1482.3	971	446,000	3,769,500	0.05	0.07
208	1732.3	971	446,250	3,769,500	0.05	0.07
209	1982.3	971	446,500	3,769,500	0.06	0.08
210	2232.3	971	446,750	3,769,500	0.08	0.12
211	2482.3	971	447,000	3,769,500	0.08	0.12
212	2732.3	971	447,250	3,769,500	0.06	0.09
213	2982.3	971	447,500	3,769,500	0.06	0.09
214	3232.3	971	447,750	3,769,500	0.06	0.09
215	3482.3	971	448,000	3,769,500	0.05	0.09
216	3732.3	971	448,250	3,769,500	0.05	0.09
217	-3267.7	1221	441,250	3,769,750	0.02	0.03
218	-3017.7	1221	441,500	3,769,750	0.02	0.04
219	-2767.7	1221	441,750	3,769,750	0.02	0.04
220	-2517.7	1221	442,000	3,769,750	0.02	0.05
221	-2267.7	1221	442,250	3,769,750	0.02	0.04
222	-2017.7	1221	442,500	3,769,750	0.02	0.04
223	-1767.7	1221	442,750	3,769,750	0.03	0.04

224	-1517.7	1221	443,000	3,769,750	0.03	0.05
225	-1267.7	1221	443,250	3,769,750	0.04	0.05
226	-1017.7	1221	443,500	3,769,750	0.04	0.05
227	-767.7	1221	443,750	3,769,750	0.05	0.05
228	-517.7	1221	444,000	3,769,750	0.04	0.05
229	-267.7	1221	444,250	3,769,750	0.03	0.04
230	-17.7	1221	444,500	3,769,750	0.04	0.04
231	232.3	1221	444,750	3,769,750	0.04	0.04
232	482.3	1221	445,000	3,769,750	0.04	0.04
233	732.3	1221	445,250	3,769,750	0.04	0.04
234	982.3	1221	445,500	3,769,750	0.05	0.04
235	1232.3	1221	445,750	3,769,750	0.04	0.06
236	1482.3	1221	446,000	3,769,750	0.05	0.06
237	1732.3	1221	446,250	3,769,750	0.05	0.07
238	1982.3	1221	446,500	3,769,750	0.05	0.07
239	2232.3	1221	446,750	3,769,750	0.06	0.09
240	2482.3	1221	447,000	3,769,750	0.07	0.10
241	2732.3	1221	447,250	3,769,750	0.06	0.09
242	2982.3	1221	447,500	3,769,750	0.05	0.07
243	3232.3	1221	447,750	3,769,750	0.05	0.07
244	3482.3	1221	448,000	3,769,750	0.05	0.07
245	3732.3	1221	448,250	3,769,750	0.04	0.07
246	-2828.12	251.91	441,690	3,768,781	0.05	0.04
247	-2793.79	238.18	441,724	3,768,767	0.05	0.04
248	-2786.92	330.88	441,731	3,768,860	0.06	0.04
249	-2550.03	325.73	441,968	3,768,855	0.07	0.05
250	-2503.68	329.16	442,014	3,768,858	0.07	0.05
251	-2414.42	346.32	442,103	3,768,875	0.07	0.06
252	-2290.83	348.04	442,227	3,768,877	0.08	0.07
253	-2175.82	342.89	442,342	3,768,872	0.08	0.07
254	-2186.12	456.19	442,332	3,768,985	0.07	0.08
255	-2270.23	469.92	442,248	3,768,999	0.07	0.07
256	-2201.57	517.98	442,316	3,769,047	0.06	0.07
257	-2141.49	590.08	442,376	3,769,119	0.05	0.07
258	-2043.64	645.01	442,474	3,769,174	0.04	0.07
259	-1962.96	658.74	442,555	3,769,188	0.04	0.07
260	-1820.49	650.16	442,697	3,769,179	0.04	0.07
261	-1509.79	658.74	443,008	3,769,188	0.04	0.07
262	-1123.56	672.47	443,394	3,769,201	0.06	0.08
263	-915.85	655.31	443,602	3,769,184	0.07	0.09
264	-809.43	657.02	443,708	3,769,186	0.07	0.08
265	-579.4	686.21	443,938	3,769,215	0.07	0.06
266	-291.02	694.79	444,227	3,769,224	0.05	0.05
267	-9.5	711.95	444,508	3,769,241	0.04	0.05
268	373.29	710.24	444,891	3,769,239	0.05	0.07

269	718.33	717.1	445,236	3,769,246	0.07	0.07
270	1056.49	735.99	445,574	3,769,265	0.08	0.06
271	1516.53	761.74	446,034	3,769,291	0.06	0.08
272	1949.11	777.18	446,467	3,769,306	0.07	0.09
273	2330.19	784.05	446,848	3,769,313	0.14	0.18
274	2359.37	615.83	446,877	3,769,145	0.18	0.24
275	2692.39	614.11	447,210	3,769,143	0.07	0.14
276	2809.11	588.36	447,327	3,769,117	0.07	0.14
277	2932.71	514.55	447,450	3,769,043	0.09	0.14
278	2967.04	488.8	447,485	3,769,018	0.09	0.14
279	3083.77	346.32	447,602	3,768,875	0.08	0.10
280	3112.95	202.13	447,631	3,768,731	0.09	0.09
281	3291.47	195.27	447,809	3,768,724	0.08	0.08
282	3286.32	-86.25	447,804	3,768,443	0.10	0.11
283	3279.46	-278.51	447,797	3,768,250	0.10	0.10
284	3274.31	-415.83	447,792	3,768,113	0.09	0.08
285	3303.49	-536	447,821	3,767,993	0.08	0.08
286	3391.03	-656.16	447,909	3,767,873	0.09	0.08
287	3495.74	-699.07	448,013	3,767,830	0.10	0.09
288	3595.31	-700.79	448,113	3,767,828	0.10	0.09
289	3560.97	-860.43	448,079	3,767,668	0.23	0.23
290	3339.54	-867.29	447,857	3,767,662	0.27	0.27
291	3131.83	-867.29	447,650	3,767,662	0.27	0.26
292	3102.65	-841.55	447,620	3,767,687	0.21	0.20
293	3104.36	-702.5	447,622	3,767,826	0.10	0.10
294	3106.08	-542.86	447,624	3,767,986	0.08	0.08
295	2886.36	-536	447,404	3,767,993	0.08	0.09
296	2869.19	-475.91	447,387	3,768,053	0.08	0.08
297	2634.02	-477.63	447,152	3,768,051	0.09	0.09
298	2355.94	-472.48	446,874	3,768,056	0.17	0.18
299	1974.86	-467.33	446,493	3,768,061	0.16	0.22
300	1509.67	-455.32	446,027	3,768,074	0.20	0.30
301	1092.54	-455.32	445,610	3,768,074	0.15	0.23
302	733.78	-450.17	445,252	3,768,079	0.14	0.21
303	735.49	-683.62	445,253	3,767,845	0.17	0.22
304	728.63	-856.99	445,246	3,767,672	0.63	0.66
305	469.42	-853.56	444,987	3,767,675	0.54	0.57
306	110.66	-839.83	444,628	3,767,689	0.53	0.98
307	110.66	-1020.07	444,628	3,767,509	0.27	0.44
308	-138.24	-935.96	444,380	3,767,593	0.33	0.62
309	-397.45	-829.53	444,120	3,767,699	0.33	0.53
310	-646.35	-724.82	443,871	3,767,804	0.39	0.60
311	-914.14	-620.11	443,604	3,767,909	0.64	0.83
312	-1274.62	-465.62	443,243	3,768,063	0.29	0.37
313	-1659.13	-307.69	442,859	3,768,221	0.15	0.20

314	-1880.57	-216.71	442,637	3,768,312	0.15	0.17
315	-2211.87	-87.97	442,306	3,768,441	0.12	0.13
316	-2512.27	42.49	442,005	3,768,571	0.07	0.07
317	-2622.13	87.12	441,896	3,768,616	0.06	0.05
318	-2737.14	128.32	441,781	3,768,657	0.06	0.05
319	-2833.27	169.52	441,684	3,768,698	0.05	0.04

Annual PM10 Concentrations (µg/m³) from Operational Activities - Project Compared to Baseline

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	-2017.7	-1529	442,500	3,767,000	0.01	0.01
2	-1767.7	-1529	442,750	3,767,000	0.01	0.02
3	-1517.7	-1529	443,000	3,767,000	0.01	0.02
4	-1267.7	-1529	443,250	3,767,000	0.02	0.02
5	-1017.7	-1529	443,500	3,767,000	0.03	0.03
6	-767.7	-1529	443,750	3,767,000	0.03	0.04
7	-517.7	-1529	444,000	3,767,000	0.02	0.03
8	-267.7	-1529	444,250	3,767,000	0.02	0.03
9	-17.7	-1529	444,500	3,767,000	0.02	0.03
10	232.3	-1529	444,750	3,767,000	0.02	0.03
11	482.3	-1529	445,000	3,767,000	0.02	0.03
12	732.3	-1529	445,250	3,767,000	0.04	0.05
13	982.3	-1529	445,500	3,767,000	0.02	0.02
14	1232.3	-1529	445,750	3,767,000	0.01	0.02
15	1482.3	-1529	446,000	3,767,000	0.01	0.02
16	1732.3	-1529	446,250	3,767,000	0.01	0.02
17	1982.3	-1529	446,500	3,767,000	0.01	0.01
18	2232.3	-1529	446,750	3,767,000	0.01	0.01
19	2482.3	-1529	447,000	3,767,000	0.01	0.01
20	2732.3	-1529	447,250	3,767,000	0.01	0.01
21	2982.3	-1529	447,500	3,767,000	0.01	0.01
22	3232.3	-1529	447,750	3,767,000	0.01	0.01
23	3482.3	-1529	448,000	3,767,000	0.01	0.01
24	3732.3	-1529	448,250	3,767,000	0.01	0.01
25	3982.3	-1529	448,500	3,767,000	0.01	0.01
26	4232.3	-1529	448,750	3,767,000	0.01	0.01
27	4482.3	-1529	449,000	3,767,000	0.00	0.01
28	-2017.7	-1279	442,500	3,767,250	0.01	0.01
29	-1767.7	-1279	442,750	3,767,250	0.01	0.02
30	-1517.7	-1279	443,000	3,767,250	0.02	0.02
31	-1267.7	-1279	443,250	3,767,250	0.02	0.03
32	-1017.7	-1279	443,500	3,767,250	0.03	0.04
33	-767.7	-1279	443,750	3,767,250	0.03	0.05
34	-517.7	-1279	444,000	3,767,250	0.03	0.04
35	-267.7	-1279	444,250	3,767,250	0.03	0.04
36	-17.7	-1279	444,500	3,767,250	0.03	0.04
37	232.3	-1279	444,750	3,767,250	0.02	0.03
38	482.3	-1279	445,000	3,767,250	0.02	0.03
39	732.3	-1279	445,250	3,767,250	0.04	0.05
40	982.3	-1279	445,500	3,767,250	0.02	0.03
41	1232.3	-1279	445,750	3,767,250	0.02	0.02
42	1482.3	-1279	446,000	3,767,250	0.02	0.02
43	1732.3	-1279	446,250	3,767,250	0.02	0.02

44	1982.3	-1279	446,500	3,767,250	0.02	0.02
45	2232.3	-1279	446,750	3,767,250	0.01	0.02
46	2482.3	-1279	447,000	3,767,250	0.01	0.02
47	2732.3	-1279	447,250	3,767,250	0.01	0.01
48	2982.3	-1279	447,500	3,767,250	0.01	0.01
49	3232.3	-1279	447,750	3,767,250	0.01	0.01
50	3482.3	-1279	448,000	3,767,250	0.01	0.01
51	3732.3	-1279	448,250	3,767,250	0.01	0.01
52	3982.3	-1279	448,500	3,767,250	0.01	0.01
53	4232.3	-1279	448,750	3,767,250	0.01	0.01
54	4482.3	-1279	449,000	3,767,250	0.01	0.01
55	-2017.7	-1029	442,500	3,767,500	0.01	0.01
56	-1767.7	-1029	442,750	3,767,500	0.01	0.02
57	-1517.7	-1029	443,000	3,767,500	0.02	0.02
58	-1267.7	-1029	443,250	3,767,500	0.02	0.03
59	-1017.7	-1029	443,500	3,767,500	0.04	0.05
60	-767.7	-1029	443,750	3,767,500	0.04	0.06
61	-517.7	-1029	444,000	3,767,500	0.04	0.06
62	-267.7	-1029	444,250	3,767,500	0.04	0.06
63	-17.7	-1029	444,500	3,767,500	0.04	0.06
64	232.3	-1029	444,750	3,767,500	0.04	0.05
65	482.3	-1029	445,000	3,767,500	0.04	0.05
66	732.3	-1029	445,250	3,767,500	0.06	0.07
67	982.3	-1029	445,500	3,767,500	0.04	0.04
68	1232.3	-1029	445,750	3,767,500	0.03	0.04
69	1482.3	-1029	446,000	3,767,500	0.03	0.04
70	1732.3	-1029	446,250	3,767,500	0.03	0.03
71	1982.3	-1029	446,500	3,767,500	0.03	0.03
72	2232.3	-1029	446,750	3,767,500	0.03	0.03
73	2482.3	-1029	447,000	3,767,500	0.02	0.03
74	2732.3	-1029	447,250	3,767,500	0.02	0.02
75	2982.3	-1029	447,500	3,767,500	0.02	0.02
76	3232.3	-1029	447,750	3,767,500	0.02	0.02
77	3482.3	-1029	448,000	3,767,500	0.02	0.02
78	3732.3	-1029	448,250	3,767,500	0.02	0.02
79	3982.3	-1029	448,500	3,767,500	0.02	0.02
80	4232.3	-1029	448,750	3,767,500	0.02	0.02
81	4482.3	-1029	449,000	3,767,500	0.02	0.02
82	-3017.7	-779	441,500	3,767,750	0.01	0.01
83	-2767.7	-779	441,750	3,767,750	0.01	0.01
84	-2517.7	-779	442,000	3,767,750	0.01	0.01
85	-2267.7	-779	442,250	3,767,750	0.01	0.01
86	-2017.7	-779	442,500	3,767,750	0.01	0.02
87	-1767.7	-779	442,750	3,767,750	0.01	0.02
88	-1517.7	-779	443,000	3,767,750	0.02	0.03

89	-1267.7	-779	443,250	3,767,750	0.03	0.04
90	-1017.7	-779	443,500	3,767,750	0.05	0.07
91	-767.7	-779	443,750	3,767,750	0.07	0.09
92	-517.7	-779	444,000	3,767,750	0.07	0.10
93	732.3	-779	445,250	3,767,750	0.07	0.09
94	982.3	-779	445,500	3,767,750	0.06	0.08
95	1232.3	-779	445,750	3,767,750	0.06	0.07
96	1482.3	-779	446,000	3,767,750	0.06	0.07
97	1732.3	-779	446,250	3,767,750	0.05	0.06
98	1982.3	-779	446,500	3,767,750	0.05	0.06
99	2232.3	-779	446,750	3,767,750	0.05	0.06
100	2482.3	-779	447,000	3,767,750	0.04	0.05
101	2732.3	-779	447,250	3,767,750	0.04	0.04
102	2982.3	-779	447,500	3,767,750	0.03	0.03
103	3732.3	-779	448,250	3,767,750	0.03	0.03
104	3982.3	-779	448,500	3,767,750	0.03	0.03
105	4232.3	-779	448,750	3,767,750	0.02	0.03
106	4482.3	-779	449,000	3,767,750	0.02	0.02
107	-3517.7	-529	441,000	3,768,000	0.01	0.01
108	-3267.7	-529	441,250	3,768,000	0.01	0.01
109	-3017.7	-529	441,500	3,768,000	0.01	0.01
110	-2767.7	-529	441,750	3,768,000	0.01	0.01
111	-2517.7	-529	442,000	3,768,000	0.01	0.01
112	-2267.7	-529	442,250	3,768,000	0.01	0.01
113	-2017.7	-529	442,500	3,768,000	0.01	0.02
114	-1767.7	-529	442,750	3,768,000	0.02	0.02
115	-1517.7	-529	443,000	3,768,000	0.03	0.03
116	-1267.7	-529	443,250	3,768,000	0.07	0.07
117	732.3	-529	445,250	3,768,000	0.04	0.07
118	982.3	-529	445,500	3,768,000	0.04	0.06
119	1232.3	-529	445,750	3,768,000	0.04	0.06
120	1482.3	-529	446,000	3,768,000	0.03	0.05
121	1732.3	-529	446,250	3,768,000	0.03	0.05
122	1982.3	-529	446,500	3,768,000	0.03	0.04
123	2232.3	-529	446,750	3,768,000	0.03	0.04
124	2482.3	-529	447,000	3,768,000	0.03	0.03
125	2732.3	-529	447,250	3,768,000	0.02	0.03
126	3482.3	-529	448,000	3,768,000	0.02	0.02
127	3732.3	-529	448,250	3,768,000	0.01	0.02
128	3982.3	-529	448,500	3,768,000	0.01	0.02
129	4232.3	-529	448,750	3,768,000	0.01	0.01
130	4482.3	-529	449,000	3,768,000	0.01	0.01
131	-3517.7	-279	441,000	3,768,250	0.01	0.01
132	-3267.7	-279	441,250	3,768,250	0.01	0.01
133	-3017.7	-279	441,500	3,768,250	0.01	0.01

134	-2767.7	-279	441,750	3,768,250	0.01	0.01
135	-2517.7	-279	442,000	3,768,250	0.01	0.02
136	-2267.7	-279	442,250	3,768,250	0.02	0.02
137	-2017.7	-279	442,500	3,768,250	0.03	0.03
138	3482.3	-279	448,000	3,768,250	0.01	0.02
139	3732.3	-279	448,250	3,768,250	0.01	0.02
140	3982.3	-279	448,500	3,768,250	0.01	0.01
141	4232.3	-279	448,750	3,768,250	0.01	0.01
142	4482.3	-279	449,000	3,768,250	0.01	0.01
143	-3517.7	-29	441,000	3,768,500	0.02	0.02
144	-3267.7	-29	441,250	3,768,500	0.02	0.02
145	-3017.7	-29	441,500	3,768,500	0.02	0.02
146	-2767.7	-29	441,750	3,768,500	0.02	0.02
147	-2517.7	-29	442,000	3,768,500	0.02	0.02
148	3482.3	-29	448,000	3,768,500	0.01	0.02
149	3732.3	-29	448,250	3,768,500	0.01	0.02
150	3982.3	-29	448,500	3,768,500	0.01	0.01
151	4232.3	-29	448,750	3,768,500	0.01	0.01
152	4482.3	-29	449,000	3,768,500	0.01	0.01
153	-3517.7	221	441,000	3,768,750	0.01	0.01
154	-3267.7	221	441,250	3,768,750	0.01	0.01
155	-3017.7	221	441,500	3,768,750	0.01	0.01
156	3482.3	221	448,000	3,768,750	0.01	0.02
157	3732.3	221	448,250	3,768,750	0.01	0.02
158	3982.3	221	448,500	3,768,750	0.01	0.02
159	4232.3	221	448,750	3,768,750	0.01	0.01
160	4482.3	221	449,000	3,768,750	0.01	0.01
161	-3517.7	471	441,000	3,769,000	0.00	0.00
162	-3267.7	471	441,250	3,769,000	0.00	0.01
163	-3017.7	471	441,500	3,769,000	0.00	0.01
164	-2767.7	471	441,750	3,769,000	0.01	0.01
165	-2517.7	471	442,000	3,769,000	0.01	0.01
166	-2267.7	471	442,250	3,769,000	0.01	0.01
167	3232.3	471	447,750	3,769,000	0.02	0.02
168	3482.3	471	448,000	3,769,000	0.01	0.02
169	3732.3	471	448,250	3,769,000	0.01	0.02
170	3982.3	471	448,500	3,769,000	0.01	0.02
171	4232.3	471	448,750	3,769,000	0.01	0.01
172	4482.3	471	449,000	3,769,000	0.01	0.01
173	-3517.7	721	441,000	3,769,250	0.00	0.00
174	-3267.7	721	441,250	3,769,250	0.00	0.00
175	-3017.7	721	441,500	3,769,250	0.00	0.00
176	-2767.7	721	441,750	3,769,250	0.00	0.00
177	-2517.7	721	442,000	3,769,250	0.00	0.01
178	-2267.7	721	442,250	3,769,250	0.00	0.01

179	2482.3	721	447,000	3,769,250	0.02	0.03
180	2732.3	721	447,250	3,769,250	0.02	0.03
181	2982.3	721	447,500	3,769,250	0.02	0.02
182	3232.3	721	447,750	3,769,250	0.01	0.02
183	3482.3	721	448,000	3,769,250	0.01	0.02
184	3732.3	721	448,250	3,769,250	0.01	0.02
185	3982.3	721	448,500	3,769,250	0.01	0.02
186	4232.3	721	448,750	3,769,250	0.01	0.01
187	4482.3	721	449,000	3,769,250	0.01	0.01
188	-3267.7	971	441,250	3,769,500	0.00	0.00
189	-3017.7	971	441,500	3,769,500	0.00	0.00
190	-2767.7	971	441,750	3,769,500	0.00	0.00
191	-2517.7	971	442,000	3,769,500	0.00	0.00
192	-2267.7	971	442,250	3,769,500	0.00	0.00
193	-2017.7	971	442,500	3,769,500	0.00	0.01
194	-1767.7	971	442,750	3,769,500	0.00	0.01
195	-1517.7	971	443,000	3,769,500	0.00	0.01
196	-1267.7	971	443,250	3,769,500	0.01	0.01
197	-1017.7	971	443,500	3,769,500	0.01	0.01
198	-767.7	971	443,750	3,769,500	0.01	0.01
199	-517.7	971	444,000	3,769,500	0.01	0.01
200	-267.7	971	444,250	3,769,500	0.01	0.01
201	-17.7	971	444,500	3,769,500	0.01	0.01
202	232.3	971	444,750	3,769,500	0.01	0.01
203	482.3	971	445,000	3,769,500	0.01	0.01
204	732.3	971	445,250	3,769,500	0.01	0.01
205	982.3	971	445,500	3,769,500	0.01	0.01
206	1232.3	971	445,750	3,769,500	0.01	0.02
207	1482.3	971	446,000	3,769,500	0.01	0.02
208	1732.3	971	446,250	3,769,500	0.01	0.02
209	1982.3	971	446,500	3,769,500	0.01	0.02
210	2232.3	971	446,750	3,769,500	0.02	0.02
211	2482.3	971	447,000	3,769,500	0.02	0.03
212	2732.3	971	447,250	3,769,500	0.02	0.02
213	2982.3	971	447,500	3,769,500	0.01	0.02
214	3232.3	971	447,750	3,769,500	0.01	0.02
215	3482.3	971	448,000	3,769,500	0.01	0.02
216	3732.3	971	448,250	3,769,500	0.01	0.02
217	-3267.7	1221	441,250	3,769,750	0.00	0.00
218	-3017.7	1221	441,500	3,769,750	0.00	0.00
219	-2767.7	1221	441,750	3,769,750	0.00	0.00
220	-2517.7	1221	442,000	3,769,750	0.00	0.00
221	-2267.7	1221	442,250	3,769,750	0.00	0.00
222	-2017.7	1221	442,500	3,769,750	0.00	0.00
223	-1767.7	1221	442,750	3,769,750	0.00	0.00

224	-1517.7	1221	443,000	3,769,750	0.00	0.01
225	-1267.7	1221	443,250	3,769,750	0.00	0.01
226	-1017.7	1221	443,500	3,769,750	0.00	0.01
227	-767.7	1221	443,750	3,769,750	0.00	0.01
228	-517.7	1221	444,000	3,769,750	0.01	0.01
229	-267.7	1221	444,250	3,769,750	0.01	0.01
230	-17.7	1221	444,500	3,769,750	0.01	0.01
231	232.3	1221	444,750	3,769,750	0.01	0.01
232	482.3	1221	445,000	3,769,750	0.01	0.01
233	732.3	1221	445,250	3,769,750	0.01	0.01
234	982.3	1221	445,500	3,769,750	0.01	0.01
235	1232.3	1221	445,750	3,769,750	0.01	0.01
236	1482.3	1221	446,000	3,769,750	0.01	0.01
237	1732.3	1221	446,250	3,769,750	0.01	0.01
238	1982.3	1221	446,500	3,769,750	0.01	0.01
239	2232.3	1221	446,750	3,769,750	0.01	0.02
240	2482.3	1221	447,000	3,769,750	0.02	0.02
241	2732.3	1221	447,250	3,769,750	0.01	0.02
242	2982.3	1221	447,500	3,769,750	0.01	0.02
243	3232.3	1221	447,750	3,769,750	0.01	0.02
244	3482.3	1221	448,000	3,769,750	0.01	0.01
245	3732.3	1221	448,250	3,769,750	0.01	0.01
246	-2828.12	251.91	441,690	3,768,781	0.01	0.01
247	-2793.79	238.18	441,724	3,768,767	0.01	0.01
248	-2786.92	330.88	441,731	3,768,860	0.01	0.01
249	-2550.03	325.73	441,968	3,768,855	0.01	0.01
250	-2503.68	329.16	442,014	3,768,858	0.01	0.01
251	-2414.42	346.32	442,103	3,768,875	0.01	0.01
252	-2290.83	348.04	442,227	3,768,877	0.01	0.01
253	-2175.82	342.89	442,342	3,768,872	0.01	0.01
254	-2186.12	456.19	442,332	3,768,985	0.01	0.01
255	-2270.23	469.92	442,248	3,768,999	0.01	0.01
256	-2201.57	517.98	442,316	3,769,047	0.01	0.01
257	-2141.49	590.08	442,376	3,769,119	0.01	0.01
258	-2043.64	645.01	442,474	3,769,174	0.01	0.01
259	-1962.96	658.74	442,555	3,769,188	0.01	0.01
260	-1820.49	650.16	442,697	3,769,179	0.01	0.01
261	-1509.79	658.74	443,008	3,769,188	0.01	0.01
262	-1123.56	672.47	443,394	3,769,201	0.01	0.01
263	-915.85	655.31	443,602	3,769,184	0.01	0.01
264	-809.43	657.02	443,708	3,769,186	0.01	0.01
265	-579.4	686.21	443,938	3,769,215	0.01	0.01
266	-291.02	694.79	444,227	3,769,224	0.01	0.02
267	-9.5	711.95	444,508	3,769,241	0.01	0.02
268	373.29	710.24	444,891	3,769,239	0.01	0.02

269	718.33	717.1	445,236	3,769,246	0.01	0.02
270	1056.49	735.99	445,574	3,769,265	0.01	0.02
271	1516.53	761.74	446,034	3,769,291	0.01	0.02
272	1949.11	777.18	446,467	3,769,306	0.02	0.02
273	2330.19	784.05	446,848	3,769,313	0.04	0.05
274	2359.37	615.83	446,877	3,769,145	0.04	0.05
275	2692.39	614.11	447,210	3,769,143	0.02	0.03
276	2809.11	588.36	447,327	3,769,117	0.02	0.03
277	2932.71	514.55	447,450	3,769,043	0.02	0.03
278	2967.04	488.8	447,485	3,769,018	0.02	0.03
279	3083.77	346.32	447,602	3,768,875	0.02	0.03
280	3112.95	202.13	447,631	3,768,731	0.02	0.03
281	3291.47	195.27	447,809	3,768,724	0.02	0.02
282	3286.32	-86.25	447,804	3,768,443	0.02	0.02
283	3279.46	-278.51	447,797	3,768,250	0.02	0.02
284	3274.31	-415.83	447,792	3,768,113	0.02	0.02
285	3303.49	-536	447,821	3,767,993	0.02	0.02
286	3391.03	-656.16	447,909	3,767,873	0.02	0.02
287	3495.74	-699.07	448,013	3,767,830	0.02	0.02
288	3595.31	-700.79	448,113	3,767,828	0.02	0.02
289	3560.97	-860.43	448,079	3,767,668	0.07	0.07
290	3339.54	-867.29	447,857	3,767,662	0.11	0.11
291	3131.83	-867.29	447,650	3,767,662	0.08	0.08
292	3102.65	-841.55	447,620	3,767,687	0.06	0.06
293	3104.36	-702.5	447,622	3,767,826	0.02	0.03
294	3106.08	-542.86	447,624	3,767,986	0.02	0.02
295	2886.36	-536	447,404	3,767,993	0.02	0.02
296	2869.19	-475.91	447,387	3,768,053	0.02	0.02
297	2634.02	-477.63	447,152	3,768,051	0.02	0.03
298	2355.94	-472.48	446,874	3,768,056	0.06	0.07
299	1974.86	-467.33	446,493	3,768,061	0.03	0.04
300	1509.67	-455.32	446,027	3,768,074	0.04	0.06
301	1092.54	-455.32	445,610	3,768,074	0.04	0.06
302	733.78	-450.17	445,252	3,768,079	0.05	0.07
303	735.49	-683.62	445,253	3,767,845	0.05	0.06
304	728.63	-856.99	445,246	3,767,672	0.17	0.18
305	469.42	-853.56	444,987	3,767,675	0.20	0.21
306	110.66	-839.83	444,628	3,767,689	0.11	0.16
307	110.66	-1020.07	444,628	3,767,509	0.04	0.06
308	-138.24	-935.96	444,380	3,767,593	0.05	0.08
309	-397.45	-829.53	444,120	3,767,699	0.07	0.10
310	-646.35	-724.82	443,871	3,767,804	0.08	0.12
311	-914.14	-620.11	443,604	3,767,909	0.19	0.22
312	-1274.62	-465.62	443,243	3,768,063	0.06	0.06
313	-1659.13	-307.69	442,859	3,768,221	0.05	0.05

314	-1880.57	-216.71	442,637	3,768,312	0.05	0.05
315	-2211.87	-87.97	442,306	3,768,441	0.04	0.04
316	-2512.27	42.49	442,005	3,768,571	0.01	0.02
317	-2622.13	87.12	441,896	3,768,616	0.01	0.01
318	-2737.14	128.32	441,781	3,768,657	0.01	0.01
319	-2833.27	169.52	441,684	3,768,698	0.01	0.01

1-Hour SO2 Concentrations (µg/m³) from Operational Activities - Project Compared to Baseline

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	-2017.7	-1529	442,500	3,767,000	0.3	2.0
2	-1767.7	-1529	442,750	3,767,000	0.7	2.9
3	-1517.7	-1529	443,000	3,767,000	1.7	3.7
4	-1267.7	-1529	443,250	3,767,000	2.2	3.6
5	-1017.7	-1529	443,500	3,767,000	2.4	3.0
6	-767.7	-1529	443,750	3,767,000	2.6	2.2
7	-517.7	-1529	444,000	3,767,000	2.8	1.6
8	-267.7	-1529	444,250	3,767,000	2.9	2.8
9	-17.7	-1529	444,500	3,767,000	1.3	2.9
10	232.3	-1529	444,750	3,767,000	0.6	2.9
11	482.3	-1529	445,000	3,767,000	0.4	2.5
12	732.3	-1529	445,250	3,767,000	(0.6)	1.2
13	982.3	-1529	445,500	3,767,000	(1.6)	(1.8)
14	1232.3	-1529	445,750	3,767,000	(0.7)	(0.9)
15	1482.3	-1529	446,000	3,767,000	3.0	4.2
16	1732.3	-1529	446,250	3,767,000	1.2	1.7
17	1982.3	-1529	446,500	3,767,000	(2.6)	(2.1)
18	2232.3	-1529	446,750	3,767,000	(2.8)	0.8
19	2482.3	-1529	447,000	3,767,000	0.8	5.0
20	2732.3	-1529	447,250	3,767,000	0.1	4.2
21	2982.3	-1529	447,500	3,767,000	1.2	3.8
22	3232.3	-1529	447,750	3,767,000	2.9	2.9
23	3482.3	-1529	448,000	3,767,000	4.3	2.0
24	3732.3	-1529	448,250	3,767,000	3.8	1.8
25	3982.3	-1529	448,500	3,767,000	2.6	2.1
26	4232.3	-1529	448,750	3,767,000	1.6	2.8
27	4482.3	-1529	449,000	3,767,000	1.0	3.2
28	-2017.7	-1279	442,500	3,767,250	0.3	1.5
29	-1767.7	-1279	442,750	3,767,250	0.5	1.8
30	-1517.7	-1279	443,000	3,767,250	0.6	2.9
31	-1267.7	-1279	443,250	3,767,250	1.3	4.0
32	-1017.7	-1279	443,500	3,767,250	2.5	4.5
33	-767.7	-1279	443,750	3,767,250	2.8	4.0
34	-517.7	-1279	444,000	3,767,250	3.0	3.1
35	-267.7	-1279	444,250	3,767,250	3.3	2.1
36	-17.7	-1279	444,500	3,767,250	3.5	3.3
37	232.3	-1279	444,750	3,767,250	1.7	3.5
38	482.3	-1279	445,000	3,767,250	0.5	3.6
39	732.3	-1279	445,250	3,767,250	0.4	3.2
40	982.3	-1279	445,500	3,767,250	(1.6)	(0.7)
41	1232.3	-1279	445,750	3,767,250	(1.5)	(1.7)
42	1482.3	-1279	446,000	3,767,250	2.2	3.5
43	1732.3	-1279	446,250	3,767,250	1.2	1.7

44	1982.3	-1279	446,500	3,767,250	(4.0)	(2.7)
45	2232.3	-1279	446,750	3,767,250	(0.9)	4.1
46	2482.3	-1279	447,000	3,767,250	0.4	4.9
47	2732.3	-1279	447,250	3,767,250	1.6	4.4
48	2982.3	-1279	447,500	3,767,250	3.8	3.3
49	3232.3	-1279	447,750	3,767,250	5.2	2.0
50	3482.3	-1279	448,000	3,767,250	4.0	2.3
51	3732.3	-1279	448,250	3,767,250	2.5	3.2
52	3982.3	-1279	448,500	3,767,250	1.4	3.9
53	4232.3	-1279	448,750	3,767,250	1.6	3.6
54	4482.3	-1279	449,000	3,767,250	1.5	2.9
55	-2017.7	-1029	442,500	3,767,500	2.5	2.3
56	-1767.7	-1029	442,750	3,767,500	1.6	1.9
57	-1517.7	-1029	443,000	3,767,500	0.8	2.1
58	-1267.7	-1029	443,250	3,767,500	1.0	2.9
59	-1017.7	-1029	443,500	3,767,500	1.2	4.3
60	-767.7	-1029	443,750	3,767,500	2.7	5.3
61	-517.7	-1029	444,000	3,767,500	3.4	5.3
62	-267.7	-1029	444,250	3,767,500	3.7	4.6
63	-17.7	-1029	444,500	3,767,500	4.0	3.5
64	232.3	-1029	444,750	3,767,500	4.4	4.0
65	482.3	-1029	445,000	3,767,500	2.5	4.5
66	732.3	-1029	445,250	3,767,500	0.5	4.8
67	982.3	-1029	445,500	3,767,500	0.3	4.0
68	1232.3	-1029	445,750	3,767,500	(2.1)	(2.3)
69	1482.3	-1029	446,000	3,767,500	0.8	2.1
70	1732.3	-1029	446,250	3,767,500	1.2	1.7
71	1982.3	-1029	446,500	3,767,500	(6.0)	(1.4)
72	2232.3	-1029	446,750	3,767,500	0.9	6.8
73	2482.3	-1029	447,000	3,767,500	2.2	5.3
74	2732.3	-1029	447,250	3,767,500	5.1	3.6
75	2982.3	-1029	447,500	3,767,500	6.4	2.9
76	3232.3	-1029	447,750	3,767,500	4.1	3.9
77	3482.3	-1029	448,000	3,767,500	2.2	4.8
78	3732.3	-1029	448,250	3,767,500	1.9	4.1
79	3982.3	-1029	448,500	3,767,500	1.5	2.9
80	4232.3	-1029	448,750	3,767,500	1.4	1.8
81	4482.3	-1029	449,000	3,767,500	1.4	1.5
82	-3017.7	-779	441,500	3,767,750	4.0	2.5
83	-2767.7	-779	441,750	3,767,750	4.5	2.7
84	-2517.7	-779	442,000	3,767,750	5.0	3.3
85	-2267.7	-779	442,250	3,767,750	5.4	4.1
86	-2017.7	-779	442,500	3,767,750	5.9	5.0
87	-1767.7	-779	442,750	3,767,750	5.9	5.4
88	-1517.7	-779	443,000	3,767,750	5.2	5.0

89	-1267.7	-779	443,250	3,767,750	4.3	4.4
90	-1017.7	-779	443,500	3,767,750	3.3	3.5
91	-767.7	-779	443,750	3,767,750	2.3	5.1
92	-517.7	-779	444,000	3,767,750	3.0	6.2
93	732.3	-779	445,250	3,767,750	3.8	6.1
94	982.3	-779	445,500	3,767,750	0.3	6.7
95	1232.3	-779	445,750	3,767,750	(2.0)	2.3
96	1482.3	-779	446,000	3,767,750	(1.0)	(0.4)
97	1732.3	-779	446,250	3,767,750	1.2	1.5
98	1982.3	-779	446,500	3,767,750	(4.1)	4.7
99	2232.3	-779	446,750	3,767,750	3.6	6.5
100	2482.3	-779	447,000	3,767,750	7.0	3.7
101	2732.3	-779	447,250	3,767,750	7.5	5.0
102	2982.3	-779	447,500	3,767,750	3.8	6.3
103	3732.3	-779	448,250	3,767,750	1.9	2.3
104	3982.3	-779	448,500	3,767,750	1.9	2.0
105	4232.3	-779	448,750	3,767,750	1.9	1.7
106	4482.3	-779	449,000	3,767,750	1.8	1.4
107	-3517.7	-529	441,000	3,768,000	2.0	2.0
108	-3267.7	-529	441,250	3,768,000	2.5	2.4
109	-3017.7	-529	441,500	3,768,000	3.1	2.8
110	-2767.7	-529	441,750	3,768,000	3.9	3.3
111	-2517.7	-529	442,000	3,768,000	4.7	3.8
112	-2267.7	-529	442,250	3,768,000	5.5	4.2
113	-2017.7	-529	442,500	3,768,000	6.2	4.3
114	-1767.7	-529	442,750	3,768,000	6.8	3.9
115	-1517.7	-529	443,000	3,768,000	7.8	5.6
116	-1267.7	-529	443,250	3,768,000	9.4	8.2
117	732.3	-529	445,250	3,768,000	7.6	7.3
118	982.3	-529	445,500	3,768,000	6.2	8.9
119	1232.3	-529	445,750	3,768,000	(0.1)	10.9
120	1482.3	-529	446,000	3,768,000	(2.9)	(2.0)
121	1732.3	-529	446,250	3,768,000	0.6	(0.7)
122	1982.3	-529	446,500	3,768,000	7.4	6.6
123	2232.3	-529	446,750	3,768,000	10.8	1.5
124	2482.3	-529	447,000	3,768,000	3.9	5.9
125	2732.3	-529	447,250	3,768,000	1.8	4.6
126	3482.3	-529	448,000	3,768,000	2.9	2.4
127	3732.3	-529	448,250	3,768,000	3.2	1.8
128	3982.3	-529	448,500	3,768,000	2.8	1.5
129	4232.3	-529	448,750	3,768,000	2.5	1.3
130	4482.3	-529	449,000	3,768,000	2.2	1.0
131	-3517.7	-279	441,000	3,768,250	1.0	1.8
132	-3267.7	-279	441,250	3,768,250	1.0	1.9
133	-3017.7	-279	441,500	3,768,250	1.0	1.8

134	-2767.7	-279	441,750	3,768,250	1.4	2.2
135	-2517.7	-279	442,000	3,768,250	2.4	3.1
136	-2267.7	-279	442,250	3,768,250	3.9	4.6
137	-2017.7	-279	442,500	3,768,250	5.6	6.8
138	3482.3	-279	448,000	3,768,250	3.1	2.5
139	3732.3	-279	448,250	3,768,250	2.6	2.2
140	3982.3	-279	448,500	3,768,250	2.2	2.0
141	4232.3	-279	448,750	3,768,250	1.9	1.9
142	4482.3	-279	449,000	3,768,250	1.7	1.8
143	-3517.7	-29	441,000	3,768,500	0.6	1.4
144	-3267.7	-29	441,250	3,768,500	0.6	1.5
145	-3017.7	-29	441,500	3,768,500	0.7	1.6
146	-2767.7	-29	441,750	3,768,500	0.8	1.6
147	-2517.7	-29	442,000	3,768,500	0.4	1.0
148	3482.3	-29	448,000	3,768,500	0.9	3.6
149	3732.3	-29	448,250	3,768,500	0.9	3.3
150	3982.3	-29	448,500	3,768,500	0.9	3.0
151	4232.3	-29	448,750	3,768,500	0.9	2.8
152	4482.3	-29	449,000	3,768,500	0.8	2.6
153	-3517.7	221	441,000	3,768,750	0.4	1.5
154	-3267.7	221	441,250	3,768,750	0.6	1.7
155	-3017.7	221	441,500	3,768,750	1.0	1.8
156	3482.3	221	448,000	3,768,750	(1.0)	3.2
157	3732.3	221	448,250	3,768,750	(0.8)	2.8
158	3982.3	221	448,500	3,768,750	(0.7)	2.5
159	4232.3	221	448,750	3,768,750	(0.6)	2.2
160	4482.3	221	449,000	3,768,750	(0.5)	2.0
161	-3517.7	471	441,000	3,769,000	1.6	1.4
162	-3267.7	471	441,250	3,769,000	1.7	1.3
163	-3017.7	471	441,500	3,769,000	1.8	2.3
164	-2767.7	471	441,750	3,769,000	1.9	3.7
165	-2517.7	471	442,000	3,769,000	2.2	4.6
166	-2267.7	471	442,250	3,769,000	2.5	3.8
167	3232.3	471	447,750	3,769,000	1.5	3.3
168	3482.3	471	448,000	3,769,000	0.8	2.5
169	3732.3	471	448,250	3,769,000	(0.1)	2.4
170	3982.3	471	448,500	3,769,000	(0.5)	2.3
171	4232.3	471	448,750	3,769,000	(0.6)	2.1
172	4482.3	471	449,000	3,769,000	(0.6)	2.0
173	-3517.7	721	441,000	3,769,250	0.9	1.7
174	-3267.7	721	441,250	3,769,250	1.2	2.0
175	-3017.7	721	441,500	3,769,250	1.4	2.4
176	-2767.7	721	441,750	3,769,250	1.6	2.6
177	-2517.7	721	442,000	3,769,250	1.6	2.7
178	-2267.7	721	442,250	3,769,250	1.6	2.8

179	2482.3	721	447,000	3,769,250	6.2	7.0
180	2732.3	721	447,250	3,769,250	3.3	3.6
181	2982.3	721	447,500	3,769,250	1.5	3.7
182	3232.3	721	447,750	3,769,250	1.1	3.8
183	3482.3	721	448,000	3,769,250	1.5	3.6
184	3732.3	721	448,250	3,769,250	1.2	3.0
185	3982.3	721	448,500	3,769,250	1.0	2.4
186	4232.3	721	448,750	3,769,250	0.8	1.9
187	4482.3	721	449,000	3,769,250	0.4	1.6
188	-3267.7	971	441,250	3,769,500	1.4	2.3
189	-3017.7	971	441,500	3,769,500	1.5	2.5
190	-2767.7	971	441,750	3,769,500	1.5	2.6
191	-2517.7	971	442,000	3,769,500	1.6	2.6
192	-2267.7	971	442,250	3,769,500	1.6	2.7
193	-2017.7	971	442,500	3,769,500	1.6	2.7
194	-1767.7	971	442,750	3,769,500	1.7	3.4
195	-1517.7	971	443,000	3,769,500	1.5	4.1
196	-1267.7	971	443,250	3,769,500	1.3	4.7
197	-1017.7	971	443,500	3,769,500	1.2	5.5
198	-767.7	971	443,750	3,769,500	1.0	5.4
199	-517.7	971	444,000	3,769,500	1.6	4.9
200	-267.7	971	444,250	3,769,500	2.1	3.3
201	-17.7	971	444,500	3,769,500	1.9	1.5
202	232.3	971	444,750	3,769,500	1.3	1.7
203	482.3	971	445,000	3,769,500	1.0	2.2
204	732.3	971	445,250	3,769,500	2.6	6.6
205	982.3	971	445,500	3,769,500	4.3	9.2
206	1232.3	971	445,750	3,769,500	3.6	8.4
207	1482.3	971	446,000	3,769,500	0.3	4.3
208	1732.3	971	446,250	3,769,500	1.1	4.9
209	1982.3	971	446,500	3,769,500	4.3	7.6
210	2232.3	971	446,750	3,769,500	3.9	7.3
211	2482.3	971	447,000	3,769,500	4.9	5.7
212	2732.3	971	447,250	3,769,500	5.7	6.0
213	2982.3	971	447,500	3,769,500	4.7	4.2
214	3232.3	971	447,750	3,769,500	2.9	3.0
215	3482.3	971	448,000	3,769,500	1.5	2.6
216	3732.3	971	448,250	3,769,500	1.0	2.8
217	-3267.7	1221	441,250	3,769,750	1.5	2.3
218	-3017.7	1221	441,500	3,769,750	1.5	2.3
219	-2767.7	1221	441,750	3,769,750	1.6	2.4
220	-2517.7	1221	442,000	3,769,750	1.4	2.5
221	-2267.7	1221	442,250	3,769,750	1.2	3.1
222	-2017.7	1221	442,500	3,769,750	1.0	3.6
223	-1767.7	1221	442,750	3,769,750	0.8	4.2

224	-1517.7	1221	443,000	3,769,750	0.7	4.5
225	-1267.7	1221	443,250	3,769,750	0.8	4.4
226	-1017.7	1221	443,500	3,769,750	1.0	4.1
227	-767.7	1221	443,750	3,769,750	1.2	3.5
228	-517.7	1221	444,000	3,769,750	1.6	1.9
229	-267.7	1221	444,250	3,769,750	1.6	1.4
230	-17.7	1221	444,500	3,769,750	1.3	1.6
231	232.3	1221	444,750	3,769,750	1.1	2.0
232	482.3	1221	445,000	3,769,750	2.0	4.4
233	732.3	1221	445,250	3,769,750	3.5	7.1
234	982.3	1221	445,500	3,769,750	3.4	7.4
235	1232.3	1221	445,750	3,769,750	1.8	5.0
236	1482.3	1221	446,000	3,769,750	(0.2)	3.4
237	1732.3	1221	446,250	3,769,750	0.6	3.7
238	1982.3	1221	446,500	3,769,750	3.7	5.2
239	2232.3	1221	446,750	3,769,750	3.7	6.9
240	2482.3	1221	447,000	3,769,750	2.4	5.4
241	2732.3	1221	447,250	3,769,750	3.5	4.6
242	2982.3	1221	447,500	3,769,750	4.2	4.6
243	3232.3	1221	447,750	3,769,750	4.5	4.0
244	3482.3	1221	448,000	3,769,750	3.6	2.6
245	3732.3	1221	448,250	3,769,750	2.4	2.3
246	-2828.12	251.91	441,690	3,768,781	1.7	2.0
247	-2793.79	238.18	441,724	3,768,767	1.7	2.0
248	-2786.92	330.88	441,731	3,768,860	2.5	2.2
249	-2550.03	325.73	441,968	3,768,855	3.3	5.1
250	-2503.68	329.16	442,014	3,768,858	3.5	5.9
251	-2414.42	346.32	442,103	3,768,875	3.9	7.3
252	-2290.83	348.04	442,227	3,768,877	4.5	8.3
253	-2175.82	342.89	442,342	3,768,872	5.2	8.1
254	-2186.12	456.19	442,332	3,768,985	2.7	3.7
255	-2270.23	469.92	442,248	3,768,999	2.5	3.8
256	-2201.57	517.98	442,316	3,769,047	2.2	3.2
257	-2141.49	590.08	442,376	3,769,119	1.8	2.9
258	-2043.64	645.01	442,474	3,769,174	1.6	2.9
259	-1962.96	658.74	442,555	3,769,188	1.5	2.9
260	-1820.49	650.16	442,697	3,769,179	1.5	3.0
261	-1509.79	658.74	443,008	3,769,188	1.4	3.1
262	-1123.56	672.47	443,394	3,769,201	1.5	3.2
263	-915.85	655.31	443,602	3,769,184	1.7	3.5
264	-809.43	657.02	443,708	3,769,186	1.8	4.1
265	-579.4	686.21	443,938	3,769,215	2.1	5.9
266	-291.02	694.79	444,227	3,769,224	1.9	7.1
267	-9.5	711.95	444,508	3,769,241	3.0	5.5
268	373.29	710.24	444,891	3,769,239	1.8	1.6

269	718.33	717.1	445,236	3,769,246	0.5	3.7
270	1056.49	735.99	445,574	3,769,265	5.2	11.4
271	1516.53	761.74	446,034	3,769,291	0.7	5.8
272	1949.11	777.18	446,467	3,769,306	5.5	9.6
273	2330.19	784.05	446,848	3,769,313	6.3	6.9
274	2359.37	615.83	446,877	3,769,145	5.6	7.0
275	2692.39	614.11	447,210	3,769,143	1.6	4.2
276	2809.11	588.36	447,327	3,769,117	1.0	4.5
277	2932.71	514.55	447,450	3,769,043	2.0	4.9
278	2967.04	488.8	447,485	3,769,018	2.1	4.7
279	3083.77	346.32	447,602	3,768,875	0.3	3.5
280	3112.95	202.13	447,631	3,768,731	(1.0)	4.0
281	3291.47	195.27	447,809	3,768,724	(0.9)	3.6
282	3286.32	-86.25	447,804	3,768,443	1.3	4.2
283	3279.46	-278.51	447,797	3,768,250	3.7	2.8
284	3274.31	-415.83	447,792	3,768,113	4.3	2.0
285	3303.49	-536	447,821	3,767,993	2.7	2.8
286	3391.03	-656.16	447,909	3,767,873	2.2	2.8
287	3495.74	-699.07	448,013	3,767,830	2.0	2.6
288	3595.31	-700.79	448,113	3,767,828	2.1	2.4
289	3560.97	-860.43	448,079	3,767,668	1.6	3.2
290	3339.54	-867.29	447,857	3,767,662	1.9	4.8
291	3131.83	-867.29	447,650	3,767,662	3.5	5.7
292	3102.65	-841.55	447,620	3,767,687	3.4	5.9
293	3104.36	-702.5	447,622	3,767,826	1.6	3.8
294	3106.08	-542.86	447,624	3,767,986	2.6	3.4
295	2886.36	-536	447,404	3,767,993	2.2	4.1
296	2869.19	-475.91	447,387	3,768,053	2.8	4.1
297	2634.02	-477.63	447,152	3,768,051	1.9	5.2
298	2355.94	-472.48	446,874	3,768,056	2.9	7.5
299	1974.86	-467.33	446,493	3,768,061	12.2	5.6
300	1509.67	-455.32	446,027	3,768,074	(2.6)	(1.4)
301	1092.54	-455.32	445,610	3,768,074	6.7	10.8
302	733.78	-450.17	445,252	3,768,079	8.2	9.2
303	735.49	-683.62	445,253	3,767,845	5.5	6.5
304	728.63	-856.99	445,246	3,767,672	2.7	6.1
305	469.42	-853.56	444,987	3,767,675	5.3	5.3
306	110.66	-839.83	444,628	3,767,689	4.6	5.3
307	110.66	-1020.07	444,628	3,767,509	4.4	3.3
308	-138.24	-935.96	444,380	3,767,593	4.1	5.2
309	-397.45	-829.53	444,120	3,767,699	3.9	6.8
310	-646.35	-724.82	443,871	3,767,804	2.9	5.9
311	-914.14	-620.11	443,604	3,767,909	7.8	8.4
312	-1274.62	-465.62	443,243	3,768,063	8.7	6.4
313	-1659.13	-307.69	442,859	3,768,221	7.8	9.0

314	-1880.57	-216.71	442,637	3,768,312	6.0	8.2
315	-2211.87	-87.97	442,306	3,768,441	1.6	1.7
316	-2512.27	42.49	442,005	3,768,571	(0.4)	0.6
317	-2622.13	87.12	441,896	3,768,616	0.2	1.4
318	-2737.14	128.32	441,781	3,768,657	0.4	1.6
319	-2833.27	169.52	441,684	3,768,698	0.8	1.8

24-Hour SO2 Concentrations (µg/m³) from Operational Activities - Project Compared to Baseline

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	-2017.7	-1529	442,500	3,767,000	0.1	0.2
2	-1767.7	-1529	442,750	3,767,000	0.1	0.3
3	-1517.7	-1529	443,000	3,767,000	0.2	0.4
4	-1267.7	-1529	443,250	3,767,000	0.2	0.5
5	-1017.7	-1529	443,500	3,767,000	0.2	0.6
6	-767.7	-1529	443,750	3,767,000	0.3	0.6
7	-517.7	-1529	444,000	3,767,000	0.3	0.7
8	-267.7	-1529	444,250	3,767,000	0.3	0.7
9	-17.7	-1529	444,500	3,767,000	0.3	0.7
10	232.3	-1529	444,750	3,767,000	0.3	0.7
11	482.3	-1529	445,000	3,767,000	0.3	0.9
12	732.3	-1529	445,250	3,767,000	0.4	1.2
13	982.3	-1529	445,500	3,767,000	0.4	1.1
14	1232.3	-1529	445,750	3,767,000	0.3	0.8
15	1482.3	-1529	446,000	3,767,000	0.3	0.9
16	1732.3	-1529	446,250	3,767,000	0.4	0.8
17	1982.3	-1529	446,500	3,767,000	0.4	0.6
18	2232.3	-1529	446,750	3,767,000	0.3	0.4
19	2482.3	-1529	447,000	3,767,000	0.1	0.4
20	2732.3	-1529	447,250	3,767,000	0.1	0.4
21	2982.3	-1529	447,500	3,767,000	0.2	0.2
22	3232.3	-1529	447,750	3,767,000	0.2	0.3
23	3482.3	-1529	448,000	3,767,000	0.2	0.3
24	3732.3	-1529	448,250	3,767,000	0.2	0.3
25	3982.3	-1529	448,500	3,767,000	0.1	0.3
26	4232.3	-1529	448,750	3,767,000	0.1	0.2
27	4482.3	-1529	449,000	3,767,000	0.1	0.2
28	-2017.7	-1279	442,500	3,767,250	0.1	0.2
29	-1767.7	-1279	442,750	3,767,250	0.1	0.3
30	-1517.7	-1279	443,000	3,767,250	0.2	0.4
31	-1267.7	-1279	443,250	3,767,250	0.2	0.5
32	-1017.7	-1279	443,500	3,767,250	0.3	0.6
33	-767.7	-1279	443,750	3,767,250	0.3	0.7
34	-517.7	-1279	444,000	3,767,250	0.3	0.8
35	-267.7	-1279	444,250	3,767,250	0.3	0.8
36	-17.7	-1279	444,500	3,767,250	0.4	0.9
37	232.3	-1279	444,750	3,767,250	0.3	0.9
38	482.3	-1279	445,000	3,767,250	0.3	0.8
39	732.3	-1279	445,250	3,767,250	0.5	1.2
40	982.3	-1279	445,500	3,767,250	0.5	1.4
41	1232.3	-1279	445,750	3,767,250	0.4	1.1
42	1482.3	-1279	446,000	3,767,250	0.4	1.1
43	1732.3	-1279	446,250	3,767,250	0.4	1.0

44	1982.3	-1279	446,500	3,767,250	0.5	0.7
45	2232.3	-1279	446,750	3,767,250	0.3	0.5
46	2482.3	-1279	447,000	3,767,250	0.2	0.5
47	2732.3	-1279	447,250	3,767,250	0.2	0.3
48	2982.3	-1279	447,500	3,767,250	0.3	0.4
49	3232.3	-1279	447,750	3,767,250	0.2	0.4
50	3482.3	-1279	448,000	3,767,250	0.2	0.4
51	3732.3	-1279	448,250	3,767,250	0.2	0.3
52	3982.3	-1279	448,500	3,767,250	0.1	0.3
53	4232.3	-1279	448,750	3,767,250	0.1	0.2
54	4482.3	-1279	449,000	3,767,250	0.1	0.2
55	-2017.7	-1029	442,500	3,767,500	0.1	0.3
56	-1767.7	-1029	442,750	3,767,500	0.1	0.3
57	-1517.7	-1029	443,000	3,767,500	0.1	0.3
58	-1267.7	-1029	443,250	3,767,500	0.2	0.5
59	-1017.7	-1029	443,500	3,767,500	0.3	0.6
60	-767.7	-1029	443,750	3,767,500	0.4	0.8
61	-517.7	-1029	444,000	3,767,500	0.4	0.9
62	-267.7	-1029	444,250	3,767,500	0.4	1.0
63	-17.7	-1029	444,500	3,767,500	0.5	1.0
64	232.3	-1029	444,750	3,767,500	0.4	1.0
65	482.3	-1029	445,000	3,767,500	0.4	1.0
66	732.3	-1029	445,250	3,767,500	0.4	1.1
67	982.3	-1029	445,500	3,767,500	0.7	1.7
68	1232.3	-1029	445,750	3,767,500	0.6	1.6
69	1482.3	-1029	446,000	3,767,500	0.6	1.3
70	1732.3	-1029	446,250	3,767,500	0.5	1.2
71	1982.3	-1029	446,500	3,767,500	0.6	0.8
72	2232.3	-1029	446,750	3,767,500	0.3	0.7
73	2482.3	-1029	447,000	3,767,500	0.2	0.5
74	2732.3	-1029	447,250	3,767,500	0.3	0.5
75	2982.3	-1029	447,500	3,767,500	0.3	0.5
76	3232.3	-1029	447,750	3,767,500	0.2	0.4
77	3482.3	-1029	448,000	3,767,500	0.2	0.4
78	3732.3	-1029	448,250	3,767,500	0.1	0.3
79	3982.3	-1029	448,500	3,767,500	0.1	0.2
80	4232.3	-1029	448,750	3,767,500	0.1	0.2
81	4482.3	-1029	449,000	3,767,500	0.1	0.1
82	-3017.7	-779	441,500	3,767,750	0.0	0.3
83	-2767.7	-779	441,750	3,767,750	0.1	0.4
84	-2517.7	-779	442,000	3,767,750	0.1	0.5
85	-2267.7	-779	442,250	3,767,750	0.1	0.5
86	-2017.7	-779	442,500	3,767,750	0.1	0.5
87	-1767.7	-779	442,750	3,767,750	0.1	0.5
88	-1517.7	-779	443,000	3,767,750	0.2	0.5

89	-1267.7	-779	443,250	3,767,750	0.2	0.5
90	-1017.7	-779	443,500	3,767,750	0.3	0.6
91	-767.7	-779	443,750	3,767,750	0.4	0.9
92	-517.7	-779	444,000	3,767,750	0.6	1.1
93	732.3	-779	445,250	3,767,750	0.5	1.3
94	982.3	-779	445,500	3,767,750	0.7	1.6
95	1232.3	-779	445,750	3,767,750	0.9	2.1
96	1482.3	-779	446,000	3,767,750	0.9	1.7
97	1732.3	-779	446,250	3,767,750	0.7	1.5
98	1982.3	-779	446,500	3,767,750	0.7	1.1
99	2232.3	-779	446,750	3,767,750	0.4	0.7
100	2482.3	-779	447,000	3,767,750	0.5	0.7
101	2732.3	-779	447,250	3,767,750	0.3	0.7
102	2982.3	-779	447,500	3,767,750	0.2	0.5
103	3732.3	-779	448,250	3,767,750	0.1	0.2
104	3982.3	-779	448,500	3,767,750	0.1	0.1
105	4232.3	-779	448,750	3,767,750	0.1	0.1
106	4482.3	-779	449,000	3,767,750	0.1	0.1
107	-3517.7	-529	441,000	3,768,000	0.1	0.2
108	-3267.7	-529	441,250	3,768,000	0.1	0.3
109	-3017.7	-529	441,500	3,768,000	0.1	0.3
110	-2767.7	-529	441,750	3,768,000	0.1	0.4
111	-2517.7	-529	442,000	3,768,000	0.1	0.5
112	-2267.7	-529	442,250	3,768,000	0.1	0.6
113	-2017.7	-529	442,500	3,768,000	0.1	0.7
114	-1767.7	-529	442,750	3,768,000	0.1	0.8
115	-1517.7	-529	443,000	3,768,000	0.1	0.7
116	-1267.7	-529	443,250	3,768,000	0.2	0.7
117	732.3	-529	445,250	3,768,000	0.6	1.6
118	982.3	-529	445,500	3,768,000	0.7	1.7
119	1232.3	-529	445,750	3,768,000	1.1	2.2
120	1482.3	-529	446,000	3,768,000	1.4	2.9
121	1732.3	-529	446,250	3,768,000	1.0	2.3
122	1982.3	-529	446,500	3,768,000	0.8	1.7
123	2232.3	-529	446,750	3,768,000	0.6	1.1
124	2482.3	-529	447,000	3,768,000	0.3	0.8
125	2732.3	-529	447,250	3,768,000	0.2	0.5
126	3482.3	-529	448,000	3,768,000	0.1	0.2
127	3732.3	-529	448,250	3,768,000	0.1	0.2
128	3982.3	-529	448,500	3,768,000	0.1	0.2
129	4232.3	-529	448,750	3,768,000	0.1	0.2
130	4482.3	-529	449,000	3,768,000	0.1	0.2
131	-3517.7	-279	441,000	3,768,250	0.1	0.2
132	-3267.7	-279	441,250	3,768,250	0.1	0.2
133	-3017.7	-279	441,500	3,768,250	0.1	0.2

134	-2767.7	-279	441,750	3,768,250	0.2	0.3
135	-2517.7	-279	442,000	3,768,250	0.2	0.5
136	-2267.7	-279	442,250	3,768,250	0.3	0.7
137	-2017.7	-279	442,500	3,768,250	0.3	0.8
138	3482.3	-279	448,000	3,768,250	0.4	0.3
139	3732.3	-279	448,250	3,768,250	0.4	0.2
140	3982.3	-279	448,500	3,768,250	0.3	0.2
141	4232.3	-279	448,750	3,768,250	0.3	0.2
142	4482.3	-279	449,000	3,768,250	0.3	0.2
143	-3517.7	-29	441,000	3,768,500	0.2	0.2
144	-3267.7	-29	441,250	3,768,500	0.2	0.2
145	-3017.7	-29	441,500	3,768,500	0.2	0.2
146	-2767.7	-29	441,750	3,768,500	0.2	0.3
147	-2517.7	-29	442,000	3,768,500	0.2	0.3
148	3482.3	-29	448,000	3,768,500	0.5	0.4
149	3732.3	-29	448,250	3,768,500	0.4	0.3
150	3982.3	-29	448,500	3,768,500	0.4	0.3
151	4232.3	-29	448,750	3,768,500	0.3	0.3
152	4482.3	-29	449,000	3,768,500	0.3	0.2
153	-3517.7	221	441,000	3,768,750	0.2	0.2
154	-3267.7	221	441,250	3,768,750	0.2	0.2
155	-3017.7	221	441,500	3,768,750	0.2	0.2
156	3482.3	221	448,000	3,768,750	0.3	0.3
157	3732.3	221	448,250	3,768,750	0.3	0.3
158	3982.3	221	448,500	3,768,750	0.3	0.3
159	4232.3	221	448,750	3,768,750	0.3	0.3
160	4482.3	221	449,000	3,768,750	0.3	0.3
161	-3517.7	471	441,000	3,769,000	0.1	0.2
162	-3267.7	471	441,250	3,769,000	0.1	0.2
163	-3017.7	471	441,500	3,769,000	0.1	0.2
164	-2767.7	471	441,750	3,769,000	0.2	0.2
165	-2517.7	471	442,000	3,769,000	0.2	0.2
166	-2267.7	471	442,250	3,769,000	0.2	0.2
167	3232.3	471	447,750	3,769,000	0.3	0.4
168	3482.3	471	448,000	3,769,000	0.3	0.4
169	3732.3	471	448,250	3,769,000	0.3	0.3
170	3982.3	471	448,500	3,769,000	0.3	0.3
171	4232.3	471	448,750	3,769,000	0.2	0.2
172	4482.3	471	449,000	3,769,000	0.2	0.2
173	-3517.7	721	441,000	3,769,250	0.1	0.1
174	-3267.7	721	441,250	3,769,250	0.1	0.2
175	-3017.7	721	441,500	3,769,250	0.1	0.2
176	-2767.7	721	441,750	3,769,250	0.1	0.2
177	-2517.7	721	442,000	3,769,250	0.1	0.2
178	-2267.7	721	442,250	3,769,250	0.1	0.2

179	2482.3	721	447,000	3,769,250	0.3	0.7
180	2732.3	721	447,250	3,769,250	0.3	0.7
181	2982.3	721	447,500	3,769,250	0.3	0.6
182	3232.3	721	447,750	3,769,250	0.3	0.5
183	3482.3	721	448,000	3,769,250	0.3	0.5
184	3732.3	721	448,250	3,769,250	0.2	0.4
185	3982.3	721	448,500	3,769,250	0.2	0.3
186	4232.3	721	448,750	3,769,250	0.2	0.3
187	4482.3	721	449,000	3,769,250	0.2	0.2
188	-3267.7	971	441,250	3,769,500	0.1	0.2
189	-3017.7	971	441,500	3,769,500	0.1	0.2
190	-2767.7	971	441,750	3,769,500	0.1	0.2
191	-2517.7	971	442,000	3,769,500	0.1	0.2
192	-2267.7	971	442,250	3,769,500	0.1	0.2
193	-2017.7	971	442,500	3,769,500	0.0	0.2
194	-1767.7	971	442,750	3,769,500	0.0	0.2
195	-1517.7	971	443,000	3,769,500	0.1	0.2
196	-1267.7	971	443,250	3,769,500	0.1	0.2
197	-1017.7	971	443,500	3,769,500	0.1	0.2
198	-767.7	971	443,750	3,769,500	0.2	0.2
199	-517.7	971	444,000	3,769,500	0.2	0.2
200	-267.7	971	444,250	3,769,500	0.2	0.2
201	-17.7	971	444,500	3,769,500	0.2	0.2
202	232.3	971	444,750	3,769,500	0.2	0.3
203	482.3	971	445,000	3,769,500	0.2	0.3
204	732.3	971	445,250	3,769,500	0.2	0.4
205	982.3	971	445,500	3,769,500	0.2	0.5
206	1232.3	971	445,750	3,769,500	0.3	0.5
207	1482.3	971	446,000	3,769,500	0.3	0.4
208	1732.3	971	446,250	3,769,500	0.3	0.5
209	1982.3	971	446,500	3,769,500	0.2	0.4
210	2232.3	971	446,750	3,769,500	0.2	0.5
211	2482.3	971	447,000	3,769,500	0.2	0.5
212	2732.3	971	447,250	3,769,500	0.2	0.5
213	2982.3	971	447,500	3,769,500	0.2	0.5
214	3232.3	971	447,750	3,769,500	0.3	0.5
215	3482.3	971	448,000	3,769,500	0.3	0.4
216	3732.3	971	448,250	3,769,500	0.2	0.4
217	-3267.7	1221	441,250	3,769,750	0.1	0.1
218	-3017.7	1221	441,500	3,769,750	0.0	0.1
219	-2767.7	1221	441,750	3,769,750	0.0	0.1
220	-2517.7	1221	442,000	3,769,750	0.0	0.1
221	-2267.7	1221	442,250	3,769,750	0.0	0.1
222	-2017.7	1221	442,500	3,769,750	0.0	0.1
223	-1767.7	1221	442,750	3,769,750	0.0	0.2

224	-1517.7	1221	443,000	3,769,750	0.1	0.2
225	-1267.7	1221	443,250	3,769,750	0.1	0.2
226	-1017.7	1221	443,500	3,769,750	0.1	0.2
227	-767.7	1221	443,750	3,769,750	0.1	0.2
228	-517.7	1221	444,000	3,769,750	0.1	0.1
229	-267.7	1221	444,250	3,769,750	0.1	0.1
230	-17.7	1221	444,500	3,769,750	0.2	0.2
231	232.3	1221	444,750	3,769,750	0.2	0.2
232	482.3	1221	445,000	3,769,750	0.2	0.2
233	732.3	1221	445,250	3,769,750	0.2	0.3
234	982.3	1221	445,500	3,769,750	0.2	0.4
235	1232.3	1221	445,750	3,769,750	0.2	0.3
236	1482.3	1221	446,000	3,769,750	0.3	0.4
237	1732.3	1221	446,250	3,769,750	0.4	0.5
238	1982.3	1221	446,500	3,769,750	0.2	0.5
239	2232.3	1221	446,750	3,769,750	0.1	0.3
240	2482.3	1221	447,000	3,769,750	0.1	0.4
241	2732.3	1221	447,250	3,769,750	0.1	0.4
242	2982.3	1221	447,500	3,769,750	0.1	0.3
243	3232.3	1221	447,750	3,769,750	0.2	0.3
244	3482.3	1221	448,000	3,769,750	0.2	0.4
245	3732.3	1221	448,250	3,769,750	0.2	0.4
246	-2828.12	251.91	441,690	3,768,781	0.2	0.2
247	-2793.79	238.18	441,724	3,768,767	0.2	0.2
248	-2786.92	330.88	441,731	3,768,860	0.2	0.2
249	-2550.03	325.73	441,968	3,768,855	0.2	0.3
250	-2503.68	329.16	442,014	3,768,858	0.2	0.3
251	-2414.42	346.32	442,103	3,768,875	0.2	0.3
252	-2290.83	348.04	442,227	3,768,877	0.3	0.3
253	-2175.82	342.89	442,342	3,768,872	0.3	0.3
254	-2186.12	456.19	442,332	3,768,985	0.2	0.2
255	-2270.23	469.92	442,248	3,768,999	0.2	0.2
256	-2201.57	517.98	442,316	3,769,047	0.2	0.2
257	-2141.49	590.08	442,376	3,769,119	0.2	0.3
258	-2043.64	645.01	442,474	3,769,174	0.2	0.3
259	-1962.96	658.74	442,555	3,769,188	0.1	0.3
260	-1820.49	650.16	442,697	3,769,179	0.1	0.3
261	-1509.79	658.74	443,008	3,769,188	0.1	0.3
262	-1123.56	672.47	443,394	3,769,201	0.2	0.3
263	-915.85	655.31	443,602	3,769,184	0.2	0.4
264	-809.43	657.02	443,708	3,769,186	0.3	0.4
265	-579.4	686.21	443,938	3,769,215	0.3	0.4
266	-291.02	694.79	444,227	3,769,224	0.3	0.3
267	-9.5	711.95	444,508	3,769,241	0.2	0.3
268	373.29	710.24	444,891	3,769,239	0.3	0.3

269	718.33	717.1	445,236	3,769,246	0.3	0.6
270	1056.49	735.99	445,574	3,769,265	0.3	0.7
271	1516.53	761.74	446,034	3,769,291	0.2	0.3
272	1949.11	777.18	446,467	3,769,306	0.3	0.7
273	2330.19	784.05	446,848	3,769,313	0.2	0.6
274	2359.37	615.83	446,877	3,769,145	0.3	0.8
275	2692.39	614.11	447,210	3,769,143	0.4	0.8
276	2809.11	588.36	447,327	3,769,117	0.5	0.8
277	2932.71	514.55	447,450	3,769,043	0.5	0.7
278	2967.04	488.8	447,485	3,769,018	0.5	0.7
279	3083.77	346.32	447,602	3,768,875	0.4	0.5
280	3112.95	202.13	447,631	3,768,731	0.4	0.4
281	3291.47	195.27	447,809	3,768,724	0.4	0.4
282	3286.32	-86.25	447,804	3,768,443	0.5	0.4
283	3279.46	-278.51	447,797	3,768,250	0.4	0.3
284	3274.31	-415.83	447,792	3,768,113	0.1	0.3
285	3303.49	-536	447,821	3,767,993	0.1	0.2
286	3391.03	-656.16	447,909	3,767,873	0.1	0.2
287	3495.74	-699.07	448,013	3,767,830	0.1	0.2
288	3595.31	-700.79	448,113	3,767,828	0.1	0.2
289	3560.97	-860.43	448,079	3,767,668	0.2	0.3
290	3339.54	-867.29	447,857	3,767,662	0.2	0.4
291	3131.83	-867.29	447,650	3,767,662	0.2	0.5
292	3102.65	-841.55	447,620	3,767,687	0.2	0.5
293	3104.36	-702.5	447,622	3,767,826	0.2	0.4
294	3106.08	-542.86	447,624	3,767,986	0.1	0.3
295	2886.36	-536	447,404	3,767,993	0.2	0.4
296	2869.19	-475.91	447,387	3,768,053	0.2	0.3
297	2634.02	-477.63	447,152	3,768,051	0.2	0.5
298	2355.94	-472.48	446,874	3,768,056	0.4	1.0
299	1974.86	-467.33	446,493	3,768,061	0.8	1.8
300	1509.67	-455.32	446,027	3,768,074	1.7	3.4
301	1092.54	-455.32	445,610	3,768,074	0.8	2.1
302	733.78	-450.17	445,252	3,768,079	0.6	1.8
303	735.49	-683.62	445,253	3,767,845	0.5	1.4
304	728.63	-856.99	445,246	3,767,672	0.5	1.2
305	469.42	-853.56	444,987	3,767,675	0.4	1.2
306	110.66	-839.83	444,628	3,767,689	0.6	1.3
307	110.66	-1020.07	444,628	3,767,509	0.5	1.1
308	-138.24	-935.96	444,380	3,767,593	0.6	1.1
309	-397.45	-829.53	444,120	3,767,699	0.5	1.1
310	-646.35	-724.82	443,871	3,767,804	0.5	1.0
311	-914.14	-620.11	443,604	3,767,909	0.4	0.8
312	-1274.62	-465.62	443,243	3,768,063	0.2	0.8
313	-1659.13	-307.69	442,859	3,768,221	0.1	1.3

314	-1880.57	-216.71	442,637	3,768,312	0.4	0.8
315	-2211.87	-87.97	442,306	3,768,441	0.3	0.6
316	-2512.27	42.49	442,005	3,768,571	0.2	0.2
317	-2622.13	87.12	441,896	3,768,616	0.2	0.2
318	-2737.14	128.32	441,781	3,768,657	0.2	0.2
319	-2833.27	169.52	441,684	3,768,698	0.2	0.2

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Date: July 26, 2022

To: Mike Ratte, Senior Air Quality Scientist
RCH Group

From: Holly Galbreath
Senior Environmental Analyst | Air Quality

Subject: South Airport Cargo Center Project – Mobile Carbon Monoxide Hot Spot Analysis

INTRODUCTION

This memorandum provides a mobile carbon monoxide (CO) analysis for the proposed South Airport Cargo Center Project (Project) to be incorporated into the Project's air quality impact report. Specifically, this analysis determines whether the Project will have a significant impact due to release of emissions from motor vehicles. These releases may create localized concentrations or air toxics "hot spots" where emissions from specific sources may expose individuals and population groups to elevated risks of adverse health effects, including, but not limited to, cancer and contribute to the cumulative health risks of emissions from other sources in the area.

The Project Site consists of approximately 97 acres located at Ontario International Airport (Airport) in the City of Ontario, San Bernardino County. The Project Site includes portions of Assessor Parcel Numbers (APN) 11326106, 11326107, 11326108, 11327101, and 11327102, located in the southern half of the Airport, immediately west of the Cucamonga Canyon Channel and north of Mission Boulevard. The Project would replace existing, underutilized airport related buildings and site improvements with an air cargo center. The Project would include demolition of the existing buildings, site improvements, and the development of a new air cargo center in two phases. Phase 1 would take place on the easternmost 60 acres of the Project site, and Phase 2 would occur on the remaining western 30 acres. A transportation study was prepared for the Project and identified 36 study intersections within the vicinity of the Project Site.[1]

Attachments:
A CALINE Modeling Results

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[1] Fehr and Peers, Ontario International Airport Cargo Center Draft Transportation Impact Study, June 2022.

METHODOLOGY

Localized CO concentrations associated with motor vehicle travel on area roadways were evaluated using a screening method based on the California Line Source Dispersion Model (CALINE-4) microscale dispersion model, developed by Caltrans, in combination with EMFAC 2021 emission factors for future year (2040). In traffic studies, the term "level of service" (LOS) describes traffic performance at roadway intersections and is generally expressed as a letter grade (A through F, with an F grade reflecting highly congested traffic conditions).

To establish a more accurate record of baseline CO concentrations affecting the Basin, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a daily traffic volume of approximately 100,000 vehicles per day. The SCAQMD 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm, which indicates that the most stringent 1-hour CO standard (20.0 ppm) would likely not be exceeded until the daily traffic at the intersection exceeded more than 400,000 vehicles per day.[2] Additionally, the SCAQMD also recommends an evaluation of potential localized CO impacts when a project causes the LOS at a study intersection to worsen from C to D, or if a project increases the V/C ratio at any intersection rated D or worse by 2 percent or more.

As provided in the Projects Draft Transportation Impact Study[3], the following traffic forecasts for each scenario, with and without project alternatives, were prepared and LOS was calculated to identify intersection operational deficiencies:

- Under Existing (2021) Conditions, the intersection of Mission Boulevard and Bon View Avenue operates below acceptable LOS policies.
- Under Opening Year (2024) plus Phase 1 Project Conditions, two intersections are forecast to operate below acceptable LOS per City's policies. Although these intersections would operate below LOS standards, the Project will not degrade the intersections or add additional delay to those intersections.
- Under Opening Year (2029) plus Phase 1 and Phase 2 Project Conditions, two intersections are forecast to operate below acceptable LOS. The addition of Project traffic was forecast to add delay to one intersection already operating at LOS E or worse. Infrastructure improvements are recommended to bring operations at that location to better than pre-Project conditions.
- Under Cumulative Year (2040) plus Phase 1 and Phase 2 Project Conditions, three intersections are forecast to operate below acceptable LOS. The addition of project traffic was forecast to add delay at three intersections already operating at LOS E or worse. Infrastructure improvements are recommended to bring operations at that location to better than pre-Project conditions.

None of the Project's studied intersections would exceed 400,000 vehicles per day. Additionally, none of the Project's study intersections worsen from C to D or increase the V/C ratio at any intersection

[2] South Coast Air Quality Management District, 2003 AQMP Appendix V, August 2003.

[3] Fehr and Peers, Ontario International Airport Cargo Center Draft Transportation Impact Study, June 2022.

rated D or worse by 2 percent or more. As such, the Project would not produce the volume of traffic required to generate a CO hot spot in the context of the 2003 AQMP hot spot study.

To further support this conclusion, CO concentration levels were forecasted at the Project's three most potentially impacted intersections using the CALINE-4 dispersion model developed by Caltrans, peak-hour traffic volumes, and conservative meteorological assumptions. The following intersections were evaluated because the Project's transportation study found that they would operate below LOS standards (i.e. LOS E/F):

1. Euclid Avenue/SR-83 at Mission Boulevard
2. Bon View Avenue at Mission Boulevard
3. Airport Drive at Haven Avenue

RESULTS

As mentioned previously, the three most potentially impacted intersections based on the SCAQMD criteria described above were forecasted using the CALINE-4 dispersion model. As shown in the table below, Project-generated traffic volumes are forecasted to have a negligible effect on the projected 1-hour and 8-hour CO concentrations at each of the three intersection locations analyzed. Thus, the Project would not cause any new or exacerbate any existing CO hot spots, and, as a result, health impacts related to localized mobile-source CO emissions would not be considered significant.

TABLE 1
LOCALIZED CARBON MONOXIDE DISPERSION ANALYSIS

Intersection	Peak Period[a]	Maximum 1-Hour Future without Project concentration[b]	Maximum 1-Hour Future with Project concentration[c]	Significant 1-Hour Impact?[d] (>20 ppm)	Maximum 8-Hour Future without Project concentration[e]	Maximum 8-Hour Future with Project concentration[f]	Significant 8-Hour Impact?[d] (>9.0 ppm)
Euclid Ave (SR-83)/Mission Blvd	AM	2.8	2.8	**No**	1.3	1.3	**No**
	PM	2.8	2.8	**No**	1.3	1.3	**No**
Bon View Ave/Mission Blvd	AM	2.8	2.8	**No**	1.3	1.3	**No**
	PM	2.8	2.8	**No**	1.3	1.3	**No**
Airport Dr/Haven Ave	AM	2.8	2.8	**No**	1.3	1.3	**No**
	PM	2.9	2.9	**No**	1.4	1.4	**No**

*Source: Emission factor and dispersion modeling output sheets are provided in **Attachment A***

[a] *Project contribution to local CO impacts were calculated based on peak hour trip generation rates provided in the Ontario International Airport South Airport Cargo Center Draft Transportation Impact Study for both the future and future plus Project AM and PM peak hours.*

[b] *SCAQMD 1-hour ambient background concentration (2.7 ppm) + 2040 Future No Project Conditions.*

[c] *SCAQMD 1-hour ambient background concentration (2.7 ppm) + 2040 Future Plus Phase 1 and Phase 2 Project Conditions.*

[d] *The most restrictive standard for 1-hour CO concentrations is 20 ppm and for 8-hour concentrations is 9.0 ppm.*

[e] *SCAQMD 8-hour ambient background concentration (1.2 ppm) + 2040 Future No Project Conditions.*

[f] *SCAQMD 8-hour ambient background concentration (1.2 ppm) + 2040 Future Plus Phase 1 and Phase 2 Project Conditions.*

Note: ppm = parts per million.

Attachment A:

CALINE Modeling Results

A.1

Euclid Avenue/SR-83 at Mission Boulevard

```
           CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                    JUNE 1989 VERSION
                    PAGE   1

               JOB: 1. Future w/out Project (AM)
               RUN: Hour 1           (WORST CASE ANGLE)
         POLLUTANT:


   I.  SITE VARIABLES

         U=   1.8 M/S            Z0= 100. CM           ALT= 0.0 (M)
       BRG= WORST CASE           VD=  0.0 CM/S
      CLAS=     7 (G)            VS=  0.0 CM/S
      MIXH= 1000. M             AMB=  0.0 PPM
     SIGTH=    5. DEGREES      TEMP= 19.4 DEGREE (C)


  II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (FT)  *               EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (FT)  (FT)
 ---------------*-------------------------*-----------------------------
 A. A           *     0     0   200     0 *  AG   3230   0.6    0.0  35.0
 B. B           *  -200     0     0     0 *  AG   3100   0.6    0.0  35.0
 C. C           *     0  -200     0     0 *  AG   3020   0.6    0.0  35.0
 D. D           *     0     0     0   200 *  AG   3490   0.6    0.0  35.0


 III.  RECEPTOR LOCATIONS

            *    COORDINATES (FT)
   RECEPTOR *    X      Y      Z
 -----------*---------------------
 1. NE      *     25     25   5.9
 2. NW      *    -25     25   5.9
 3. SE      *     25    -25   5.9
 4. SW      *    -25    -25   5.9


  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *      CONC/LINK
            *  BRG  * CONC  *        (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D
------------*-------*-------*--------------------
 1. NE      *  256. *   0.1 *  0.0  0.1  0.0  0.0
 2. NW      *  104. *   0.1 *  0.1  0.0  0.0  0.0
 3. SE      *  346. *   0.1 *  0.0  0.0  0.0  0.1
 4. SW      *   14. *   0.1 *  0.0  0.0  0.0  0.1
```

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
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JOB: 1. Future w/out Project (PM)
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT:

I. SITE VARIABLES

U= 1.8 M/S	Z0= 100. CM	ALT= 0.0 (M)
BRG= WORST CASE	VD= 0.0 CM/S	
CLAS= 7 (G)	VS= 0.0 CM/S	
MIXH= 1000. M	AMB= 0.0 PPM	
SIGTH= 5. DEGREES	TEMP= 19.4 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
	LINK COORDINATES (FT)								
A. A	0	0	200	0	AG	3150	0.6	0.0	35.0
B. B	-200	0	0	0	AG	2930	0.6	0.0	35.0
C. C	0	-200	0	0	AG	3390	0.6	0.0	35.0
D. D	0	0	0	200	AG	3490	0.6	0.0	35.0

III. RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
	COORDINATES (FT)		
1. NE	25	25	5.9
2. NW	-25	25	5.9
3. SE	25	-25	5.9
4. SW	-25	-25	5.9

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	A	B	C	D
			CONC/LINK (PPM)			
1. NE	194.	0.1	0.0	0.0	0.1	0.0
2. NW	104.	0.1	0.1	0.0	0.0	0.0
3. SE	346.	0.1	0.0	0.0	0.0	0.1
4. SW	76.	0.1	0.1	0.0	0.0	0.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
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JOB: 1. Future w/ Project (AM)
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT:

I. SITE VARIABLES

U= 1.8 M/S	Z0= 100. CM	ALT= 0.0 (M)
BRG= WORST CASE	VD= 0.0 CM/S	
CLAS= 7 (G)	VS= 0.0 CM/S	
MIXH= 1000. M	AMB= 0.0 PPM	
SIGTH= 5. DEGREES	TEMP= 19.4 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. A	0	0	200	0	AG	3253	0.6	0.0	35.0
B. B	-200	0	0	0	AG	3115	0.6	0.0	35.0
C. C	0	-200	0	0	AG	3020	0.6	0.0	35.0
D. D	0	0	0	200	AG	3498	0.6	0.0	35.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. NE	25	25	5.9
2. NW	-25	25	5.9
3. SE	25	-25	5.9
4. SW	-25	-25	5.9

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D
1. NE	256.	0.1	0.0	0.1	0.0	0.0
2. NW	104.	0.1	0.1	0.0	0.0	0.0
3. SE	346.	0.1	0.0	0.0	0.0	0.1
4. SW	14.	0.1	0.0	0.0	0.0	0.1

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
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              JOB: 1. Future w/ Project (PM)
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT:


  I.  SITE VARIABLES

        U=   1.8 M/S             Z0= 100. CM           ALT= 0.0 (M)
      BRG= WORST CASE            VD=  0.0 CM/S
     CLAS=     7 (G)             VS=  0.0 CM/S
     MIXH= 1000. M              AMB=  0.0 PPM
    SIGTH=    5. DEGREES       TEMP= 19.4 DEGREE (C)


 II.  LINK VARIABLES

     LINK      *  LINK COORDINATES (FT)  *               EF     H     W
  DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (FT)  (FT)
---------------*-------------------------*-----------------------------
A. A           *     0     0   200     0 *  AG   3187   0.6    0.0  35.0
B. B           *  -200     0     0     0 *  AG   2954   0.6    0.0  35.0
C. C           *     0  -200     0     0 *  AG   3390   0.6    0.0  35.0
D. D           *     0     0     0   200 *  AG   3503   0.6    0.0  35.0


III.  RECEPTOR LOCATIONS

           *    COORDINATES (FT)
  RECEPTOR *    X      Y      Z
-----------*---------------------
1. NE      *     25     25   5.9
2. NW      *    -25     25   5.9
3. SE      *     25    -25   5.9
4. SW      *    -25    -25   5.9


 IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

           *       * PRED  *      CONC/LINK
           *  BRG  * CONC  *        (PPM)
 RECEPTOR  * (DEG) * (PPM) *   A    B    C    D
-------------*-------*-------*--------------------
1. NE      *  194. *   0.1 *  0.0  0.0  0.1  0.0
2. NW      *  104. *   0.1 *  0.1  0.0  0.0  0.0
3. SE      *  346. *   0.1 *  0.0  0.0  0.0  0.1
4. SW      *   76. *   0.1 *  0.1  0.0  0.0  0.0
```

A.2

Bon View Avenue at Mission Boulevard

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
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JOB: 4. Future w/out Project (AM)
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT:

I. SITE VARIABLES

U= 1.8 M/S	Z0= 100. CM	ALT= 0.0 (M)
BRG= WORST CASE	VD= 0.0 CM/S	
CLAS= 7 (G)	VS= 0.0 CM/S	
MIXH= 1000. M	AMB= 0.0 PPM	
SIGTH= 5. DEGREES	TEMP= 19.4 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. A	0	0	200	0	AG	2520	0.6	0.0	35.0
B. B	-200	0	0	0	AG	2640	0.6	0.0	35.0
C. C	0	-200	0	0	AG	810	0.6	0.0	35.0
D. D	0	0	0	200	AG	930	0.6	0.0	35.0

LINK COORDINATES (FT) apply to X1, Y1, X2, Y2.

III. RECEPTOR LOCATIONS

RECEPTOR	X (FT)	Y (FT)	Z (FT)
1. NE	25	25	5.9
2. NW	-25	25	5.9
3. SE	25	-25	5.9
4. SW	-25	-25	5.9

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D
1. NE	257.	0.1	0.0	0.1	0.0	0.0
2. NW	103.	0.1	0.1	0.0	0.0	0.0
3. SE	283.	0.1	0.0	0.1	0.0	0.0
4. SW	77.	0.1	0.1	0.0	0.0	0.0

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
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              JOB: 4. Future w/out Project (PM)
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT:


   I.  SITE VARIABLES

         U=   1.8 M/S             Z0= 100. CM           ALT= 0.0 (M)
       BRG= WORST CASE            VD=  0.0 CM/S
      CLAS=     7 (G)             VS=  0.0 CM/S
      MIXH= 1000. M              AMB=  0.0 PPM
     SIGTH=    5. DEGREES       TEMP= 19.4 DEGREE (C)


  II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (FT)  *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (FT)  (FT)
----------------*-------------------------*-----------------------------
 A. A           *     0     0   200     0 *  AG   3000   0.6    0.0  35.0
 B. B           *  -200     0     0     0 *  AG   3010   0.6    0.0  35.0
 C. C           *     0  -200     0     0 *  AG   1190   0.6    0.0  35.0
 D. D           *     0     0     0   200 *  AG   1300   0.6    0.0  35.0


 III.  RECEPTOR LOCATIONS

            *    COORDINATES (FT)
  RECEPTOR  *    X       Y      Z
------------*---------------------
 1. NE      *     25     25   5.9
 2. NW      *    -25     25   5.9
 3. SE      *     25    -25   5.9
 4. SW      *    -25    -25   5.9


  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *      CONC/LINK
            *  BRG  * CONC  *        (PPM)
 RECEPTOR   * (DEG) * (PPM) *   A    B    C    D
------------*-------*-------*--------------------
 1. NE      *  256. *   0.1 *  0.0  0.1  0.0  0.0
 2. NW      *  104. *   0.1 *  0.1  0.0  0.0  0.0
 3. SE      *  284. *   0.1 *  0.0  0.1  0.0  0.0
 4. SW      *   76. *   0.1 *  0.1  0.0  0.0  0.0
```

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
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              JOB: 4. Future w Project (AM)
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT:


   I.  SITE VARIABLES

         U=   1.8 M/S            Z0= 100. CM           ALT= 0.0 (M)
       BRG= WORST CASE           VD=  0.0 CM/S
      CLAS=     7 (G)            VS=  0.0 CM/S
      MIXH= 1000. M             AMB=  0.0 PPM
     SIGTH=    5. DEGREES      TEMP= 19.4 DEGREE (C)


  II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (FT)  *               EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (FT)  (FT)
 ---------------*-------------------------*-----------------------------
 A. A           *     0     0   200     0 *  AG   2543   0.6    0.0  35.0
 B. B           *  -200     0     0     0 *  AG   2663   0.6    0.0  35.0
 C. C           *     0  -200     0     0 *  AG    810   0.6    0.0  35.0
 D. D           *     0     0     0   200 *  AG    930   0.6    0.0  35.0


 III.  RECEPTOR LOCATIONS

            *    COORDINATES (FT)
   RECEPTOR *    X      Y      Z
 -----------*---------------------
 1. NE      *     25     25   5.9
 2. NW      *    -25     25   5.9
 3. SE      *     25    -25   5.9
 4. SW      *    -25    -25   5.9


  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *      CONC/LINK
            *  BRG  * CONC  *        (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D
------------*-------*-------*--------------------
 1. NE      *  257. *   0.1 *  0.0  0.1  0.0  0.0
 2. NW      *  103. *   0.1 *  0.1  0.0  0.0  0.0
 3. SE      *  283. *   0.1 *  0.0  0.1  0.0  0.0
 4. SW      *   77. *   0.1 *  0.1  0.0  0.0  0.0
```

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
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JOB: 4. Future w Project (PM)
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT:

I. SITE VARIABLES

```
     U=   1.8 M/S            Z0= 100. CM           ALT= 0.0 (M)
   BRG= WORST CASE           VD=  0.0 CM/S
  CLAS=     7 (G)            VS=  0.0 CM/S
  MIXH= 1000. M             AMB=  0.0 PPM
 SIGTH=    5. DEGREES      TEMP= 19.4 DEGREE (C)
```

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. A	0	0	200	0	AG	3037	0.6	0.0	35.0
B. B	-200	0	0	0	AG	3047	0.6	0.0	35.0
C. C	0	-200	0	0	AG	1190	0.6	0.0	35.0
D. D	0	0	0	200	AG	1300	0.6	0.0	35.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. NE	25	25	5.9
2. NW	-25	25	5.9
3. SE	25	-25	5.9
4. SW	-25	-25	5.9

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D
1. NE	256.	0.1	0.0	0.1	0.0	0.0
2. NW	104.	0.1	0.1	0.0	0.0	0.0
3. SE	284.	0.1	0.0	0.1	0.0	0.0
4. SW	76.	0.1	0.1	0.0	0.0	0.0

A.3

Airport Drive at Haven Avenue

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: 26. Future w/out Project (AM)
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT:


  I.  SITE VARIABLES

       U=   1.8 M/S            Z0= 100. CM           ALT= 0.0 (M)
     BRG= WORST CASE           VD=  0.0 CM/S
    CLAS=     7 (G)            VS=  0.0 CM/S
    MIXH= 1000. M             AMB=  0.0 PPM
   SIGTH=    5. DEGREES      TEMP= 19.4 DEGREE (C)


 II.  LINK VARIABLES

    LINK      *  LINK COORDINATES (FT)  *              EF     H     W
 DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (FT)  (FT)
----------------*-------------------------*-----------------------------
A. A            *     0     0   200     0 *  AG   1940   0.6    0.0  35.0
B. B            *  -200     0     0     0 *  AG   1640   0.6    0.0  35.0
C. C            *     0  -200     0     0 *  AG   4620   0.6    0.0  35.0
D. D            *     0     0     0   200 *  AG   4740   0.6    0.0  35.0


III.  RECEPTOR LOCATIONS

            *    COORDINATES (FT)
  RECEPTOR  *    X      Y      Z
------------*---------------------
1. NE       *     25     25   5.9
2. NW       *    -25     25   5.9
3. SE       *     25    -25   5.9
4. SW       *    -25    -25   5.9


 IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *      CONC/LINK
            *  BRG  * CONC  *        (PPM)
 RECEPTOR   * (DEG) * (PPM) *   A    B    C    D
-------------*-------*-------*--------------------
1. NE       *  194. *   0.1 *  0.0  0.0  0.1  0.0
2. NW       *  166. *   0.1 *  0.0  0.0  0.1  0.0
3. SE       *  346. *   0.1 *  0.0  0.0  0.0  0.1
4. SW       *   14. *   0.1 *  0.0  0.0  0.0  0.1
```

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
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JOB: 26. Future w/out Project (PM)
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT:

I. SITE VARIABLES

U= 1.8 M/S	Z0= 100. CM	ALT= 0.0 (M)
BRG= WORST CASE	VD= 0.0 CM/S	
CLAS= 7 (G)	VS= 0.0 CM/S	
MIXH= 1000. M	AMB= 0.0 PPM	
SIGTH= 5. DEGREES	TEMP= 19.4 DEGREE (C)	

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. A	0	0	200	0	AG	2200	0.6	0.0	35.0
B. B	-200	0	0	0	AG	3300	0.6	0.0	35.0
C. C	0	-200	0	0	AG	5510	0.6	0.0	35.0
D. D	0	0	0	200	AG	5370	0.6	0.0	35.0

(LINK COORDINATES (FT))

III. RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1. NE	25	25	5.9
2. NW	-25	25	5.9
3. SE	25	-25	5.9
4. SW	-25	-25	5.9

(COORDINATES (FT))

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D
1. NE	194.	0.2	0.0	0.0	0.1	0.0
2. NW	166.	0.2	0.0	0.0	0.1	0.0
3. SE	346.	0.2	0.0	0.0	0.0	0.1
4. SW	14.	0.2	0.0	0.0	0.0	0.1

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
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              JOB: 26. Future w/ Project (AM)
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT:


   I.  SITE VARIABLES

          U=   1.8 M/S             Z0= 100. CM           ALT= 0.0 (M)
        BRG= WORST CASE            VD=  0.0 CM/S
       CLAS=     7 (G)             VS=  0.0 CM/S
       MIXH= 1000. M              AMB=  0.0 PPM
      SIGTH=    5. DEGREES       TEMP= 19.4 DEGREE (C)


  II.  LINK VARIABLES

       LINK      *  LINK COORDINATES (FT)  *              EF     H     W
    DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (FT)  (FT)
 ----------------*-------------------------*-----------------------------
 A. A            *     0     0   200     0 *  AG   1940   0.6    0.0  35.0
 B. B            *  -200     0     0     0 *  AG   1640   0.6    0.0  35.0
 C. C            *     0  -200     0     0 *  AG   4642   0.6    0.0  35.0
 D. D            *     0     0     0   200 *  AG   4762   0.6    0.0  35.0


 III.  RECEPTOR LOCATIONS

             *    COORDINATES (FT)
   RECEPTOR  *    X      Y      Z
 ------------*---------------------
 1. NE       *     25     25   5.9
 2. NW       *    -25     25   5.9
 3. SE       *     25    -25   5.9
 4. SW       *    -25    -25   5.9


  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

             *       * PRED  *      CONC/LINK
             *  BRG  * CONC  *        (PPM)
  RECEPTOR   * (DEG) * (PPM) *   A    B    C    D
-------------*-------*-------*--------------------
 1. NE       *  194. *   0.1 *  0.0  0.0  0.1  0.0
 2. NW       *  166. *   0.1 *  0.0  0.0  0.1  0.0
 3. SE       *  346. *   0.1 *  0.0  0.0  0.0  0.1
 4. SW       *   14. *   0.1 *  0.0  0.0  0.0  0.1
```

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
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JOB: 26. Future w/ Project (PM)
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT:

I. SITE VARIABLES

U=	1.8 M/S	Z0=	100. CM	ALT=	0.0 (M)
BRG=	WORST CASE	VD=	0.0 CM/S		
CLAS=	7 (G)	VS=	0.0 CM/S		
MIXH=	1000. M	AMB=	0.0 PPM		
SIGTH=	5. DEGREES	TEMP=	19.4 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. A	0	0	200	0	AG	2200	0.6	0.0	35.0
B. B	-200	0	0	0	AG	3300	0.6	0.0	35.0
C. C	0	-200	0	0	AG	5555	0.6	0.0	35.0
D. D	0	0	0	200	AG	5415	0.6	0.0	35.0

LINK COORDINATES (FT): X1, Y1, X2, Y2

III. RECEPTOR LOCATIONS

RECEPTOR	X	Y	Z
1. NE	25	25	5.9
2. NW	-25	25	5.9
3. SE	25	-25	5.9
4. SW	-25	-25	5.9

COORDINATES (FT): X, Y, Z

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	A	B	C	D
1. NE	194.	0.2	0.0	0.0	0.1	0.0
2. NW	166.	0.2	0.0	0.0	0.1	0.0
3. SE	346.	0.2	0.0	0.0	0.0	0.1
4. SW	14.	0.2	0.0	0.0	0.0	0.1

CONC/LINK (PPM): A, B, C, D

Attachment B

Construction and Operational Emissions Inventory

Phase 1 Summer	Daily Emissions (pounds/day)											
	ROG	CO	NOX	PM10f	PM10r	PM10e	PM10t	PM2.5f	PM2.5r	PM2.5e	PM2.5t	SO2
2023	3.63	114	29.1	11.2	24.2	0.46	35.8	4.29	3.63	0.45	8.38	0.31
2024	3.43	96.9	17.5	6.87		0.29	7.15	1.85		0.28	2.13	0.22

Phase 1 Winter	Daily Emissions (pounds/day)											
	ROG	CO	NOX	PM10f	PM10r	PM10e	PM10t	PM2.5f	PM2.5r	PM2.5e	PM2.5t	SO2
2023	3.67	113	30.0	11.2	24.2	0.46	35.8	4.29	3.63	0.45	8.38	0.30
2024	3.53	95.5	17.9	6.87		0.29	7.15	1.85		0.28	2.13	0.22

Phase 1 Worst-Case	Daily Emissions (pounds/day)												Total	Onsite Equipment	Diesel
	ROG	CO	NOX	PM10f	PM10r	PM10e	PM10t	PM2.5f	PM2.5r	PM2.5e	PM2.5t	SO2	Annual CO2e (mertic tons)	Annual CO2e (mertic tons)	(gallons)
2023	3.67	114	30.0	11.2	24.2	0.46	35.8	4.29	3.63	0.45	8.38	0.31	2,161	1,486	146,423
2024	3.53	96.9	17.9	6.87	-	0.29	7.15	1.85	-	0.28	2.13	0.22	1,737	967	95,284
SCAQMD Significance Thresholds	75	550	100				150				55	150			241,707
	No	No	No				No				No	No			

Employee Annual CO2e (mertic tons)	Gasoline (gallons)	Vendor/Haul Trucks Annual CO2e (mertic tons)	Diesel (gallons)
144	16,181	531	52,323
412	46,234	358	35,301
	62,415		87,624

Phase 2 Summer	Daily Emissions (pounds/day)											
	ROG	CO	NOX	PM10f	PM10r	PM10e	PM10t	PM2.5f	PM2.5r	PM2.5e	PM2.5t	SO2
2025	1.56	58.5	9.14	2.53	24.2	0.22	26.9	0.46	3.63	0.21	4.30	0.13
2026	1.56	58.5	11.4	6.12		0.22	6.34	2.95		0.21	3.16	0.13
2027	2.24	76.8	11.3	6.12		0.23	6.35	2.95		0.23	3.17	0.16
2028	3.05	93.4	17.0	6.87		0.28	7.15	1.85		0.27	2.13	0.21

Phase 2 Winter	Daily Emissions (pounds/day)											
	ROG	CO	NOX	PM10f	PM10r	PM10e	PM10t	PM2.5f	PM2.5r	PM2.5e	PM2.5t	SO2
2025	1.56	58.5	9.27	2.53	24.2	0.22	26.9	0.46	3.63	0.21	4.30	0.13
2026	1.56	58.5	11.7	6.12		0.22	6.34	2.95		0.21	3.16	0.13
2027	2.29	76.2	11.6	6.12		0.23	6.35	2.95		0.23	3.17	0.16
2028	3.13	92.3	17.4	6.87		0.28	7.15	1.85		0.27	2.13	0.21

Phase 2 Worst-Case	Daily Emissions (pounds/day)												Total	Onsite Equipment	Diesel
	ROG	CO	NOX	PM10f	PM10r	PM10e	PM10t	PM2.5f	PM2.5r	PM2.5e	PM2.5t	SO2	Annual CO2e (mertic tons)	Annual CO2e (mertic tons)	(gallons)
2025	1.56	58.5	9.27	2.53	24.2	0.22	26.9	0.46	3.63	0.21	4.30	0.13	469	411	40,504
2026	1.56	58.5	11.7	6.12	-	0.22	6.34	2.95	-	0.21	3.16	0.13	166	128	12,651
2027	2.29	76.8	11.6	6.12	-	0.23	6.35	2.95	-	0.23	3.17	0.16	1,213	854	84,140
2028	3.13	93.4	17.4	6.87	-	0.28	7.15	1.85	-	0.27	2.13	0.21	1,501	835	82,244

	Employee Annual CO2e (mertic tons)	Gasoline (gallons)	Vendor/Haul Trucks Annual CO2e (mertic tons)	Diesel (gallons)
2025	7	732	52	5,083
2026	3	387	34	3,330
2027	119	13,377	240	23,616
2028	354	39,726	313	30,792

Annual Operational Emissions (tons) for 2021 Baseline

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft (Non-SACC)	589	121	574	48.6	5.32	5.32

Daily Operational Emissions (pounds) for 2021 Baseline

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft (Non-SACC)	3,225	663	3,147	266	29.2	29.2

Annual Operational Emissions (tons) for Phase 1 (No Project)

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft (Non-SACC)	677	135	672	54.2	5.69	5.69

Daily Operational Emissions (pounds) for Phase 1 (No Project)

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft (Non-SACC)	3,707	742	3,682	297	31.2	31.2

Annual Operational Emissions (tons) for Phase 1 (Project-Related)

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft (SACC)	145	24.3	158	11.3	0.75	0.75
Aircraft (Non-SACC Taxi/Delay)	29.0	4.60	4.00	1.00	0.08	0.08
Grand Total Aircraft	**174**	**28.9**	**162**	**12.3**	**0.83**	**0.83**
APU (SACC)	2.31	0.18	2.81	0.35	0.38	0.38
GSE (SACC)	0.02	0.02	0.03	0.00	0.00	0.00
Employee Motor Vehicles	11.1	0.18	0.99	0.04	0.33	0.13
Delivery Trucks	5.26	0.18	0.45	0.02	0.09	0.04
Emergency Generator	1.92	0.14	0.37	0.27	0.02	0.02
Area Sources	0.05	2.84	0.00	0.00	0.00	0.00
Grand Total	**195**	**32.4**	**166**	**12.9**	**1.65**	**1.40**
Significance Threshold	100	10	10		100	70
	872	**168**	**838**	**67.1**	**7.34**	**7.09**

Daily Operational Emissions (pounds) for Phase 1 (Project-Related)

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft (SACC)	796	133	864	61.8	4.11	4.11
Aircraft (Non-SACC Taxi/Delay)	159	25.2	21.9	5.48	0.44	0.44
Grand Total Aircraft	**955**	**158**	**886**	**67.2**	**4.55**	**4.55**
APU (SACC)	12.7	1.00	15.4	1.89	2.07	2.07
GSE (SACC)	0.11	0.12	0.16	0.00	0.01	0.01
Employee Motor Vehicles	60.8	0.96	5.43	0.23	1.82	0.74
Delivery Trucks	28.8	0.97	2.45	0.09	0.47	0.19
Emergency Generator	30.7	2.25	5.91	4.34	0.35	0.35
Area Sources	0.37	15.6	0.00	0.00	0.00	0.00
Grand Total	**1,089**	**179**	**915**	**73.8**	**9.27**	**7.91**
Significance Threshold	550	55	55	150	150	55
	4,796	**921**	**4,598**	**371**	**40.5**	**39.1**

Annual Operational Emissions (tons) for Phase 1 (With Project Compared to Baseline)

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft	262	43.4	259	17.9	1.20	1.20
Grand Total	283	47.0	264	18.5	2.02	1.77

Daily Operational Emissions (pounds) for Phase 1 (With Project Compared to Baseline)

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft	1,438	238	1,421	97.9	6.58	6.58
Grand Total	1,571	259	1,451	104	11.3	9.94

Annual Operational Emissions (tons) for Phase 1 (With Project Compared to No Project)

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft	174	28.9	162	12.3	0.83	0.83
Grand Total	195	32.4	166	12.9	1.65	1.40

Daily Operational Emissions (pounds) for Phase 1 (With Project Copared to No Project)

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft	955	158	886	67.2	4.55	4.55
Grand Total	1,068	178	911	70.9	9.0	7.68
	1,089	**179**	**915**	**73.8**	**9.27**	**7.91**

Annual Operational GHG Emissions (metric tons) for 2021 Baseline

	CO_2	CH_4	N_2O	CO_2e	Fuel (gallons)
Aircraft (Non-SACC)	114,797	0	4	115,733	11,774,007

Annual Operational GHG Emissions (metric tons) for Phase 1 (No Project)

	CO_2	CH_4	N_2O	CO_2e	Fuel (gallons)
Aircraft (Non-SACC)	128,013	0	4	129,057	13,129,535

Annual Operational GHG Emissions (metric tons) for Phase 1 (Project-Related) / **Compared to Baseline**

	CO_2	CH_4	N_2O	CO_2e	Fuel (gallons)		Compared to Baseline CO_2e	Compared to Baseline Fuel (gallons)	
Aircraft (SACC)	46,005	0	1	46,380	4,718,427				
Aircraft (Non-SACC Taxi/Delay)	2,558	0	0	2,579	262,352				
Grand Total Aircraft	48,563	0	1	48,959	4,980,779		62,283	6,336,307	
APU (SACC)	985	0	0	994	100,981	5,081,761	994	100,981	6,437,288
GSE (SACC)	81	0	0	82	7,975		82	7,975	
Employee Motor Vehicles	3,879	0	0	3,902	437,888		3,902	437,888	
Delivery Trucks	1,518	0	0	1,528	150,556		1,528	150,556	
Emergency Generator	353	0	0	353	34,759		353	34,759	
Area Sources	0	0	0	0			0		
Electrical	9,477	1	0	9,525			9,525		
Waste	128	8	0	317			317		
Water	416	5	0	574			574		
Grand Total	**65,399**	**13**	**2**	**66,232**	**195,289**		**79,556**		

Notes:

Aircraft (Non-SACC) are associated with increased taxi times due to the inclusion of SACC operations
Employee motor vehicle and delivery truck emissions based on EMFAC
Area, enregy, waste, ,and water-related emissions based on CalEEMod
Aircraft, APU, and GSE Emission Factors (emission-factors_mar_2018_0.pdf (epa.gov), Emission Factors for Greenhouse Gas Inventories, March 9, 2018
Aircraft fuel usage based on AEDT, APU fuel usage based on Aviation Emissions and Air Quality Handbook, GSE fuel usage based on OFFROAD
Diesel Density 6.943 lb/gal
Jet A Density 6.84 lb/gal
GWP, Intergovernmental Panel on Climate Change, Fourth Assessment
Generator emissions based on USEPA AP-42 Section 3.4

Global Warming Potentials

CO_2	=	1
CH_4	=	28
N_2O	=	265

Annual Operational Emissions (tons) for 2021 Baseline

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft (Non-SACC)	589	121	574	48.6	5.32	5.32

Daily Operational Emissions (pounds) for 2021 Baseline

CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
3,225	663	3,147	266	29.2	29.2

Annual Operational Emissions (tons) for Phase 2 (No Project)

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft (Non-SACC)	717	142	782	59.7	6.07	6.07

Daily Operational Emissions (pounds) for Phase 2 (No Project)

CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
3,930	777	4,286	327	33.3	33.3

Annual Operational Emissions (tons) for Phase 2 (Project-Related)

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft (SACC)	226	37.8	251	18.0	1.21	1.21
Aircraft (Non-SACC Taxi/Delay)	28.0	4.50	3.00	1.00	0.08	0.08
Grand Total Aircraft	**254**	**42.3**	**254**	**19.0**	**1.29**	**1.29**
APU (SACC)	3.65	0.28	4.46	0.55	0.62	0.62
GSE (SACC)	-	-	-	-	-	-
Employee Motor Vehicles	9.05	0.12	0.69	0.04	0.32	0.13
Delivery Trucks	4.66	0.07	0.36	0.02	0.12	0.05
Emergency Generator	2.69	0.20	0.52	0.38	0.03	0.03
Area Sources	0.06	4.04	0.00	0.00	0.00	0.00
Grand Total	**274**	**47.0**	**260**	**20.0**	**2.38**	**2.11**
Significance Threshold	100	10.0	10		100	70
	991	**189**	**1,042**	**79.7**	**8.45**	**8.18**

Daily Operational Emissions (pounds) for Phase 2 (Project-Related)

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft (SACC)	1,238	207	1,373	98.5	6.61	6.61
Aircraft (Non-SACC Taxi/Delay)	153	24.7	16.4	5.48	0.44	0.44
Grand Total Aircraft	**1,392**	**232**	**1,390**	**104**	**7.05**	**7.05**
APU (SACC)	20.0	1.54	24.4	3.03	3.38	3.38
GSE (SACC)	-	-	-	-	-	-
Employee Motor Vehicles	49.6	0.68	3.80	0.21	1.77	0.69
Delivery Trucks	25.5	0.37	1.97	0.12	0.66	0.26
Emergency Generator	30.7	2.25	5.91	4.34	0.35	0.35
Area Sources	0.51	22.2	0.00	0.00	0.00	0.00
Grand Total	**1,518**	**259**	**1,426**	**112**	**13.2**	**11.7**
Significance Threshold	550	55	55	150	150	55
	5,448	**1,036**	**5,712**	**439**	**46.5**	**45.0**

Annual Operational Emissions (tons) for Phase 2 (With Project Compared to Baseline)

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft	383	63.1	462	30.1	2.04	2.04
Grand Total	403	67.9	468	31.1	3.13	2.86

Daily Operational Emissions (pounds) for Phase 2 (With Project Compared to Baseline)

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft	2,097	346	2,529	165	11.2	11.2
Grand Total	2,223	373	2,565	173	17.3	15.8

Annual Operational Emissions (tons) for Phase 2 (With Project Compared to No Project)

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft	254	42.3	254	19.0	1.29	1.29
Grand Total	274	47	260	20.0	2.38	2.11

Daily Operational Emissions (pounds) for Phase 2 (With Project Compared to No Project)

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft	1,392	232	1,390	104	7.05	7.05
Grand Total	1,502	258	1,423	109	13.0	11.6
	1,518	**259**	**1,426**	**111.7**	**13.22**	**11.74**

Annual Operational GHG Emissions (metric tons) for 2021 Baseline

	CO_2	CH_4	N_2O	CO_2e	Fuel (gallons)
Aircraft (Non-SACC)	114,797	0	4	115,733	11,774,007

Annual Operational GHG Emissions (metric tons) for Phase 2 (No Project)

	CO_2	CH_4	N_2O	CO_2e	Fuel (gallons)
Aircraft (Non-SACC)	141,299	0	4	142,451	14,492,216

Annual Operational Emissions (metric tons) for Phase 2 (Project-Related)

	CO_2	CH_4	N_2O	CO_2e	Fuel (gallons)	
Aircraft (SACC)	73,228	0	2	73,825	7,510,521	
Aircraft (Non-SACC Taxi/Delay)	2,456	0	0	2,476	251,859	
Grand Total Aircraft	75,683	0	2	76,300	7,762,380	
APU (SACC)	1,578	0	0	1,592	161,815	7,924,196
GSE (SACC)	-	-	-	-		
Employee Motor Vehicles	3,603	0	0	3,622	406,608	
Delivery Trucks	2,055	0	0	2,064	203,390	
Emergency Generator	494	0	0	494	48,662	
Area Sources	0	0	0	0		
Electrical	15,691	1	0	15,770		
Waste	180	11	0	446		
Water	582	7	0	807		
Grand Total	**99,866**	**19**	**3**	**101,096**	**243,548**	

Compared to Baseline

	CO_2e	Fuel (gallons)	
Aircraft (SACC)			
Aircraft (Non-SACC Taxi/Delay)			
Grand Total Aircraft	103,019	10,480,589	
APU (SACC)	1,592	161,815	10,642,404
GSE (SACC)	0	0	
Employee Motor Vehicles	3,622	406,608	
Delivery Trucks	2,064	203,390	
Emergency Generator	494	48,662	
Area Sources	0		
Electrical	15,770		
Waste	446		
Water	807		
Grand Total	**127,815**		

Notes:

Aircraft (Non-SACC) are associated with increased taxi times due to the inclusion of SACC operations
Employee motor vehicle and delivery truck emissions based on EMFAC
Area, enregy, waste, ,and water-related emissions based on CalEEMod
Aircraft, APU, and GSE Emission Factors (emission-factors_mar_2018_0.pdf (epa.gov), Emission Factors for Greenhouse Gas Inventories, March 9, 2018
Aircraft fuel usage based on AEDT, APU fuel usage based on Aviation Emissions and Air Quality Handbook, GSE fuel usage based on OFFROAD
Diesel Density 6.943 lb/gal
Jet A Density 6.84 lb/gal
GWP, Intergovernmental Panel on Climate Change, Fourth Assessment
Generator emissions based on USEPA AP-42 Section 3.4

Global Warming Potentials

CO_2	=	1
CH_4	=	28
N_2O	=	265

Attachment B

Construction and Operational Area/Energy/Waste/Water Source Emissions CalEEMod Output Files

Phase 1

- Annual
- Summer
- Winter

Phase 2

- Annual
- Summer
- Winter

Recycling Plants Fugitive Dust

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

Ontario International Airport South Airport Cargo Center Project - Phase 1

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	101.50	1000sqft	1.00	101,500.00	0
General Office Building	7.00	1000sqft	0.00	7,000.00	0
Unrefrigerated Warehouse-No Rail	508.68	1000sqft	5.00	508,675.00	0
Unrefrigerated Warehouse-No Rail	27.00	1000sqft	0.50	27,000.00	0
Enclosed Parking with Elevator	900.00	Space	4.00	271,000.00	0
Other Non-Asphalt Surfaces	2,047.32	1000sqft	47.00	2,047,320.00	0
Parking Lot	33.00	Space	0.30	15,300.00	0
Parking Lot	39.00	Space	5.00	122,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Description

Construction Phase - Project proponent, May 12, 2022

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

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

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Trips and VMT - Project Description

Demolition - CHA, November 22, 2021, Updated November 10, 2022

Grading - Project Description

Vehicle Trips - Motor vehicle emissions estimated externally

Energy Use - Calculations due to electrical usage are performed outside of the model and project would not use natural gas.

Construction Off-road Equipment Mitigation - Basic and Enhanced Emission Reduction Measures

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	322088	335588
tblAreaCoating	Area_Nonresidential_Interior	966263	1006763
tblAreaCoating	Area_Parking	147349	150510
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	70.00	87.00
tblConstructionPhase	NumDays	40.00	122.00
tblConstructionPhase	NumDays	1,110.00	154.00
tblConstructionPhase	NumDays	1,110.00	264.00

tblConstructionPhase	NumDays	75.00	155.00
tblConstructionPhase	NumDays	1,110.00	208.00
tblEnergyUse	LightingElect	1.75	0.00
tblEnergyUse	LightingElect	3.66	0.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	LightingElect	1.17	0.00
tblEnergyUse	NT24E	0.19	0.00
tblEnergyUse	NT24E	2.79	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	3.50	0.00
tblEnergyUse	T24E	2.74	0.00
tblEnergyUse	T24E	0.33	0.00
tblEnergyUse	T24NG	3.43	0.00
tblEnergyUse	T24NG	1.98	0.00
tblGrading	AcresOfGrading	122.00	62.00
tblGrading	MaterialImported	0.00	107,000.00
tblLandUse	LandUseSquareFeet	508,680.00	508,675.00
tblLandUse	LandUseSquareFeet	360,000.00	271,000.00
tblLandUse	LandUseSquareFeet	13,200.00	15,300.00
tblLandUse	LandUseSquareFeet	15,600.00	122,200.00
tblLandUse	LotAcreage	2.33	1.00
tblLandUse	LotAcreage	0.16	0.00
tblLandUse	LotAcreage	0.62	0.50
tblLandUse	LotAcreage	11.68	5.00
tblLandUse	LotAcreage	8.10	4.00
tblLandUse	LotAcreage	0.35	5.00
tblOffRoadEquipment	HorsePower	158.00	450.00
tblOffRoadEquipment	HorsePower	89.00	50.00

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

tblOffRoadEquipment	HorsePower	130.00	350.00
tblOffRoadEquipment	HorsePower	80.00	120.00
tblOffRoadEquipment	HorsePower	247.00	250.00
tblOffRoadEquipment	HorsePower	97.00	120.00
tblOffRoadEquipment	HorsePower	97.00	120.00
tblOffRoadEquipment	HorsePower	97.00	120.00
tblOffRoadEquipment	HorsePower	46.00	10.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	158.00	425.00
tblOffRoadEquipment	HorsePower	187.00	200.00
tblOffRoadEquipment	HorsePower	402.00	300.00
tblOffRoadEquipment	HorsePower	172.00	425.00
tblOffRoadEquipment	HorsePower	172.00	385.00
tblOffRoadEquipment	HorsePower	8.00	250.00
tblOffRoadEquipment	HorsePower	84.00	200.00
tblOffRoadEquipment	HorsePower	84.00	200.00
tblOffRoadEquipment	HorsePower	80.00	120.00
tblOffRoadEquipment	HorsePower	65.00	225.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00

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

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	503.54	528.91
tblTripsAndVMT	VendorTripNumber	508.00	17.00
tblTripsAndVMT	VendorTripNumber	508.00	100.00
tblTripsAndVMT	VendorTripNumber	508.00	100.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblTripsAndVMT	WorkerTripNumber	1,291.00	43.00
tblTripsAndVMT	WorkerTripNumber	1,291.00	240.00
tblTripsAndVMT	WorkerTripNumber	1,291.00	240.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	1.74	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	1.74	0.00
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	1.74	0.00
tblWater	IndoorWaterUseRate	123,876,000.00	130,117,437.50

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.7703	7.6488	6.5127	0.0235	1.2055	0.2740	1.4796	0.5141	0.2539	0.7680	0.0000	2,125.3007	2,125.3007	0.4579	0.0829	2,161.4497
2024	0.6286	5.3055	6.7986	0.0189	0.6502	0.1794	0.8296	0.1755	0.1673	0.3428	0.0000	1,712.7465	1,712.7465	0.2731	0.0598	1,737.3812
Maximum	**0.7703**	**7.6488**	**6.7986**	**0.0235**	**1.2055**	**0.2740**	**1.4796**	**0.5141**	**0.2539**	**0.7680**	**0.0000**	**2,125.3007**	**2,125.3007**	**0.4579**	**0.0829**	**2,161.4497**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2760	2.0863	9.2497	0.0235	0.6758	0.0353	0.7111	0.2563	0.0349	0.2911	0.0000	2,125.2989	2,125.2989	0.4579	0.0829	2,161.4479
2024	0.2983	1.6273	8.0722	0.0189	0.6502	0.0240	0.6742	0.1755	0.0236	0.1991	0.0000	1,712.7453	1,712.7453	0.2731	0.0598	1,737.3801
Maximum	**0.2983**	**2.0863**	**9.2497**	**0.0235**	**0.6758**	**0.0353**	**0.7111**	**0.2563**	**0.0349**	**0.2911**	**0.0000**	**2,125.2989**	**2,125.2989**	**0.4579**	**0.0829**	**2,161.4479**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	58.94	71.33	-30.13	0.00	28.54	86.94	40.01	37.39	86.14	55.87	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	3-1-2023	5-31-2023	1.7469	0.3449
2	6-1-2023	8-31-2023	2.5996	0.8207
3	9-1-2023	11-30-2023	3.1868	0.9812
4	12-1-2023	2-29-2024	2.3143	0.5239
5	3-1-2024	5-31-2024	2.2669	0.6560
6	6-1-2024	8-31-2024	1.5995	0.5740
7	9-1-2024	9-30-2024	0.1753	0.0897
		Highest	3.1868	0.9812

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	2.8367	4.2000e-004	0.0466	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	0.0909	0.0909	2.4000e-004	0.0000	0.0968
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	127.8478	0.0000	127.8478	7.5556	0.0000	316.7374
Water						0.0000	0.0000		0.0000	0.0000	47.3982	368.2882	415.6864	4.8993	0.1187	573.5477
Total	**2.8367**	**4.2000e-004**	**0.0466**	**0.0000**	**0.0000**	**1.7000e-004**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**1.7000e-004**	**175.2460**	**368.3791**	**543.6251**	**12.4552**	**0.1187**	**890.3820**

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	2.8367	4.2000e-004	0.0466	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	0.0909	0.0909	2.4000e-004	0.0000	0.0968
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	127.8478	0.0000	127.8478	7.5556	0.0000	316.7374
Water						0.0000	0.0000		0.0000	0.0000	47.3982	368.2882	415.6864	4.8993	0.1187	573.5477
Total	**2.8367**	**4.2000e-004**	**0.0466**	**0.0000**	**0.0000**	**1.7000e-004**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**1.7000e-004**	**175.2460**	**368.3791**	**543.6251**	**12.4552**	**0.1187**	**890.3820**

	ROG	NOx	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	3/1/2023	6/29/2023	5	87	
2	Site Preparation	Site Preparation	5/26/2023	11/13/2023	5	122	
3	Garage Construction	Building Construction	7/3/2023	2/1/2024	5	154	

4	Building Construction	Building Construction	9/1/2023	9/4/2024	5	264	
5	Apron Paving	Paving	11/15/2023	6/18/2024	5	155	
6	MHE Installation	Building Construction	3/15/2024	12/31/2024	5	208	

Acres of Grading (Site Preparation Phase): 62

Acres of Grading (Grading Phase): 0

Acres of Paving: 56.3

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	3	8.00	450	0.38
Demolition	Other Construction Equipment	3	8.00	425	0.42
Demolition	Other Material Handling Equipment	1	8.00	168	0.40
Demolition	Other Material Handling Equipment	1	8.00	168	0.40
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Excavators	3	8.00	425	0.38
Site Preparation	Off-Highway Trucks	3	8.00	300	0.38
Site Preparation	Plate Compactors	2	8.00	250	0.43
Site Preparation	Rollers	2	8.00	120	0.38
Site Preparation	Rubber Tired Dozers	2	8.00	250	0.40
Site Preparation	Skid Steer Loaders	2	8.00	225	0.37
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Garage Construction	Cranes	2	7.00	231	0.29
Garage Construction	Forklifts	0	8.00	89	0.20
Garage Construction	Generator Sets	0	8.00	84	0.74
Garage Construction	Pumps	1	8.00	200	0.74

Garage Construction	Tractors/Loaders/Backhoes	2	8.00	120	0.37
Garage Construction	Welders	0	8.00	46	0.45
Building Construction	Aerial Lifts	5	8.00	75	0.31
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Pumps	1	8.00	200	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Tractors/Loaders/Backhoes	2	8.00	120	0.37
Building Construction	Welders	1	8.00	46	0.45
Apron Paving	Graders	1	8.00	200	0.41
Apron Paving	Other Construction Equipment	1	8.00	385	0.42
Apron Paving	Pavers	2	8.00	350	0.42
Apron Paving	Paving Equipment	2	8.00	132	0.36
Apron Paving	Rollers	2	8.00	120	0.38
MHE Installation	Aerial Lifts	3	8.00	75	0.31
MHE Installation	Cranes	0	7.00	231	0.29
MHE Installation	Forklifts	3	8.00	50	0.20
MHE Installation	Generator Sets	0	8.00	84	0.74
MHE Installation	Tractors/Loaders/Backhoes	1	8.00	120	0.37
MHE Installation	Welders	2	8.00	10	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	10	20.00	0.00	876.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	14	35.00	0.00	13,375.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Garage Construction	5	43.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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

Building Construction	15	240.00	100.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Apron Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
MHE Installation	9	240.00	100.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0947	0.0000	0.0947	0.0143	0.0000	0.0143	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2041	1.8985	1.5843	5.1800e-003		0.0780	0.0780		0.0717	0.0717	0.0000	454.6945	454.6945	0.1471	0.0000	458.3709
Total	**0.2041**	**1.8985**	**1.5843**	**5.1800e-003**	**0.0947**	**0.0780**	**0.1727**	**0.0143**	**0.0717**	**0.0861**	**0.0000**	**454.6945**	**454.6945**	**0.1471**	**0.0000**	**458.3709**

3.2 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-004	0.0568	0.0151	2.5000e-004	7.5400e-003	3.8000e-004	7.9100e-003	2.0700e-003	3.6000e-004	2.4300e-003	0.0000	25.2199	25.2199	1.5500e-003	4.0100e-003	26.4540
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	2.7000e-003	2.0800e-003	0.0284	8.0000e-005	9.5500e-003	5.0000e-005	9.6000e-003	2.5300e-003	5.0000e-005	2.5900e-003	0.0000	7.5628	7.5628	1.9000e-004	1.9000e-004	7.6249
Total	**3.6000e-003**	**0.0589**	**0.0436**	**3.3000e-004**	**0.0171**	**4.3000e-004**	**0.0175**	**4.6000e-003**	**4.1000e-004**	**5.0200e-003**	**0.0000**	**32.7828**	**32.7828**	**1.7400e-003**	**4.2000e-003**	**34.0789**

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					0.0370	0.0000	0.0370	5.5900e-003	0.0000	5.5900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0636	0.2754	2.4848	5.1800e-003		8.4700e-003	8.4700e-003		8.4700e-003	8.4700e-003	0.0000	454.6939	454.6939	0.1471	0.0000	458.3704
Total	**0.0636**	**0.2754**	**2.4848**	**5.1800e-003**	**0.0370**	**8.4700e-003**	**0.0454**	**5.5900e-003**	**8.4700e-003**	**0.0141**	**0.0000**	**454.6939**	**454.6939**	**0.1471**	**0.0000**	**458.3704**

3.2 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.0000e-004	0.0568	0.0151	2.5000e-004	7.5400e-003	3.8000e-004	7.9100e-003	2.0700e-003	3.6000e-004	2.4300e-003	0.0000	25.2199	25.2199	1.5500e-003	4.0100e-003	26.4540
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	2.7000e-003	2.0800e-003	0.0284	8.0000e-005	9.5500e-003	5.0000e-005	9.6000e-003	2.5300e-003	5.0000e-005	2.5900e-003	0.0000	7.5628	7.5628	1.9000e-004	1.9000e-004	7.6249
Total	**3.6000e-003**	**0.0589**	**0.0436**	**3.3000e-004**	**0.0171**	**4.3000e-004**	**0.0175**	**4.6000e-003**	**4.1000e-004**	**5.0200e-003**	**0.0000**	**32.7828**	**32.7828**	**1.7400e-003**	**4.2000e-003**	**34.0789**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7736	0.0000	0.7736	0.4083	0.0000	0.4083	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2451	2.1275	1.7194	5.8700e-003		0.0892	0.0892		0.0821	0.0821	0.0000	515.5918	515.5918	0.1668	0.0000	519.7607
Total	**0.2451**	**2.1275**	**1.7194**	**5.8700e-003**	**0.7736**	**0.0892**	**0.8628**	**0.4083**	**0.0821**	**0.4904**	**0.0000**	**515.5918**	**515.5918**	**0.1668**	**0.0000**	**519.7607**

3.3 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0137	0.8675	0.2311	3.8400e-003	0.1151	5.7800e-003	0.1208	0.0316	5.5300e-003	0.0371	0.0000	385.0643	385.0643	0.0236	0.0613	403.9064
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6400e-003	5.1100e-003	0.0698	2.0000e-004	0.0234	1.3000e-004	0.0236	6.2200e-003	1.2000e-004	6.3400e-003	0.0000	18.5594	18.5594	4.7000e-004	4.7000e-004	18.7116
Total	**0.0204**	**0.8726**	**0.3009**	**4.0400e-003**	**0.1385**	**5.9100e-003**	**0.1444**	**0.0378**	**5.6500e-003**	**0.0435**	**0.0000**	**403.6237**	**403.6237**	**0.0241**	**0.0617**	**422.6180**

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					0.3017	0.0000	0.3017	0.1592	0.0000	0.1592	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0722	0.3127	2.7926	5.8700e-003		9.6200e-003	9.6200e-003		9.6200e-003	9.6200e-003	0.0000	515.5912	515.5912	0.1668	0.0000	519.7601
Total	**0.0722**	**0.3127**	**2.7926**	**5.8700e-003**	**0.3017**	**9.6200e-003**	**0.3113**	**0.1592**	**9.6200e-003**	**0.1689**	**0.0000**	**515.5912**	**515.5912**	**0.1668**	**0.0000**	**519.7601**

3.3 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0137	0.8675	0.2311	3.8400e-003	0.1151	5.7800e-003	0.1208	0.0316	5.5300e-003	0.0371	0.0000	385.0643	385.0643	0.0236	0.0613	403.9064
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6400e-003	5.1100e-003	0.0698	2.0000e-004	0.0234	1.3000e-004	0.0236	6.2200e-003	1.2000e-004	6.3400e-003	0.0000	18.5594	18.5594	4.7000e-004	4.7000e-004	18.7116
Total	**0.0204**	**0.8726**	**0.3009**	**4.0400e-003**	**0.1385**	**5.9100e-003**	**0.1444**	**0.0378**	**5.6500e-003**	**0.0435**	**0.0000**	**403.6237**	**403.6237**	**0.0241**	**0.0617**	**422.6180**

3.4 Garage Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0944	0.9102	0.7408	2.1800e-003		0.0371	0.0371		0.0347	0.0347	0.0000	189.1377	189.1377	0.0352	0.0000	190.0175
Total	**0.0944**	**0.9102**	**0.7408**	**2.1800e-003**		**0.0371**	**0.0371**		**0.0347**	**0.0347**	**0.0000**	**189.1377**	**189.1377**	**0.0352**	**0.0000**	**190.0175**

3.4 Garage Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1600e-003	0.0424	0.0158	2.0000e-004	6.9700e-003	2.2000e-004	7.1900e-003	2.0100e-003	2.1000e-004	2.2200e-003	0.0000	19.7198	19.7198	7.3000e-004	2.8600e-003	20.5910
Worker	8.6900e-003	6.6900e-003	0.0913	2.6000e-004	0.0307	1.8000e-004	0.0308	8.1400e-003	1.6000e-004	8.3100e-003	0.0000	24.2967	24.2967	6.2000e-004	6.2000e-004	24.4960
Total	**9.8500e-003**	**0.0491**	**0.1071**	**4.6000e-004**	**0.0376**	**4.0000e-004**	**0.0380**	**0.0102**	**3.7000e-004**	**0.0105**	**0.0000**	**44.0165**	**44.0165**	**1.3500e-003**	**3.4800e-003**	**45.0870**

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	0.0244	0.1055	1.0456	2.1800e-003		3.2500e-003	3.2500e-003		3.2500e-003	3.2500e-003	0.0000	189.1375	189.1375	0.0352	0.0000	190.0173
Total	**0.0244**	**0.1055**	**1.0456**	**2.1800e-003**		**3.2500e-003**	**3.2500e-003**		**3.2500e-003**	**3.2500e-003**	**0.0000**	**189.1375**	**189.1375**	**0.0352**	**0.0000**	**190.0173**

3.4 Garage Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1600e-003	0.0424	0.0158	2.0000e-004	6.9700e-003	2.2000e-004	7.1900e-003	2.0100e-003	2.1000e-004	2.2200e-003	0.0000	19.7198	19.7198	7.3000e-004	2.8600e-003	20.5910
Worker	8.6900e-003	6.6900e-003	0.0913	2.6000e-004	0.0307	1.8000e-004	0.0308	8.1400e-003	1.6000e-004	8.3100e-003	0.0000	24.2967	24.2967	6.2000e-004	6.2000e-004	24.4960
Total	**9.8500e-003**	**0.0491**	**0.1071**	**4.6000e-004**	**0.0376**	**4.0000e-004**	**0.0380**	**0.0102**	**3.7000e-004**	**0.0105**	**0.0000**	**44.0165**	**44.0165**	**1.3500e-003**	**3.4800e-003**	**45.0870**

3.4 Garage Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0165	0.1538	0.1355	4.0000e-004		6.1000e-003	6.1000e-003		5.7000e-003	5.7000e-003	0.0000	34.9227	34.9227	6.5000e-003	0.0000	35.0851
Total	**0.0165**	**0.1538**	**0.1355**	**4.0000e-004**		**6.1000e-003**	**6.1000e-003**		**5.7000e-003**	**5.7000e-003**	**0.0000**	**34.9227**	**34.9227**	**6.5000e-003**	**0.0000**	**35.0851**

3.4 Garage Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1000e-004	7.8700e-003	2.8600e-003	4.0000e-005	1.2900e-003	4.0000e-005	1.3300e-003	3.7000e-004	4.0000e-005	4.1000e-004	0.0000	3.5888	3.5888	1.3000e-004	5.2000e-004	3.7477
Worker	1.5000e-003	1.1000e-003	0.0157	5.0000e-005	5.6600e-003	3.0000e-005	5.6900e-003	1.5000e-003	3.0000e-005	1.5300e-003	0.0000	4.3891	4.3891	1.0000e-004	1.1000e-004	4.4232
Total	**1.7100e-003**	**8.9700e-003**	**0.0186**	**9.0000e-005**	**6.9500e-003**	**7.0000e-005**	**7.0200e-003**	**1.8700e-003**	**7.0000e-005**	**1.9400e-003**	**0.0000**	**7.9779**	**7.9779**	**2.3000e-004**	**6.3000e-004**	**8.1709**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.5000e-003	0.0195	0.1930	4.0000e-004		6.0000e-004	6.0000e-004		6.0000e-004	6.0000e-004	0.0000	34.9226	34.9226	6.5000e-003	0.0000	35.0851
Total	**4.5000e-003**	**0.0195**	**0.1930**	**4.0000e-004**		**6.0000e-004**	**6.0000e-004**		**6.0000e-004**	**6.0000e-004**	**0.0000**	**34.9226**	**34.9226**	**6.5000e-003**	**0.0000**	**35.0851**

3.4 Garage Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1000e-004	7.8700e-003	2.8600e-003	4.0000e-005	1.2900e-003	4.0000e-005	1.3300e-003	3.7000e-004	4.0000e-005	4.1000e-004	0.0000	3.5888	3.5888	1.3000e-004	5.2000e-004	3.7477
Worker	1.5000e-003	1.1000e-003	0.0157	5.0000e-005	5.6600e-003	3.0000e-005	5.6900e-003	1.5000e-003	3.0000e-005	1.5300e-003	0.0000	4.3891	4.3891	1.0000e-004	1.1000e-004	4.4232
Total	**1.7100e-003**	**8.9700e-003**	**0.0186**	**9.0000e-005**	**6.9500e-003**	**7.0000e-005**	**7.0200e-003**	**1.8700e-003**	**7.0000e-005**	**1.9400e-003**	**0.0000**	**7.9779**	**7.9779**	**2.3000e-004**	**6.3000e-004**	**8.1709**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1125	1.0898	1.2513	2.6100e-003		0.0434	0.0434		0.0409	0.0409	0.0000	226.1600	226.1600	0.0474	0.0000	227.3457
Total	**0.1125**	**1.0898**	**1.2513**	**2.6100e-003**		**0.0434**	**0.0434**		**0.0409**	**0.0409**	**0.0000**	**226.1600**	**226.1600**	**0.0474**	**0.0000**	**227.3457**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.5200e-003	0.1651	0.0613	7.8000e-004	0.0271	8.7000e-004	0.0280	7.8200e-003	8.3000e-004	8.6600e-003	0.0000	76.7375	76.7375	2.8300e-003	0.0111	80.1278
Worker	0.0321	0.0247	0.3373	9.7000e-004	0.1132	6.5000e-004	0.1139	0.0301	6.0000e-004	0.0307	0.0000	89.7109	89.7109	2.2800e-003	2.2800e-003	90.4468
Total	**0.0366**	**0.1898**	**0.3986**	**1.7500e-003**	**0.1403**	**1.5200e-003**	**0.1419**	**0.0379**	**1.4300e-003**	**0.0393**	**0.0000**	**166.4484**	**166.4484**	**5.1100e-003**	**0.0134**	**170.5746**

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	0.0304	0.1667	1.5211	2.6100e-003		3.9300e-003	3.9300e-003		3.9300e-003	3.9300e-003	0.0000	226.1597	226.1597	0.0474	0.0000	227.3455
Total	**0.0304**	**0.1667**	**1.5211**	**2.6100e-003**		**3.9300e-003**	**3.9300e-003**		**3.9300e-003**	**3.9300e-003**	**0.0000**	**226.1597**	**226.1597**	**0.0474**	**0.0000**	**227.3455**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.5200e-003	0.1651	0.0613	7.8000e-004	0.0271	8.7000e-004	0.0280	7.8200e-003	8.3000e-004	8.6600e-003	0.0000	76.7375	76.7375	2.8300e-003	0.0111	80.1278
Worker	0.0321	0.0247	0.3373	9.7000e-004	0.1132	6.5000e-004	0.1139	0.0301	6.0000e-004	0.0307	0.0000	89.7109	89.7109	2.2800e-003	2.2800e-003	90.4468
Total	**0.0366**	**0.1898**	**0.3986**	**1.7500e-003**	**0.1403**	**1.5200e-003**	**0.1419**	**0.0379**	**1.4300e-003**	**0.0393**	**0.0000**	**166.4484**	**166.4484**	**5.1100e-003**	**0.0134**	**170.5746**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2207	2.1074	2.5806	5.4100e-003		0.0797	0.0797		0.0751	0.0751	0.0000	468.1754	468.1754	0.0979	0.0000	470.6229
Total	**0.2207**	**2.1074**	**2.5806**	**5.4100e-003**		**0.0797**	**0.0797**		**0.0751**	**0.0751**	**0.0000**	**468.1754**	**468.1754**	**0.0979**	**0.0000**	**470.6229**

3.5 Building Construction - 2024

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	9.1100e-003	0.3432	0.1248	1.6000e-003	0.0561	1.8100e-003	0.0579	0.0162	1.7300e-003	0.0179	0.0000	156.5708	156.5708	5.8700e-003	0.0228	163.5008
Worker	0.0621	0.0457	0.6512	1.9400e-003	0.2344	1.2900e-003	0.2356	0.0622	1.1900e-003	0.0634	0.0000	181.6865	181.6865	4.2800e-003	4.3900e-003	183.1010
Total	**0.0712**	**0.3889**	**0.7760**	**3.5400e-003**	**0.2905**	**3.1000e-003**	**0.2936**	**0.0784**	**2.9200e-003**	**0.0814**	**0.0000**	**338.2573**	**338.2573**	**0.0102**	**0.0272**	**346.6018**

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	0.0629	0.3451	3.1482	5.4100e-003		8.1300e-003	8.1300e-003		8.1300e-003	8.1300e-003	0.0000	468.1748	468.1748	0.0979	0.0000	470.6224
Total	**0.0629**	**0.3451**	**3.1482**	**5.4100e-003**		**8.1300e-003**	**8.1300e-003**		**8.1300e-003**	**8.1300e-003**	**0.0000**	**468.1748**	**468.1748**	**0.0979**	**0.0000**	**470.6224**

3.5 Building Construction - 2024

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	9.1100e-003	0.3432	0.1248	1.6000e-003	0.0561	1.8100e-003	0.0579	0.0162	1.7300e-003	0.0179	0.0000	156.5708	156.5708	5.8700e-003	0.0228	163.5008
Worker	0.0621	0.0457	0.6512	1.9400e-003	0.2344	1.2900e-003	0.2356	0.0622	1.1900e-003	0.0634	0.0000	181.6865	181.6865	4.2800e-003	4.3900e-003	183.1010
Total	**0.0712**	**0.3889**	**0.7760**	**3.5400e-003**	**0.2905**	**3.1000e-003**	**0.2936**	**0.0784**	**2.9200e-003**	**0.0814**	**0.0000**	**338.2573**	**338.2573**	**0.0102**	**0.0272**	**346.6018**

3.6 Apron Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0415	0.4515	0.3560	1.0200e-003		0.0181	0.0181		0.0167	0.0167	0.0000	89.9767	89.9767	0.0291	0.0000	90.7042
Paving	1.4800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0430**	**0.4515**	**0.3560**	**1.0200e-003**		**0.0181**	**0.0181**		**0.0167**	**0.0167**	**0.0000**	**89.9767**	**89.9767**	**0.0291**	**0.0000**	**90.7042**

3.6 Apron Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0300e-003	7.9000e-004	0.0108	3.0000e-005	3.6200e-003	2.0000e-005	3.6400e-003	9.6000e-004	2.0000e-005	9.8000e-004	0.0000	2.8687	2.8687	7.0000e-005	7.0000e-005	2.8922
Total	**1.0300e-003**	**7.9000e-004**	**0.0108**	**3.0000e-005**	**3.6200e-003**	**2.0000e-005**	**3.6400e-003**	**9.6000e-004**	**2.0000e-005**	**9.8000e-004**	**0.0000**	**2.8687**	**2.8687**	**7.0000e-005**	**7.0000e-005**	**2.8922**

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	0.0126	0.0548	0.5448	1.0200e-003		1.6900e-003	1.6900e-003		1.6900e-003	1.6900e-003	0.0000	89.9766	89.9766	0.0291	0.0000	90.7041
Paving	1.4800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0141**	**0.0548**	**0.5448**	**1.0200e-003**		**1.6900e-003**	**1.6900e-003**		**1.6900e-003**	**1.6900e-003**	**0.0000**	**89.9766**	**89.9766**	**0.0291**	**0.0000**	**90.7041**

3.6 Apron Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0300e-003	7.9000e-004	0.0108	3.0000e-005	3.6200e-003	2.0000e-005	3.6400e-003	9.6000e-004	2.0000e-005	9.8000e-004	0.0000	2.8687	2.8687	7.0000e-005	7.0000e-005	2.8922
Total	**1.0300e-003**	**7.9000e-004**	**0.0108**	**3.0000e-005**	**3.6200e-003**	**2.0000e-005**	**3.6400e-003**	**9.6000e-004**	**2.0000e-005**	**9.8000e-004**	**0.0000**	**2.8687**	**2.8687**	**7.0000e-005**	**7.0000e-005**	**2.8922**

3.6 Apron Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1455	1.5140	1.3126	3.7900e-003		0.0606	0.0606		0.0557	0.0557	0.0000	333.0089	333.0089	0.1077	0.0000	335.7015
Paving	5.4600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1509**	**1.5140**	**1.3126**	**3.7900e-003**		**0.0606**	**0.0606**		**0.0557**	**0.0557**	**0.0000**	**333.0089**	**333.0089**	**0.1077**	**0.0000**	**335.7015**

3.6 Apron Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5400e-003	2.6100e-003	0.0372	1.1000e-004	0.0134	7.0000e-005	0.0135	3.5500e-003	7.0000e-005	3.6200e-003	0.0000	10.3772	10.3772	2.4000e-004	2.5000e-004	10.4580
Total	**3.5400e-003**	**2.6100e-003**	**0.0372**	**1.1000e-004**	**0.0134**	**7.0000e-005**	**0.0135**	**3.5500e-003**	**7.0000e-005**	**3.6200e-003**	**0.0000**	**10.3772**	**10.3772**	**2.4000e-004**	**2.5000e-004**	**10.4580**

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	0.0467	0.2025	2.0140	3.7900e-003		6.2300e-003	6.2300e-003		6.2300e-003	6.2300e-003	0.0000	333.0085	333.0085	0.1077	0.0000	335.7011
Paving	5.4600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0522**	**0.2025**	**2.0140**	**3.7900e-003**		**6.2300e-003**	**6.2300e-003**		**6.2300e-003**	**6.2300e-003**	**0.0000**	**333.0085**	**333.0085**	**0.1077**	**0.0000**	**335.7011**

3.6 Apron Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5400e-003	2.6100e-003	0.0372	1.1000e-004	0.0134	7.0000e-005	0.0135	3.5500e-003	7.0000e-005	3.6200e-003	0.0000	10.3772	10.3772	2.4000e-004	2.5000e-004	10.4580
Total	**3.5400e-003**	**2.6100e-003**	**0.0372**	**1.1000e-004**	**0.0134**	**7.0000e-005**	**0.0135**	**3.5500e-003**	**7.0000e-005**	**3.6200e-003**	**0.0000**	**10.3772**	**10.3772**	**2.4000e-004**	**2.5000e-004**	**10.4580**

3.7 MHE Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0809	0.6753	1.0313	1.4600e-003		0.0262	0.0262		0.0244	0.0244	0.0000	124.7601	124.7601	0.0385	0.0000	125.7233
Total	**0.0809**	**0.6753**	**1.0313**	**1.4600e-003**		**0.0262**	**0.0262**		**0.0244**	**0.0244**	**0.0000**	**124.7601**	**124.7601**	**0.0385**	**0.0000**	**125.7233**

3.7 MHE Installation - 2024

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	0.0107	0.4011	0.1458	1.8700e-003	0.0656	2.1200e-003	0.0677	0.0189	2.0300e-003	0.0210	0.0000	182.9592	182.9592	6.8500e-003	0.0266	191.0571
Worker	0.0725	0.0534	0.7610	2.2700e-003	0.2738	1.5100e-003	0.2754	0.0727	1.3900e-003	0.0741	0.0000	212.3078	212.3078	5.0000e-003	5.1300e-003	213.9607
Total	**0.0832**	**0.4545**	**0.9068**	**4.1400e-003**	**0.3394**	**3.6300e-003**	**0.3431**	**0.0917**	**3.4200e-003**	**0.0951**	**0.0000**	**395.2670**	**395.2670**	**0.0119**	**0.0317**	**405.0178**

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	0.0192	0.2052	0.9783	1.4600e-003		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	124.7600	124.7600	0.0385	0.0000	125.7231
Total	**0.0192**	**0.2052**	**0.9783**	**1.4600e-003**		**2.1200e-003**	**2.1200e-003**		**2.1200e-003**	**2.1200e-003**	**0.0000**	**124.7600**	**124.7600**	**0.0385**	**0.0000**	**125.7231**

3.7 MHE Installation - 2024

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	0.0107	0.4011	0.1458	1.8700e-003	0.0656	2.1200e-003	0.0677	0.0189	2.0300e-003	0.0210	0.0000	182.9592	182.9592	6.8500e-003	0.0266	191.0571
Worker	0.0725	0.0534	0.7610	2.2700e-003	0.2738	1.5100e-003	0.2754	0.0727	1.3900e-003	0.0741	0.0000	212.3078	212.3078	5.0000e-003	5.1300e-003	213.9607
Total	**0.0832**	**0.4545**	**0.9068**	**4.1400e-003**	**0.3394**	**3.6300e-003**	**0.3431**	**0.0917**	**3.4200e-003**	**0.0951**	**0.0000**	**395.2670**	**395.2670**	**0.0119**	**0.0317**	**405.0178**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644
General Office Building	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644
Other Non-Asphalt Surfaces	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644
Parking Lot	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644
Unrefrigerated Warehouse-No Rail	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	2.8367	4.2000e-004	0.0466	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	0.0909	0.0909	2.4000e-004	0.0000	0.0968
Unmitigated	2.8367	4.2000e-004	0.0466	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	0.0909	0.0909	2.4000e-004	0.0000	0.0968

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	0.3460					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.4865					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.2900e-003	4.2000e-004	0.0466	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	0.0909	0.0909	2.4000e-004	0.0000	0.0968
Total	**2.8367**	**4.2000e-004**	**0.0466**	**0.0000**		**1.7000e-004**	**1.7000e-004**		**1.7000e-004**	**1.7000e-004**	**0.0000**	**0.0909**	**0.0909**	**2.4000e-004**	**0.0000**	**0.0968**

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	0.3460					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.4865					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.2900e-003	4.2000e-004	0.0466	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	0.0909	0.0909	2.4000e-004	0.0000	0.0968
Total	**2.8367**	**4.2000e-004**	**0.0466**	**0.0000**		**1.7000e-004**	**1.7000e-004**		**1.7000e-004**	**1.7000e-004**	**0.0000**	**0.0909**	**0.0909**	**2.4000e-004**	**0.0000**	**0.0968**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	415.6864	4.8993	0.1187	573.5477
Unmitigated	415.6864	4.8993	0.1187	573.5477

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	19.2841 / 11.8193	73.9368	0.6341	0.0155	94.4175
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	130.117 / 0	341.7496	4.2652	0.1032	479.1302
Total		**415.6864**	**4.8993**	**0.1187**	**573.5477**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	19.2841 / 11.8193	73.9368	0.6341	0.0155	94.4175
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	130.117 / 0	341.7496	4.2652	0.1032	479.1302
Total		**415.6864**	**4.8993**	**0.1187**	**573.5477**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	127.8478	7.5556	0.0000	316.7374
Unmitigated	127.8478	7.5556	0.0000	316.7374

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	100.91	20.4838	1.2106	0.0000	50.7478
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	528.91	107.3640	6.3450	0.0000	265.9896
Total		**127.8478**	**7.5556**	**0.0000**	**316.7374**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	100.91	20.4838	1.2106	0.0000	50.7478
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	528.91	107.3640	6.3450	0.0000	265.9896
Total		**127.8478**	**7.5556**	**0.0000**	**316.7374**

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

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

Ontario International Airport South Airport Cargo Center Project - Phase 1

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	101.50	1000sqft	1.00	101,500.00	0
General Office Building	7.00	1000sqft	0.00	7,000.00	0
Unrefrigerated Warehouse-No Rail	508.68	1000sqft	5.00	508,675.00	0
Unrefrigerated Warehouse-No Rail	27.00	1000sqft	0.50	27,000.00	0
Enclosed Parking with Elevator	900.00	Space	4.00	271,000.00	0
Other Non-Asphalt Surfaces	2,047.32	1000sqft	47.00	2,047,320.00	0
Parking Lot	33.00	Space	0.30	15,300.00	0
Parking Lot	39.00	Space	5.00	122,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Description

Construction Phase - Project proponent, May 12, 2022

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Trips and VMT - Project Description

Demolition - CHA, November 22, 2021, Updated November 10, 2022

Grading - Project Description

Vehicle Trips - Motor vehicle emissions estimated externally

Energy Use - Calculations due to electrical usage are performed outside of the model and project would not use natural gas.

Construction Off-road Equipment Mitigation - Basic and Enhanced Emission Reduction Measures

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	322088	335588
tblAreaCoating	Area_Nonresidential_Interior	966263	1006763
tblAreaCoating	Area_Parking	147349	150510
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	70.00	87.00
tblConstructionPhase	NumDays	40.00	122.00
tblConstructionPhase	NumDays	1,110.00	154.00
tblConstructionPhase	NumDays	1,110.00	264.00

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

tblConstructionPhase	NumDays	75.00	155.00
tblConstructionPhase	NumDays	1,110.00	208.00
tblEnergyUse	LightingElect	1.75	0.00
tblEnergyUse	LightingElect	3.66	0.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	LightingElect	1.17	0.00
tblEnergyUse	NT24E	0.19	0.00
tblEnergyUse	NT24E	2.79	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	3.50	0.00
tblEnergyUse	T24E	2.74	0.00
tblEnergyUse	T24E	0.33	0.00
tblEnergyUse	T24NG	3.43	0.00
tblEnergyUse	T24NG	1.98	0.00
tblGrading	AcresOfGrading	122.00	62.00
tblGrading	MaterialImported	0.00	107,000.00
tblLandUse	LandUseSquareFeet	508,680.00	508,675.00
tblLandUse	LandUseSquareFeet	360,000.00	271,000.00
tblLandUse	LandUseSquareFeet	13,200.00	15,300.00
tblLandUse	LandUseSquareFeet	15,600.00	122,200.00
tblLandUse	LotAcreage	2.33	1.00
tblLandUse	LotAcreage	0.16	0.00
tblLandUse	LotAcreage	0.62	0.50
tblLandUse	LotAcreage	11.68	5.00
tblLandUse	LotAcreage	8.10	4.00
tblLandUse	LotAcreage	0.35	5.00
tblOffRoadEquipment	HorsePower	158.00	450.00
tblOffRoadEquipment	HorsePower	89.00	50.00

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

tblOffRoadEquipment	HorsePower	130.00	350.00
tblOffRoadEquipment	HorsePower	80.00	120.00
tblOffRoadEquipment	HorsePower	247.00	250.00
tblOffRoadEquipment	HorsePower	97.00	120.00
tblOffRoadEquipment	HorsePower	97.00	120.00
tblOffRoadEquipment	HorsePower	97.00	120.00
tblOffRoadEquipment	HorsePower	46.00	10.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	158.00	425.00
tblOffRoadEquipment	HorsePower	187.00	200.00
tblOffRoadEquipment	HorsePower	402.00	300.00
tblOffRoadEquipment	HorsePower	172.00	425.00
tblOffRoadEquipment	HorsePower	172.00	385.00
tblOffRoadEquipment	HorsePower	8.00	250.00
tblOffRoadEquipment	HorsePower	84.00	200.00
tblOffRoadEquipment	HorsePower	84.00	200.00
tblOffRoadEquipment	HorsePower	80.00	120.00
tblOffRoadEquipment	HorsePower	65.00	225.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	503.54	528.91
tblTripsAndVMT	VendorTripNumber	508.00	17.00
tblTripsAndVMT	VendorTripNumber	508.00	100.00
tblTripsAndVMT	VendorTripNumber	508.00	100.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblTripsAndVMT	WorkerTripNumber	1,291.00	43.00
tblTripsAndVMT	WorkerTripNumber	1,291.00	240.00
tblTripsAndVMT	WorkerTripNumber	1,291.00	240.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	1.74	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	1.74	0.00
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	1.74	0.00
tblWater	IndoorWaterUseRate	123,876,000.00	130,117,437.50

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	9.4475	93.3743	85.2132	0.3058	18.9027	3.3615	22.0824	8.3774	3.0964	11.3384	0.0000	30,759.6517	30,759.6517	7.2191	1.5115	31,345.4345
2024	7.4182	66.1944	79.4931	0.2203	6.8692	2.4384	9.0801	1.8508	2.2711	3.9085	0.0000	21,909.7351	21,909.7351	3.9066	0.6679	22,204.2963
Maximum	**9.4475**	**93.3743**	**85.2132**	**0.3058**	**18.9027**	**3.3615**	**22.0824**	**8.3774**	**3.0964**	**11.3384**	**0.0000**	**30,759.6517**	**30,759.6517**	**7.2191**	**1.5115**	**31,345.4345**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.6276	29.0819	113.7696	0.3058	11.1665	0.4593	11.6039	4.2942	0.4546	4.7249	0.0000	30,759.6517	30,759.6517	7.2191	1.5115	31,345.4345
2024	3.4335	17.4732	96.8607	0.2203	6.8692	0.2856	7.1540	1.8508	0.2831	2.1314	0.0000	21,909.7351	21,909.7351	3.9066	0.6679	22,204.2963
Maximum	**3.6276**	**29.0819**	**113.7696**	**0.3058**	**11.1665**	**0.4593**	**11.6039**	**4.2942**	**0.4546**	**4.7249**	**0.0000**	**30,759.6517**	**30,759.6517**	**7.2191**	**1.5115**	**31,345.4345**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	58.13	70.82	-27.88	0.00	30.02	87.16	39.81	39.92	86.26	55.03	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	15.5546	3.3800e-003	0.3731	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.8018	0.8018	2.0900e-003		0.8539
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	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	**15.5546**	**3.3800e-003**	**0.3731**	**3.0000e-005**	**0.0000**	**1.3300e-003**	**1.3300e-003**	**0.0000**	**1.3300e-003**	**1.3300e-003**		**0.8018**	**0.8018**	**2.0900e-003**	**0.0000**	**0.8539**

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	15.5546	3.3800e-003	0.3731	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.8018	0.8018	2.0900e-003		0.8539
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	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	**15.5546**	**3.3800e-003**	**0.3731**	**3.0000e-005**	**0.0000**	**1.3300e-003**	**1.3300e-003**	**0.0000**	**1.3300e-003**	**1.3300e-003**		**0.8018**	**0.8018**	**2.0900e-003**	**0.0000**	**0.8539**

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

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

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	3/1/2023	6/29/2023	5	87	
2	Site Preparation	Site Preparation	5/26/2023	11/13/2023	5	122	
3	Garage Construction	Building Construction	7/3/2023	2/1/2024	5	154	
4	Building Construction	Building Construction	9/1/2023	9/4/2024	5	264	
5	Apron Paving	Paving	11/15/2023	6/18/2024	5	155	
6	MHE Installation	Building Construction	3/15/2024	12/31/2024	5	208	

Acres of Grading (Site Preparation Phase): 62

Acres of Grading (Grading Phase): 0

Acres of Paving: 56.3

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	3	8.00	450	0.38
Demolition	Other Construction Equipment	3	8.00	425	0.42
Demolition	Other Material Handling Equipment	1	8.00	168	0.40
Demolition	Other Material Handling Equipment	1	8.00	168	0.40

Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Excavators	3	8.00	425	0.38
Site Preparation	Off-Highway Trucks	3	8.00	300	0.38
Site Preparation	Plate Compactors	2	8.00	250	0.43
Site Preparation	Rollers	2	8.00	120	0.38
Site Preparation	Rubber Tired Dozers	2	8.00	250	0.40
Site Preparation	Skid Steer Loaders	2	8.00	225	0.37
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Garage Construction	Cranes	2	7.00	231	0.29
Garage Construction	Forklifts	0	8.00	89	0.20
Garage Construction	Generator Sets	0	8.00	84	0.74
Garage Construction	Pumps	1	8.00	200	0.74
Garage Construction	Tractors/Loaders/Backhoes	2	8.00	120	0.37
Garage Construction	Welders	0	8.00	46	0.45
Building Construction	Aerial Lifts	5	8.00	75	0.31
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Pumps	1	8.00	200	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Tractors/Loaders/Backhoes	2	8.00	120	0.37
Building Construction	Welders	1	8.00	46	0.45
Apron Paving	Graders	1	8.00	200	0.41
Apron Paving	Other Construction Equipment	1	8.00	385	0.42
Apron Paving	Pavers	2	8.00	350	0.42
Apron Paving	Paving Equipment	2	8.00	132	0.36
Apron Paving	Rollers	2	8.00	120	0.38
MHE Installation	Aerial Lifts	3	8.00	75	0.31
MHE Installation	Cranes	0	7.00	231	0.29

MHE Installation	Forklifts	3	8.00	50	0.20
MHE Installation	Generator Sets	0	8.00	84	0.74
MHE Installation	Tractors/Loaders/Backhoes	1	8.00	120	0.37
MHE Installation	Welders	2	8.00	10	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	10	20.00	0.00	876.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	14	35.00	0.00	13,375.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Garage Construction	5	43.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	15	240.00	100.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Apron Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
MHE Installation	9	240.00	100.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1778	0.0000	2.1778	0.3298	0.0000	0.3298			0.0000			0.0000
Off-Road	4.6908	43.6442	36.4213	0.1190		1.7923	1.7923		1.6489	1.6489		11,522.1805	11,522.1805	3.7265		11,615.3432
Total	**4.6908**	**43.6442**	**36.4213**	**0.1190**	**2.1778**	**1.7923**	**3.9701**	**0.3298**	**1.6489**	**1.9787**		**11,522.1805**	**11,522.1805**	**3.7265**		**11,615.3432**

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	0.0212	1.2395	0.3461	5.7800e-003	0.1761	8.6900e-003	0.1848	0.0483	8.3200e-003	0.0566		638.8091	638.8091	0.0392	0.1016	670.0678
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0633	0.0426	0.6992	1.9600e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		200.1282	200.1282	4.7900e-003	4.5000e-003	201.5906
Total	**0.0845**	**1.2822**	**1.0453**	**7.7400e-003**	**0.3996**	**9.9500e-003**	**0.4096**	**0.1075**	**9.4800e-003**	**0.1170**		**838.9373**	**838.9373**	**0.0440**	**0.1061**	**871.6584**

3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8494	0.0000	0.8494	0.1286	0.0000	0.1286			0.0000			0.0000
Off-Road	1.4609	6.3304	57.1209	0.1190		0.1948	0.1948		0.1948	0.1948	0.0000	11,522.1805	11,522.1805	3.7265		11,615.3432
Total	**1.4609**	**6.3304**	**57.1209**	**0.1190**	**0.8494**	**0.1948**	**1.0441**	**0.1286**	**0.1948**	**0.3234**	**0.0000**	**11,522.1805**	**11,522.1805**	**3.7265**		**11,615.3432**

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	0.0212	1.2395	0.3461	5.7800e-003	0.1761	8.6900e-003	0.1848	0.0483	8.3200e-003	0.0566		638.8091	638.8091	0.0392	0.1016	670.0678
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0633	0.0426	0.6992	1.9600e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		200.1282	200.1282	4.7900e-003	4.5000e-003	201.5906
Total	**0.0845**	**1.2822**	**1.0453**	**7.7400e-003**	**0.3996**	**9.9500e-003**	**0.4096**	**0.1075**	**9.4800e-003**	**0.1170**		**838.9373**	**838.9373**	**0.0440**	**0.1061**	**871.6584**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.6823	0.0000	12.6823	6.6937	0.0000	6.6937			0.0000			0.0000
Off-Road	4.0175	34.8773	28.1874	0.0963		1.4624	1.4624		1.3454	1.3454		9,317.0938	9,317.0938	3.0133		9,392.4272
Total	**4.0175**	**34.8773**	**28.1874**	**0.0963**	**12.6823**	**1.4624**	**14.1447**	**6.6937**	**1.3454**	**8.0391**		**9,317.0938**	**9,317.0938**	**3.0133**		**9,392.4272**

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	0.2313	13.4960	3.7679	0.0630	1.9169	0.0947	2.0116	0.5254	0.0906	0.6159		6,955.3696	6,955.3696	0.4269	1.1063	7,295.7154
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1108	0.0746	1.2237	3.4200e-003	0.3912	2.2100e-003	0.3934	0.1038	2.0400e-003	0.1058		350.2244	350.2244	8.3900e-003	7.8800e-003	352.7835
Total	**0.3421**	**13.5706**	**4.9915**	**0.0664**	**2.3081**	**0.0969**	**2.4050**	**0.6291**	**0.0926**	**0.7217**		**7,305.5940**	**7,305.5940**	**0.4353**	**1.1142**	**7,648.4989**

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9461	0.0000	4.9461	2.6105	0.0000	2.6105			0.0000			0.0000
Off-Road	1.1828	5.1253	45.7810	0.0963		0.1577	0.1577		0.1577	0.1577	0.0000	9,317.0938	9,317.0938	3.0133		9,392.4272
Total	**1.1828**	**5.1253**	**45.7810**	**0.0963**	**4.9461**	**0.1577**	**5.1038**	**2.6105**	**0.1577**	**2.7682**	**0.0000**	**9,317.0938**	**9,317.0938**	**3.0133**		**9,392.4272**

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	0.2313	13.4960	3.7679	0.0630	1.9169	0.0947	2.0116	0.5254	0.0906	0.6159		6,955.3696	6,955.3696	0.4269	1.1063	7,295.7154
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1108	0.0746	1.2237	3.4200e-003	0.3912	2.2100e-003	0.3934	0.1038	2.0400e-003	0.1058		350.2244	350.2244	8.3900e-003	7.8800e-003	352.7835
Total	**0.3421**	**13.5706**	**4.9915**	**0.0664**	**2.3081**	**0.0969**	**2.4050**	**0.6291**	**0.0926**	**0.7217**		**7,305.5940**	**7,305.5940**	**0.4353**	**1.1142**	**7,648.4989**

3.4 Garage Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4515	14.0033	11.3961	0.0335		0.5708	0.5708		0.5335	0.5335		3,207.5180	3,207.5180	0.5968		3,222.4371
Total	**1.4515**	**14.0033**	**11.3961**	**0.0335**		**0.5708**	**0.5708**		**0.5335**	**0.5335**		**3,207.5180**	**3,207.5180**	**0.5968**		**3,222.4371**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0182	0.6221	0.2388	3.0900e-003	0.1088	3.4400e-003	0.1123	0.0313	3.2900e-003	0.0346		334.1863	334.1863	0.0124	0.0485	348.9393
Worker	0.1361	0.0917	1.5034	4.2000e-003	0.4806	2.7200e-003	0.4834	0.1275	2.5000e-003	0.1300		430.2757	430.2757	0.0103	9.6900e-003	433.4197
Total	**0.1543**	**0.7138**	**1.7421**	**7.2900e-003**	**0.5895**	**6.1600e-003**	**0.5956**	**0.1588**	**5.7900e-003**	**0.1646**		**764.4619**	**764.4619**	**0.0227**	**0.0582**	**782.3590**

3.4 Garage Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3746	1.6235	16.0862	0.0335		0.0500	0.0500		0.0500	0.0500	0.0000	3,207.5180	3,207.5180	0.5968		3,222.4371
Total	**0.3746**	**1.6235**	**16.0862**	**0.0335**		**0.0500**	**0.0500**		**0.0500**	**0.0500**	**0.0000**	**3,207.5180**	**3,207.5180**	**0.5968**		**3,222.4371**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0182	0.6221	0.2388	3.0900e-003	0.1088	3.4400e-003	0.1123	0.0313	3.2900e-003	0.0346		334.1863	334.1863	0.0124	0.0485	348.9393
Worker	0.1361	0.0917	1.5034	4.2000e-003	0.4806	2.7200e-003	0.4834	0.1275	2.5000e-003	0.1300		430.2757	430.2757	0.0103	9.6900e-003	433.4197
Total	**0.1543**	**0.7138**	**1.7421**	**7.2900e-003**	**0.5895**	**6.1600e-003**	**0.5956**	**0.1588**	**5.7900e-003**	**0.1646**		**764.4619**	**764.4619**	**0.0227**	**0.0582**	**782.3590**

3.4 Garage Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3752	12.8194	11.2944	0.0335		0.5084	0.5084		0.4748	0.4748		3,207.9705	3,207.9705	0.5969		3,222.8932
Total	**1.3752**	**12.8194**	**11.2944**	**0.0335**		**0.5084**	**0.5084**		**0.4748**	**0.4748**		**3,207.9705**	**3,207.9705**	**0.5969**		**3,222.8932**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0178	0.6248	0.2349	3.0500e-003	0.1088	3.4600e-003	0.1123	0.0313	3.3100e-003	0.0346		329.4309	329.4309	0.0124	0.0479	344.0018
Worker	0.1271	0.0819	1.4018	4.0800e-003	0.4806	2.6000e-003	0.4832	0.1275	2.4000e-003	0.1299		421.0073	421.0073	9.3400e-003	9.0200e-003	423.9279
Total	**0.1448**	**0.7067**	**1.6367**	**7.1300e-003**	**0.5895**	**6.0600e-003**	**0.5955**	**0.1588**	**5.7100e-003**	**0.1645**		**750.4382**	**750.4382**	**0.0217**	**0.0569**	**767.9297**

3.4 Garage Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3746	1.6235	16.0862	0.0335		0.0500	0.0500		0.0500	0.0500	0.0000	3,207.9705	3,207.9705	0.5969		3,222.8932
Total	**0.3746**	**1.6235**	**16.0862**	**0.0335**		**0.0500**	**0.0500**		**0.0500**	**0.0500**	**0.0000**	**3,207.9705**	**3,207.9705**	**0.5969**		**3,222.8932**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0178	0.6248	0.2349	3.0500e-003	0.1088	3.4600e-003	0.1123	0.0313	3.3100e-003	0.0346		329.4309	329.4309	0.0124	0.0479	344.0018
Worker	0.1271	0.0819	1.4018	4.0800e-003	0.4806	2.6000e-003	0.4832	0.1275	2.4000e-003	0.1299		421.0073	421.0073	9.3400e-003	9.0200e-003	423.9279
Total	**0.1448**	**0.7067**	**1.6367**	**7.1300e-003**	**0.5895**	**6.0600e-003**	**0.5955**	**0.1588**	**5.7100e-003**	**0.1645**		**750.4382**	**750.4382**	**0.0217**	**0.0569**	**767.9297**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6152	25.3446	29.1007	0.0608		1.0081	1.0081		0.9504	0.9504		5,797.643 8	5,797.643 8	1.2159		5,828.041 4
Total	**2.6152**	**25.3446**	**29.1007**	**0.0608**		**1.0081**	**1.0081**		**0.9504**	**0.9504**		**5,797.643 8**	**5,797.643 8**	**1.2159**		**5,828.041 4**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1073	3.6594	1.4044	0.0182	0.6402	0.0202	0.6604	0.1843	0.0193	0.2037		1,965.801 6	1,965.801 6	0.0728	0.2851	2,052.584 0
Worker	0.7596	0.5117	8.3909	0.0235	2.6826	0.0152	2.6978	0.7115	0.0140	0.7254		2,401.538 6	2,401.538 6	0.0575	0.0541	2,419.086 9
Total	**0.8668**	**4.1711**	**9.7953**	**0.0417**	**3.3228**	**0.0354**	**3.3582**	**0.8958**	**0.0333**	**0.9291**		**4,367.340 2**	**4,367.340 2**	**0.1303**	**0.3392**	**4,471.670 9**

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7070	3.8776	35.3734	0.0608		0.0913	0.0913		0.0913	0.0913	0.0000	5,797.643 8	5,797.643 8	1.2159		5,828.041 4
Total	**0.7070**	**3.8776**	**35.3734**	**0.0608**		**0.0913**	**0.0913**		**0.0913**	**0.0913**	**0.0000**	**5,797.643 8**	**5,797.643 8**	**1.2159**		**5,828.041 4**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1073	3.6594	1.4044	0.0182	0.6402	0.0202	0.6604	0.1843	0.0193	0.2037		1,965.801 6	1,965.801 6	0.0728	0.2851	2,052.584 0
Worker	0.7596	0.5117	8.3909	0.0235	2.6826	0.0152	2.6978	0.7115	0.0140	0.7254		2,401.538 6	2,401.538 6	0.0575	0.0541	2,419.086 9
Total	**0.8668**	**4.1711**	**9.7953**	**0.0417**	**3.3228**	**0.0354**	**3.3582**	**0.8958**	**0.0333**	**0.9291**		**4,367.340 2**	**4,367.340 2**	**0.1303**	**0.3392**	**4,471.670 9**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4799	23.6790	28.9951	0.0608		0.8953	0.8953		0.8435	0.8435		5,798.5957	5,798.5957	1.2126		5,828.9096
Total	**2.4799**	**23.6790**	**28.9951**	**0.0608**		**0.8953**	**0.8953**		**0.8435**	**0.8435**		**5,798.5957**	**5,798.5957**	**1.2126**		**5,828.9096**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1046	3.6750	1.3816	0.0179	0.6402	0.0203	0.6605	0.1843	0.0195	0.2038		1,937.8288	1,937.8288	0.0728	0.2815	2,023.5401
Worker	0.7091	0.4573	7.8242	0.0228	2.6826	0.0145	2.6972	0.7115	0.0134	0.7248		2,349.8084	2,349.8084	0.0521	0.0503	2,366.1092
Total	**0.8138**	**4.1323**	**9.2058**	**0.0407**	**3.3228**	**0.0349**	**3.3577**	**0.8958**	**0.0328**	**0.9286**		**4,287.6371**	**4,287.6371**	**0.1249**	**0.3319**	**4,389.6493**

3.5 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7070	3.8776	35.3734	0.0608		0.0913	0.0913		0.0913	0.0913	0.0000	5,798.5957	5,798.5957	1.2126		5,828.9096
Total	**0.7070**	**3.8776**	**35.3734**	**0.0608**		**0.0913**	**0.0913**		**0.0913**	**0.0913**	**0.0000**	**5,798.5957**	**5,798.5957**	**1.2126**		**5,828.9096**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1046	3.6750	1.3816	0.0179	0.6402	0.0203	0.6605	0.1843	0.0195	0.2038		1,937.8288	1,937.8288	0.0728	0.2815	2,023.5401
Worker	0.7091	0.4573	7.8242	0.0228	2.6826	0.0145	2.6972	0.7115	0.0134	0.7248		2,349.8084	2,349.8084	0.0521	0.0503	2,366.1092
Total	**0.8138**	**4.1323**	**9.2058**	**0.0407**	**3.3228**	**0.0349**	**3.3577**	**0.8958**	**0.0328**	**0.9286**		**4,287.6371**	**4,287.6371**	**0.1249**	**0.3319**	**4,389.6493**

3.6 Apron Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5141	27.3643	21.5770	0.0621		1.0987	1.0987		1.0108	1.0108		6,011.0517	6,011.0517	1.9441		6,059.6541
Paving	0.0896					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6036**	**27.3643**	**21.5770**	**0.0621**		**1.0987**	**1.0987**		**1.0108**	**1.0108**		**6,011.0517**	**6,011.0517**	**1.9441**		**6,059.6541**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0633	0.0426	0.6992	1.9600e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		200.1282	200.1282	4.7900e-003	4.5000e-003	201.5906
Total	**0.0633**	**0.0426**	**0.6992**	**1.9600e-003**	**0.2236**	**1.2600e-003**	**0.2248**	**0.0593**	**1.1600e-003**	**0.0605**		**200.1282**	**200.1282**	**4.7900e-003**	**4.5000e-003**	**201.5906**

3.6 Apron Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7661	3.3197	33.0169	0.0621		0.1021	0.1021		0.1021	0.1021	0.0000	6,011.0517	6,011.0517	1.9441		6,059.6540
Paving	0.0896					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8557**	**3.3197**	**33.0169**	**0.0621**		**0.1021**	**0.1021**		**0.1021**	**0.1021**	**0.0000**	**6,011.0517**	**6,011.0517**	**1.9441**		**6,059.6540**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0633	0.0426	0.6992	1.9600e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		200.1282	200.1282	4.7900e-003	4.5000e-003	201.5906
Total	**0.0633**	**0.0426**	**0.6992**	**1.9600e-003**	**0.2236**	**1.2600e-003**	**0.2248**	**0.0593**	**1.1600e-003**	**0.0605**		**200.1282**	**200.1282**	**4.7900e-003**	**4.5000e-003**	**201.5906**

3.6 Apron Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3847	24.8189	21.5181	0.0622		0.9926	0.9926		0.9132	0.9132		6,017.697 0	6,017.697 0	1.9463		6,066.353 1
Paving	0.0896					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4743**	**24.8189**	**21.5181**	**0.0622**		**0.9926**	**0.9926**		**0.9132**	**0.9132**		**6,017.697 0**	**6,017.697 0**	**1.9463**		**6,066.353 1**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0591	0.0381	0.6520	1.9000e-003	0.2236	1.2100e-003	0.2248	0.0593	1.1100e-003	0.0604		195.8174	195.8174	4.3400e-003	4.1900e-003	197.1758
Total	**0.0591**	**0.0381**	**0.6520**	**1.9000e-003**	**0.2236**	**1.2100e-003**	**0.2248**	**0.0593**	**1.1100e-003**	**0.0604**		**195.8174**	**195.8174**	**4.3400e-003**	**4.1900e-003**	**197.1758**

3.6 Apron Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7661	3.3197	33.0169	0.0622		0.1021	0.1021		0.1021	0.1021	0.0000	6,017.6970	6,017.6970	1.9463		6,066.3531
Paving	0.0896					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8557**	**3.3197**	**33.0169**	**0.0622**		**0.1021**	**0.1021**		**0.1021**	**0.1021**	**0.0000**	**6,017.6970**	**6,017.6970**	**1.9463**		**6,066.3531**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0591	0.0381	0.6520	1.9000e-003	0.2236	1.2100e-003	0.2248	0.0593	1.1100e-003	0.0604		195.8174	195.8174	4.3400e-003	4.1900e-003	197.1758
Total	**0.0591**	**0.0381**	**0.6520**	**1.9000e-003**	**0.2236**	**1.2100e-003**	**0.2248**	**0.0593**	**1.1100e-003**	**0.0604**		**195.8174**	**195.8174**	**4.3400e-003**	**4.1900e-003**	**197.1758**

3.7 MHE Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7775	6.4936	9.9163	0.0140		0.2521	0.2521		0.2343	0.2343		1,322.350 8	1,322.350 8	0.4083		1,332.559 3
Total	**0.7775**	**6.4936**	**9.9163**	**0.0140**		**0.2521**	**0.2521**		**0.2343**	**0.2343**		**1,322.350 8**	**1,322.350 8**	**0.4083**		**1,332.559 3**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1046	3.6750	1.3816	0.0179	0.6402	0.0203	0.6605	0.1843	0.0195	0.2038		1,937.828 8	1,937.828 8	0.0728	0.2815	2,023.540 1
Worker	0.7091	0.4573	7.8242	0.0228	2.6826	0.0145	2.6972	0.7115	0.0134	0.7248		2,349.808 4	2,349.808 4	0.0521	0.0503	2,366.109 2
Total	**0.8138**	**4.1323**	**9.2058**	**0.0407**	**3.3228**	**0.0349**	**3.3577**	**0.8958**	**0.0328**	**0.9286**		**4,287.637 1**	**4,287.637 1**	**0.1249**	**0.3319**	**4,389.649 3**

3.7 MHE Installation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1843	1.9732	9.4068	0.0140		0.0203	0.0203		0.0203	0.0203	0.0000	1,322.350 8	1,322.350 8	0.4083		1,332.559 3
Total	**0.1843**	**1.9732**	**9.4068**	**0.0140**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**1,322.350 8**	**1,322.350 8**	**0.4083**		**1,332.559 3**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1046	3.6750	1.3816	0.0179	0.6402	0.0203	0.6605	0.1843	0.0195	0.2038		1,937.828 8	1,937.828 8	0.0728	0.2815	2,023.540 1
Worker	0.7091	0.4573	7.8242	0.0228	2.6826	0.0145	2.6972	0.7115	0.0134	0.7248		2,349.808 4	2,349.808 4	0.0521	0.0503	2,366.109 2
Total	**0.8138**	**4.1323**	**9.2058**	**0.0407**	**3.3228**	**0.0349**	**3.3577**	**0.8958**	**0.0328**	**0.9286**		**4,287.637 1**	**4,287.637 1**	**0.1249**	**0.3319**	**4,389.649 3**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644
General Office Building	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644
Other Non-Asphalt Surfaces	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644
Parking Lot	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644
Unrefrigerated Warehouse-No Rail	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	15.5546	3.3800e-003	0.3731	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.8018	0.8018	2.0900e-003		0.8539
Unmitigated	15.5546	3.3800e-003	0.3731	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.8018	0.8018	2.0900e-003		0.8539

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	1.8957					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.6245					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0344	3.3800e-003	0.3731	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.8018	0.8018	2.0900e-003		0.8539
Total	**15.5546**	**3.3800e-003**	**0.3731**	**3.0000e-005**		**1.3300e-003**	**1.3300e-003**		**1.3300e-003**	**1.3300e-003**		**0.8018**	**0.8018**	**2.0900e-003**		**0.8539**

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	1.8957					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.6245					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0344	3.3800e-003	0.3731	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.8018	0.8018	2.0900e-003		0.8539
Total	**15.5546**	**3.3800e-003**	**0.3731**	**3.0000e-005**		**1.3300e-003**	**1.3300e-003**		**1.3300e-003**	**1.3300e-003**		**0.8018**	**0.8018**	**2.0900e-003**		**0.8539**

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

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

Ontario International Airport South Airport Cargo Center Project - Phase 1

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	101.50	1000sqft	1.00	101,500.00	0
General Office Building	7.00	1000sqft	0.00	7,000.00	0
Unrefrigerated Warehouse-No Rail	508.68	1000sqft	5.00	508,675.00	0
Unrefrigerated Warehouse-No Rail	27.00	1000sqft	0.50	27,000.00	0
Enclosed Parking with Elevator	900.00	Space	4.00	271,000.00	0
Other Non-Asphalt Surfaces	2,047.32	1000sqft	47.00	2,047,320.00	0
Parking Lot	33.00	Space	0.30	15,300.00	0
Parking Lot	39.00	Space	5.00	122,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Description

Construction Phase - Project proponent, May 12, 2022

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Trips and VMT - Project Description

Demolition - CHA, November 22, 2021, Updated November 10, 2022

Grading - Project Description

Vehicle Trips - Motor vehicle emissions estimated externally

Energy Use - Calculations due to electrical usage are performed outside of the model and project would not use natural gas.

Construction Off-road Equipment Mitigation - Basic and Enhanced Emission Reduction Measures

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	322088	335588
tblAreaCoating	Area_Nonresidential_Interior	966263	1006763
tblAreaCoating	Area_Parking	147349	150510
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

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

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	70.00	87.00
tblConstructionPhase	NumDays	40.00	122.00
tblConstructionPhase	NumDays	1,110.00	154.00
tblConstructionPhase	NumDays	1,110.00	264.00

tblConstructionPhase	NumDays	75.00	155.00
tblConstructionPhase	NumDays	1,110.00	208.00
tblEnergyUse	LightingElect	1.75	0.00
tblEnergyUse	LightingElect	3.66	0.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	LightingElect	1.17	0.00
tblEnergyUse	NT24E	0.19	0.00
tblEnergyUse	NT24E	2.79	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	3.50	0.00
tblEnergyUse	T24E	2.74	0.00
tblEnergyUse	T24E	0.33	0.00
tblEnergyUse	T24NG	3.43	0.00
tblEnergyUse	T24NG	1.98	0.00
tblGrading	AcresOfGrading	122.00	62.00
tblGrading	MaterialImported	0.00	107,000.00
tblLandUse	LandUseSquareFeet	508,680.00	508,675.00
tblLandUse	LandUseSquareFeet	360,000.00	271,000.00
tblLandUse	LandUseSquareFeet	13,200.00	15,300.00
tblLandUse	LandUseSquareFeet	15,600.00	122,200.00
tblLandUse	LotAcreage	2.33	1.00
tblLandUse	LotAcreage	0.16	0.00
tblLandUse	LotAcreage	0.62	0.50
tblLandUse	LotAcreage	11.68	5.00
tblLandUse	LotAcreage	8.10	4.00
tblLandUse	LotAcreage	0.35	5.00
tblOffRoadEquipment	HorsePower	158.00	450.00
tblOffRoadEquipment	HorsePower	89.00	50.00

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

tblOffRoadEquipment	HorsePower	130.00	350.00
tblOffRoadEquipment	HorsePower	80.00	120.00
tblOffRoadEquipment	HorsePower	247.00	250.00
tblOffRoadEquipment	HorsePower	97.00	120.00
tblOffRoadEquipment	HorsePower	97.00	120.00
tblOffRoadEquipment	HorsePower	97.00	120.00
tblOffRoadEquipment	HorsePower	46.00	10.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	158.00	425.00
tblOffRoadEquipment	HorsePower	187.00	200.00
tblOffRoadEquipment	HorsePower	402.00	300.00
tblOffRoadEquipment	HorsePower	172.00	425.00
tblOffRoadEquipment	HorsePower	172.00	385.00
tblOffRoadEquipment	HorsePower	8.00	250.00
tblOffRoadEquipment	HorsePower	84.00	200.00
tblOffRoadEquipment	HorsePower	84.00	200.00
tblOffRoadEquipment	HorsePower	80.00	120.00
tblOffRoadEquipment	HorsePower	65.00	225.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	503.54	528.91
tblTripsAndVMT	VendorTripNumber	508.00	17.00
tblTripsAndVMT	VendorTripNumber	508.00	100.00
tblTripsAndVMT	VendorTripNumber	508.00	100.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblTripsAndVMT	WorkerTripNumber	1,291.00	43.00
tblTripsAndVMT	WorkerTripNumber	1,291.00	240.00
tblTripsAndVMT	WorkerTripNumber	1,291.00	240.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	1.74	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	1.74	0.00
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	1.74	0.00
tblWater	IndoorWaterUseRate	123,876,000.00	130,117,437.50

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	9.4932	94.0483	84.3335	0.3042	18.9027	3.3618	22.0828	8.3774	3.0966	11.3387	0.0000	30,593.2884	30,593.2884	7.2185	1.5180	31,181.0042
2024	7.5105	66.4531	78.1482	0.2177	6.8692	2.4385	9.0803	1.8508	2.2712	3.9087	0.0000	21,643.7076	21,643.7076	3.9074	0.6758	21,940.6604
Maximum	**9.4932**	**94.0483**	**84.3335**	**0.3042**	**18.9027**	**3.3618**	**22.0828**	**8.3774**	**3.0966**	**11.3387**	**0.0000**	**30,593.2884**	**30,593.2884**	**7.2185**	**1.5180**	**31,181.0042**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.6734	29.9565	112.8899	0.3042	11.1665	0.4596	11.6043	4.2942	0.4548	4.7252	0.0000	30,593.2884	30,593.2884	7.2185	1.5180	31,181.0042
2024	3.5258	17.9121	95.5159	0.2177	6.8692	0.2857	7.1542	1.8508	0.2832	2.1316	0.0000	21,643.7076	21,643.7076	3.9074	0.6758	21,940.6604
Maximum	**3.6734**	**29.9565**	**112.8899**	**0.3042**	**11.1665**	**0.4596**	**11.6043**	**4.2942**	**0.4548**	**4.7252**	**0.0000**	**30,593.2884**	**30,593.2884**	**7.2185**	**1.5180**	**31,181.0042**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	57.66	70.18	-28.26	0.00	30.02	87.15	39.81	39.92	86.25	55.03	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	15.5546	3.3800e-003	0.3731	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.8018	0.8018	2.0900e-003		0.8539
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	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	**15.5546**	**3.3800e-003**	**0.3731**	**3.0000e-005**	**0.0000**	**1.3300e-003**	**1.3300e-003**	**0.0000**	**1.3300e-003**	**1.3300e-003**		**0.8018**	**0.8018**	**2.0900e-003**	**0.0000**	**0.8539**

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	15.5546	3.3800e-003	0.3731	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.8018	0.8018	2.0900e-003		0.8539
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	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	**15.5546**	**3.3800e-003**	**0.3731**	**3.0000e-005**	**0.0000**	**1.3300e-003**	**1.3300e-003**	**0.0000**	**1.3300e-003**	**1.3300e-003**		**0.8018**	**0.8018**	**2.0900e-003**	**0.0000**	**0.8539**

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

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

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	3/1/2023	6/29/2023	5	87	
2	Site Preparation	Site Preparation	5/26/2023	11/13/2023	5	122	
3	Garage Construction	Building Construction	7/3/2023	2/1/2024	5	154	
4	Building Construction	Building Construction	9/1/2023	9/4/2024	5	264	
5	Apron Paving	Paving	11/15/2023	6/18/2024	5	155	
6	MHE Installation	Building Construction	3/15/2024	12/31/2024	5	208	

Acres of Grading (Site Preparation Phase): 62

Acres of Grading (Grading Phase): 0

Acres of Paving: 56.3

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	3	8.00	450	0.38
Demolition	Other Construction Equipment	3	8.00	425	0.42
Demolition	Other Material Handling Equipment	1	8.00	168	0.40
Demolition	Other Material Handling Equipment	1	8.00	168	0.40

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

Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Excavators	3	8.00	425	0.38
Site Preparation	Off-Highway Trucks	3	8.00	300	0.38
Site Preparation	Plate Compactors	2	8.00	250	0.43
Site Preparation	Rollers	2	8.00	120	0.38
Site Preparation	Rubber Tired Dozers	2	8.00	250	0.40
Site Preparation	Skid Steer Loaders	2	8.00	225	0.37
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Garage Construction	Cranes	2	7.00	231	0.29
Garage Construction	Forklifts	0	8.00	89	0.20
Garage Construction	Generator Sets	0	8.00	84	0.74
Garage Construction	Pumps	1	8.00	200	0.74
Garage Construction	Tractors/Loaders/Backhoes	2	8.00	120	0.37
Garage Construction	Welders	0	8.00	46	0.45
Building Construction	Aerial Lifts	5	8.00	75	0.31
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Pumps	1	8.00	200	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Tractors/Loaders/Backhoes	2	8.00	120	0.37
Building Construction	Welders	1	8.00	46	0.45
Apron Paving	Graders	1	8.00	200	0.41
Apron Paving	Other Construction Equipment	1	8.00	385	0.42
Apron Paving	Pavers	2	8.00	350	0.42
Apron Paving	Paving Equipment	2	8.00	132	0.36
Apron Paving	Rollers	2	8.00	120	0.38
MHE Installation	Aerial Lifts	3	8.00	75	0.31
MHE Installation	Cranes	0	7.00	231	0.29

MHE Installation	Forklifts	3	8.00	50	0.20
MHE Installation	Generator Sets	0	8.00	84	0.74
MHE Installation	Tractors/Loaders/Backhoes	1	8.00	120	0.37
MHE Installation	Welders	2	8.00	10	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	10	20.00	0.00	876.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	14	35.00	0.00	13,375.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Garage Construction	5	43.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	15	240.00	100.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Apron Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
MHE Installation	9	240.00	100.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1778	0.0000	2.1778	0.3298	0.0000	0.3298			0.0000			0.0000
Off-Road	4.6908	43.6442	36.4213	0.1190		1.7923	1.7923		1.6489	1.6489		11,522.1805	11,522.1805	3.7265		11,615.3432
Total	**4.6908**	**43.6442**	**36.4213**	**0.1190**	**2.1778**	**1.7923**	**3.9701**	**0.3298**	**1.6489**	**1.9787**		**11,522.1805**	**11,522.1805**	**3.7265**		**11,615.3432**

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	0.0199	1.2953	0.3508	5.7900e-003	0.1761	8.7100e-003	0.1848	0.0483	8.3400e-003	0.0566		639.4661	639.4661	0.0391	0.1017	670.7547
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0674	0.0468	0.6374	1.8500e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		188.9748	188.9748	4.8700e-003	4.7900e-003	190.5233
Total	**0.0873**	**1.3420**	**0.9882**	**7.6400e-003**	**0.3996**	**9.9700e-003**	**0.4096**	**0.1075**	**9.5000e-003**	**0.1170**		**828.4409**	**828.4409**	**0.0440**	**0.1065**	**861.2780**

3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8494	0.0000	0.8494	0.1286	0.0000	0.1286			0.0000			0.0000
Off-Road	1.4609	6.3304	57.1209	0.1190		0.1948	0.1948		0.1948	0.1948	0.0000	11,522.1805	11,522.1805	3.7265		11,615.3432
Total	**1.4609**	**6.3304**	**57.1209**	**0.1190**	**0.8494**	**0.1948**	**1.0441**	**0.1286**	**0.1948**	**0.3234**	**0.0000**	**11,522.1805**	**11,522.1805**	**3.7265**		**11,615.3432**

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	0.0199	1.2953	0.3508	5.7900e-003	0.1761	8.7100e-003	0.1848	0.0483	8.3400e-003	0.0566		639.4661	639.4661	0.0391	0.1017	670.7547
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0674	0.0468	0.6374	1.8500e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		188.9748	188.9748	4.8700e-003	4.7900e-003	190.5233
Total	**0.0873**	**1.3420**	**0.9882**	**7.6400e-003**	**0.3996**	**9.9700e-003**	**0.4096**	**0.1075**	**9.5000e-003**	**0.1170**		**828.4409**	**828.4409**	**0.0440**	**0.1065**	**861.2780**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.6823	0.0000	12.6823	6.6937	0.0000	6.6937			0.0000			0.0000
Off-Road	4.0175	34.8773	28.1874	0.0963		1.4624	1.4624		1.3454	1.3454		9,317.0938	9,317.0938	3.0133		9,392.4272
Total	**4.0175**	**34.8773**	**28.1874**	**0.0963**	**12.6823**	**1.4624**	**14.1447**	**6.6937**	**1.3454**	**8.0391**		**9,317.0938**	**9,317.0938**	**3.0133**		**9,392.4272**

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	0.2166	14.1030	3.8192	0.0630	1.9169	0.0949	2.0118	0.5254	0.0908	0.6162		6,962.5229	6,962.5229	0.4261	1.1074	7,303.1933
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1180	0.0819	1.1154	3.2300e-003	0.3912	2.2100e-003	0.3934	0.1038	2.0400e-003	0.1058		330.7059	330.7059	8.5200e-003	8.3800e-003	333.4158
Total	**0.3345**	**14.1848**	**4.9346**	**0.0663**	**2.3081**	**0.0971**	**2.4052**	**0.6291**	**0.0928**	**0.7219**		**7,293.2288**	**7,293.2288**	**0.4346**	**1.1158**	**7,636.6091**

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9461	0.0000	4.9461	2.6105	0.0000	2.6105			0.0000			0.0000
Off-Road	1.1828	5.1253	45.7810	0.0963		0.1577	0.1577		0.1577	0.1577	0.0000	9,317.093 8	9,317.093 8	3.0133		9,392.427 2
Total	**1.1828**	**5.1253**	**45.7810**	**0.0963**	**4.9461**	**0.1577**	**5.1038**	**2.6105**	**0.1577**	**2.7682**	**0.0000**	**9,317.093 8**	**9,317.093 8**	**3.0133**		**9,392.427 2**

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	0.2166	14.1030	3.8192	0.0630	1.9169	0.0949	2.0118	0.5254	0.0908	0.6162		6,962.522 9	6,962.522 9	0.4261	1.1074	7,303.193 3
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1180	0.0819	1.1154	3.2300e-003	0.3912	2.2100e-003	0.3934	0.1038	2.0400e-003	0.1058		330.7059	330.7059	8.5200e-003	8.3800e-003	333.4158
Total	**0.3345**	**14.1848**	**4.9346**	**0.0663**	**2.3081**	**0.0971**	**2.4052**	**0.6291**	**0.0928**	**0.7219**		**7,293.228 8**	**7,293.228 8**	**0.4346**	**1.1158**	**7,636.609 1**

3.4 Garage Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4515	14.0033	11.3961	0.0335		0.5708	0.5708		0.5335	0.5335		3,207.5180	3,207.5180	0.5968		3,222.4371
Total	**1.4515**	**14.0033**	**11.3961**	**0.0335**		**0.5708**	**0.5708**		**0.5335**	**0.5335**		**3,207.5180**	**3,207.5180**	**0.5968**		**3,222.4371**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0175	0.6514	0.2464	3.1000e-003	0.1088	3.4600e-003	0.1123	0.0313	3.3100e-003	0.0346		334.7417	334.7417	0.0123	0.0486	349.5294
Worker	0.1449	0.1006	1.3704	3.9700e-003	0.4806	2.7200e-003	0.4834	0.1275	2.5000e-003	0.1300		406.2958	406.2958	0.0105	0.0103	409.6251
Total	**0.1625**	**0.7520**	**1.6168**	**7.0700e-003**	**0.5895**	**6.1800e-003**	**0.5957**	**0.1588**	**5.8100e-003**	**0.1646**		**741.0375**	**741.0375**	**0.0228**	**0.0589**	**759.1545**

3.4 Garage Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3746	1.6235	16.0862	0.0335		0.0500	0.0500		0.0500	0.0500	0.0000	3,207.518 0	3,207.518 0	0.5968		3,222.437 1
Total	**0.3746**	**1.6235**	**16.0862**	**0.0335**		**0.0500**	**0.0500**		**0.0500**	**0.0500**	**0.0000**	**3,207.518 0**	**3,207.518 0**	**0.5968**		**3,222.437 1**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0175	0.6514	0.2464	3.1000e-003	0.1088	3.4600e-003	0.1123	0.0313	3.3100e-003	0.0346		334.7417	334.7417	0.0123	0.0486	349.5294
Worker	0.1449	0.1006	1.3704	3.9700e-003	0.4806	2.7200e-003	0.4834	0.1275	2.5000e-003	0.1300		406.2958	406.2958	0.0105	0.0103	409.6251
Total	**0.1625**	**0.7520**	**1.6168**	**7.0700e-003**	**0.5895**	**6.1800e-003**	**0.5957**	**0.1588**	**5.8100e-003**	**0.1646**		**741.0375**	**741.0375**	**0.0228**	**0.0589**	**759.1545**

3.4 Garage Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3752	12.8194	11.2944	0.0335		0.5084	0.5084		0.4748	0.4748		3,207.9705	3,207.9705	0.5969		3,222.8932
Total	**1.3752**	**12.8194**	**11.2944**	**0.0335**		**0.5084**	**0.5084**		**0.4748**	**0.4748**		**3,207.9705**	**3,207.9705**	**0.5969**		**3,222.8932**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0171	0.6542	0.2424	3.0500e-003	0.1088	3.4700e-003	0.1123	0.0313	3.3200e-003	0.0347		329.9889	329.9889	0.0123	0.0480	344.5936
Worker	0.1357	0.0898	1.2786	3.8500e-003	0.4806	2.6000e-003	0.4832	0.1275	2.4000e-003	0.1299		397.5644	397.5644	9.4900e-003	9.5800e-003	400.6565
Total	**0.1528**	**0.7441**	**1.5210**	**6.9000e-003**	**0.5895**	**6.0700e-003**	**0.5956**	**0.1588**	**5.7200e-003**	**0.1645**		**727.5533**	**727.5533**	**0.0218**	**0.0576**	**745.2501**

3.4 Garage Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3746	1.6235	16.0862	0.0335		0.0500	0.0500		0.0500	0.0500	0.0000	3,207.9705	3,207.9705	0.5969		3,222.8932
Total	**0.3746**	**1.6235**	**16.0862**	**0.0335**		**0.0500**	**0.0500**		**0.0500**	**0.0500**	**0.0000**	**3,207.9705**	**3,207.9705**	**0.5969**		**3,222.8932**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0171	0.6542	0.2424	3.0500e-003	0.1088	3.4700e-003	0.1123	0.0313	3.3200e-003	0.0347		329.9889	329.9889	0.0123	0.0480	344.5936
Worker	0.1357	0.0898	1.2786	3.8500e-003	0.4806	2.6000e-003	0.4832	0.1275	2.4000e-003	0.1299		397.5644	397.5644	9.4900e-003	9.5800e-003	400.6565
Total	**0.1528**	**0.7441**	**1.5210**	**6.9000e-003**	**0.5895**	**6.0700e-003**	**0.5956**	**0.1588**	**5.7200e-003**	**0.1645**		**727.5533**	**727.5533**	**0.0218**	**0.0576**	**745.2501**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6152	25.3446	29.1007	0.0608		1.0081	1.0081		0.9504	0.9504		5,797.6438	5,797.6438	1.2159		5,828.0414
Total	**2.6152**	**25.3446**	**29.1007**	**0.0608**		**1.0081**	**1.0081**		**0.9504**	**0.9504**		**5,797.6438**	**5,797.6438**	**1.2159**		**5,828.0414**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1031	3.8320	1.4492	0.0182	0.6402	0.0203	0.6605	0.1843	0.0195	0.2038		1,969.0691	1,969.0691	0.0725	0.2858	2,056.0554
Worker	0.8089	0.5613	7.6487	0.0222	2.6826	0.0152	2.6978	0.7115	0.0140	0.7254		2,267.6974	2,267.6974	0.0584	0.0575	2,286.2796
Total	**0.9120**	**4.3933**	**9.0979**	**0.0404**	**3.3228**	**0.0355**	**3.3583**	**0.8958**	**0.0334**	**0.9292**		**4,236.7665**	**4,236.7665**	**0.1309**	**0.3433**	**4,342.3350**

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7070	3.8776	35.3734	0.0608		0.0913	0.0913		0.0913	0.0913	0.0000	5,797.643 8	5,797.643 8	1.2159		5,828.041 4
Total	**0.7070**	**3.8776**	**35.3734**	**0.0608**		**0.0913**	**0.0913**		**0.0913**	**0.0913**	**0.0000**	**5,797.643 8**	**5,797.643 8**	**1.2159**		**5,828.041 4**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1031	3.8320	1.4492	0.0182	0.6402	0.0203	0.6605	0.1843	0.0195	0.2038		1,969.069 1	1,969.069 1	0.0725	0.2858	2,056.055 4
Worker	0.8089	0.5613	7.6487	0.0222	2.6826	0.0152	2.6978	0.7115	0.0140	0.7254		2,267.697 4	2,267.697 4	0.0584	0.0575	2,286.279 6
Total	**0.9120**	**4.3933**	**9.0979**	**0.0404**	**3.3228**	**0.0355**	**3.3583**	**0.8958**	**0.0334**	**0.9292**		**4,236.766 5**	**4,236.766 5**	**0.1309**	**0.3433**	**4,342.335 0**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4799	23.6790	28.9951	0.0608		0.8953	0.8953		0.8435	0.8435		5,798.5957	5,798.5957	1.2126		5,828.9096
Total	**2.4799**	**23.6790**	**28.9951**	**0.0608**		**0.8953**	**0.8953**		**0.8435**	**0.8435**		**5,798.5957**	**5,798.5957**	**1.2126**		**5,828.9096**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1003	3.8485	1.4257	0.0180	0.6402	0.0204	0.6606	0.1843	0.0196	0.2039		1,941.1112	1,941.1112	0.0725	0.2822	2,027.0212
Worker	0.7575	0.5015	7.1364	0.0215	2.6826	0.0145	2.6972	0.7115	0.0134	0.7248		2,218.9640	2,218.9640	0.0530	0.0535	2,236.2221
Total	**0.8579**	**4.3499**	**8.5620**	**0.0395**	**3.3228**	**0.0350**	**3.3578**	**0.8958**	**0.0329**	**0.9287**		**4,160.0752**	**4,160.0752**	**0.1254**	**0.3357**	**4,263.2433**

3.5 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7070	3.8776	35.3734	0.0608		0.0913	0.0913		0.0913	0.0913	0.0000	5,798.5957	5,798.5957	1.2126		5,828.9096
Total	**0.7070**	**3.8776**	**35.3734**	**0.0608**		**0.0913**	**0.0913**		**0.0913**	**0.0913**	**0.0000**	**5,798.5957**	**5,798.5957**	**1.2126**		**5,828.9096**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1003	3.8485	1.4257	0.0180	0.6402	0.0204	0.6606	0.1843	0.0196	0.2039		1,941.1112	1,941.1112	0.0725	0.2822	2,027.0212
Worker	0.7575	0.5015	7.1364	0.0215	2.6826	0.0145	2.6972	0.7115	0.0134	0.7248		2,218.9640	2,218.9640	0.0530	0.0535	2,236.2221
Total	**0.8579**	**4.3499**	**8.5620**	**0.0395**	**3.3228**	**0.0350**	**3.3578**	**0.8958**	**0.0329**	**0.9287**		**4,160.0752**	**4,160.0752**	**0.1254**	**0.3357**	**4,263.2433**

3.6 Apron Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5141	27.3643	21.5770	0.0621		1.0987	1.0987		1.0108	1.0108		6,011.0517	6,011.0517	1.9441		6,059.6541
Paving	0.0896					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.6036**	**27.3643**	**21.5770**	**0.0621**		**1.0987**	**1.0987**		**1.0108**	**1.0108**		**6,011.0517**	**6,011.0517**	**1.9441**		**6,059.6541**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0674	0.0468	0.6374	1.8500e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		188.9748	188.9748	4.8700e-003	4.7900e-003	190.5233
Total	**0.0674**	**0.0468**	**0.6374**	**1.8500e-003**	**0.2236**	**1.2600e-003**	**0.2248**	**0.0593**	**1.1600e-003**	**0.0605**		**188.9748**	**188.9748**	**4.8700e-003**	**4.7900e-003**	**190.5233**

3.6 Apron Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7661	3.3197	33.0169	0.0621		0.1021	0.1021		0.1021	0.1021	0.0000	6,011.0517	6,011.0517	1.9441		6,059.6540
Paving	0.0896					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8557**	**3.3197**	**33.0169**	**0.0621**		**0.1021**	**0.1021**		**0.1021**	**0.1021**	**0.0000**	**6,011.0517**	**6,011.0517**	**1.9441**		**6,059.6540**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0674	0.0468	0.6374	1.8500e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		188.9748	188.9748	4.8700e-003	4.7900e-003	190.5233
Total	**0.0674**	**0.0468**	**0.6374**	**1.8500e-003**	**0.2236**	**1.2600e-003**	**0.2248**	**0.0593**	**1.1600e-003**	**0.0605**		**188.9748**	**188.9748**	**4.8700e-003**	**4.7900e-003**	**190.5233**

3.6 Apron Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3847	24.8189	21.5181	0.0622		0.9926	0.9926		0.9132	0.9132		6,017.6970	6,017.6970	1.9463		6,066.3531
Paving	0.0896					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.4743**	**24.8189**	**21.5181**	**0.0622**		**0.9926**	**0.9926**		**0.9132**	**0.9132**		**6,017.6970**	**6,017.6970**	**1.9463**		**6,066.3531**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0631	0.0418	0.5947	1.7900e-003	0.2236	1.2100e-003	0.2248	0.0593	1.1100e-003	0.0604		184.9137	184.9137	4.4100e-003	4.4600e-003	186.3518
Total	**0.0631**	**0.0418**	**0.5947**	**1.7900e-003**	**0.2236**	**1.2100e-003**	**0.2248**	**0.0593**	**1.1100e-003**	**0.0604**		**184.9137**	**184.9137**	**4.4100e-003**	**4.4600e-003**	**186.3518**

3.6 Apron Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7661	3.3197	33.0169	0.0622		0.1021	0.1021		0.1021	0.1021	0.0000	6,017.697 0	6,017.697 0	1.9463		6,066.353 1
Paving	0.0896					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8557**	**3.3197**	**33.0169**	**0.0622**		**0.1021**	**0.1021**		**0.1021**	**0.1021**	**0.0000**	**6,017.697 0**	**6,017.697 0**	**1.9463**		**6,066.353 1**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0631	0.0418	0.5947	1.7900e-003	0.2236	1.2100e-003	0.2248	0.0593	1.1100e-003	0.0604		184.9137	184.9137	4.4100e-003	4.4600e-003	186.3518
Total	**0.0631**	**0.0418**	**0.5947**	**1.7900e-003**	**0.2236**	**1.2100e-003**	**0.2248**	**0.0593**	**1.1100e-003**	**0.0604**		**184.9137**	**184.9137**	**4.4100e-003**	**4.4600e-003**	**186.3518**

3.7 MHE Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7775	6.4936	9.9163	0.0140		0.2521	0.2521		0.2343	0.2343		1,322.3508	1,322.3508	0.4083		1,332.5593
Total	**0.7775**	**6.4936**	**9.9163**	**0.0140**		**0.2521**	**0.2521**		**0.2343**	**0.2343**		**1,322.3508**	**1,322.3508**	**0.4083**		**1,332.5593**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1003	3.8485	1.4257	0.0180	0.6402	0.0204	0.6606	0.1843	0.0196	0.2039		1,941.1112	1,941.1112	0.0725	0.2822	2,027.0212
Worker	0.7575	0.5015	7.1364	0.0215	2.6826	0.0145	2.6972	0.7115	0.0134	0.7248		2,218.9640	2,218.9640	0.0530	0.0535	2,236.2221
Total	**0.8579**	**4.3499**	**8.5620**	**0.0395**	**3.3228**	**0.0350**	**3.3578**	**0.8958**	**0.0329**	**0.9287**		**4,160.0752**	**4,160.0752**	**0.1254**	**0.3357**	**4,263.2433**

3.7 MHE Installation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1843	1.9732	9.4068	0.0140		0.0203	0.0203		0.0203	0.0203	0.0000	1,322.3508	1,322.3508	0.4083		1,332.5593
Total	**0.1843**	**1.9732**	**9.4068**	**0.0140**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**1,322.3508**	**1,322.3508**	**0.4083**		**1,332.5593**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1003	3.8485	1.4257	0.0180	0.6402	0.0204	0.6606	0.1843	0.0196	0.2039		1,941.1112	1,941.1112	0.0725	0.2822	2,027.0212
Worker	0.7575	0.5015	7.1364	0.0215	2.6826	0.0145	2.6972	0.7115	0.0134	0.7248		2,218.9640	2,218.9640	0.0530	0.0535	2,236.2221
Total	**0.8579**	**4.3499**	**8.5620**	**0.0395**	**3.3228**	**0.0350**	**3.3578**	**0.8958**	**0.0329**	**0.9287**		**4,160.0752**	**4,160.0752**	**0.1254**	**0.3357**	**4,263.2433**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644
General Office Building	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644
Other Non-Asphalt Surfaces	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644
Parking Lot	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644
Unrefrigerated Warehouse-No Rail	0.542639	0.062168	0.185423	0.128137	0.023809	0.006526	0.012163	0.008660	0.000816	0.000502	0.024766	0.000746	0.003644

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	15.5546	3.3800e-003	0.3731	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.8018	0.8018	2.0900e-003		0.8539
Unmitigated	15.5546	3.3800e-003	0.3731	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.8018	0.8018	2.0900e-003		0.8539

6.2 Area by SubCategory

<u>Unmitigated</u>

	ROG	NOx	CO	SO2	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	1.8957					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.6245					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0344	3.3800e-003	0.3731	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.8018	0.8018	2.0900e-003		0.8539
Total	**15.5546**	**3.3800e-003**	**0.3731**	**3.0000e-005**		**1.3300e-003**	**1.3300e-003**		**1.3300e-003**	**1.3300e-003**		**0.8018**	**0.8018**	**2.0900e-003**		**0.8539**

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	1.8957					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.6245					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0344	3.3800e-003	0.3731	3.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003		0.8018	0.8018	2.0900e-003		0.8539
Total	**15.5546**	**3.3800e-003**	**0.3731**	**3.0000e-005**		**1.3300e-003**	**1.3300e-003**		**1.3300e-003**	**1.3300e-003**		**0.8018**	**0.8018**	**2.0900e-003**		**0.8539**

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

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

Ontario International Airport South Airport Cargo Center Project - Phase 2

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	246.82	1000sqft	2.40	246,825.00	0
Unrefrigerated Warehouse-No Rail	27.00	1000sqft	0.60	27,000.00	0
Other Non-Asphalt Surfaces	1,045.44	1000sqft	24.00	1,045,440.00	0
Parking Lot	28.00	Space	2.00	87,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Description

Construction Phase - Project Applicant, May 25, 2022

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Trips and VMT - Project Description

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

Demolition - CHA, November 22, 2021, Updated November 10, 2022

Grading - Project Description

Vehicle Trips - Motor vehicle emissions estimated externally

Energy Use - Calculations due to electrical usage are performed outside of the model and project would not use natural gas.

Construction Off-road Equipment Mitigation - Basic and Enhanced Emission Reduction Measures

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Parking	67994	53268
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	87.00
tblConstructionPhase	NumDays	20.00	122.00
tblConstructionPhase	NumDays	440.00	264.00
tblConstructionPhase	NumDays	35.00	155.00
tblConstructionPhase	NumDays	440.00	208.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	LightingElect	1.17	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	0.33	0.00
tblEnergyUse	T24NG	1.98	0.00

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

tblGrading	AcresOfGrading	122.00	35.00
tblGrading	MaterialImported	0.00	50,000.00
tblLandUse	LandUseSquareFeet	246,820.00	246,825.00
tblLandUse	LandUseSquareFeet	11,200.00	87,800.00
tblLandUse	LotAcreage	5.67	2.40
tblLandUse	LotAcreage	0.62	0.60
tblLandUse	LotAcreage	0.25	2.00
tblOffRoadEquipment	HorsePower	158.00	450.00
tblOffRoadEquipment	HorsePower	89.00	50.00
tblOffRoadEquipment	HorsePower	130.00	350.00
tblOffRoadEquipment	HorsePower	80.00	120.00
tblOffRoadEquipment	HorsePower	247.00	250.00
tblOffRoadEquipment	HorsePower	97.00	120.00
tblOffRoadEquipment	HorsePower	97.00	120.00
tblOffRoadEquipment	HorsePower	46.00	10.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	158.00	425.00
tblOffRoadEquipment	HorsePower	187.00	200.00
tblOffRoadEquipment	HorsePower	402.00	300.00
tblOffRoadEquipment	HorsePower	172.00	425.00
tblOffRoadEquipment	HorsePower	172.00	385.00
tblOffRoadEquipment	HorsePower	8.00	250.00
tblOffRoadEquipment	HorsePower	84.00	200.00
tblOffRoadEquipment	HorsePower	80.00	120.00
tblOffRoadEquipment	HorsePower	65.00	225.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	VendorTripNumber	231.00	100.00
tblTripsAndVMT	VendorTripNumber	231.00	100.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblTripsAndVMT	WorkerTripNumber	591.00	240.00
tblTripsAndVMT	WorkerTripNumber	591.00	240.00
tblVehicleTrips	ST_TR	1.74	0.00
tblVehicleTrips	SU_TR	1.74	0.00
tblVehicleTrips	WD_TR	1.74	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.1746	1.5899	1.4513	5.2000e-003	0.2145	0.0611	0.2756	0.0353	0.0562	0.0916	0.0000	463.4785	463.4785	0.1352	7.9800e-003	469.2356
2026	0.0578	0.5347	0.4571	1.8100e-003	0.1726	0.0194	0.1920	0.0727	0.0179	0.0905	0.0000	163.0222	163.0222	0.0434	5.2100e-003	165.6580
2027	0.4166	3.7918	4.0185	0.0132	0.8837	0.1303	1.0140	0.4088	0.1209	0.5297	0.0000	1,195.1918	1,195.1918	0.2575	0.0379	1,212.9087
2028	0.4943	4.2444	5.7732	0.0162	0.6104	0.1345	0.7449	0.1648	0.1255	0.2902	0.0000	1,480.1333	1,480.1333	0.2365	0.0511	1,501.2768
Maximum	**0.4943**	**4.2444**	**5.7732**	**0.0162**	**0.8837**	**0.1345**	**1.0140**	**0.4088**	**0.1255**	**0.5297**	**0.0000**	**1,480.1333**	**1,480.1333**	**0.2575**	**0.0511**	**1,501.2768**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.0609	0.3624	2.2813	5.2000e-003	0.0981	8.4100e-003	0.1065	0.0177	8.3700e-003	0.0261	0.0000	463.4780	463.4780	0.1352	7.9800e-003	469.2351
2026	0.0201	0.1532	0.7244	1.8100e-003	0.0763	2.9100e-003	0.0792	0.0308	2.8800e-003	0.0337	0.0000	163.0221	163.0221	0.0434	5.2100e-003	165.6579
2027	0.1644	1.1069	5.5849	0.0132	0.4922	0.0196	0.5118	0.1994	0.0194	0.2187	0.0000	1,195.1908	1,195.1908	0.2575	0.0379	1,212.9077
2028	0.2382	1.4442	6.8609	0.0162	0.6104	0.0206	0.6310	0.1648	0.0203	0.1851	0.0000	1,480.1323	1,480.1323	0.2365	0.0511	1,501.2758
Maximum	**0.2382**	**1.4442**	**6.8609**	**0.0162**	**0.6104**	**0.0206**	**0.6310**	**0.1994**	**0.0203**	**0.2187**	**0.0000**	**1,480.1323**	**1,480.1323**	**0.2575**	**0.0511**	**1,501.2758**

	ROG	**NOx**	**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	**57.70**	**69.82**	**-32.06**	**0.00**	**32.11**	**85.08**	**40.33**	**39.46**	**84.11**	**53.74**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	**Start Date**	**End Date**	**Maximum Unmitigated ROG + NOX (tons/quarter)**	**Maximum Mitigated ROG + NOX (tons/quarter)**
1	**9-14-2027**	**12-13-2027**	1.3567	0.3813
2	**12-14-2027**	**3-13-2028**	1.7908	0.4990
3	**3-14-2028**	**6-13-2028**	1.9382	0.6347
4	**6-14-2028**	**9-13-2028**	0.9757	0.4098
5	**9-14-2028**	**9-30-2028**	0.0701	0.0407
		Highest	1.9382	0.6347

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2036	1.5000e-004	0.0171	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0334	0.0334	9.0000e-005	0.0000	0.0356
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	52.2478	0.0000	52.2478	3.0878	0.0000	129.4418
Water						0.0000	0.0000		0.0000	0.0000	20.0888	146.2216	166.3104	2.0757	0.0502	233.1659
Total	**1.2036**	**1.5000e-004**	**0.0171**	**0.0000**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**72.3366**	**146.2550**	**218.5917**	**5.1635**	**0.0502**	**362.6433**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2036	1.5000e-004	0.0171	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0334	0.0334	9.0000e-005	0.0000	0.0356
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	52.2478	0.0000	52.2478	3.0878	0.0000	129.4418
Water						0.0000	0.0000		0.0000	0.0000	20.0888	146.2216	166.3104	2.0757	0.0502	233.1659
Total	**1.2036**	**1.5000e-004**	**0.0171**	**0.0000**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**72.3366**	**146.2550**	**218.5917**	**5.1635**	**0.0502**	**362.6433**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/14/2025	1/13/2026	5	87	
2	Site Preparation	Site Preparation	12/6/2026	5/25/2027	5	122	
3	Building Construction	Building Construction	8/8/2027	8/10/2028	5	264	

4	Apron Paving	Paving	10/25/2027	5/26/2028	5	155	
5	MHE Installation	Building Construction	2/20/2028	12/6/2028	5	208	

Acres of Grading (Site Preparation Phase): 35

Acres of Grading (Grading Phase): 0

Acres of Paving: 26

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	3	8.00	450	0.38
Demolition	Other Construction Equipment	3	8.00	425	0.42
Demolition	Other Material Handling Equipment	1	8.00	168	0.40
Demolition	Other Material Handling Equipment	1	8.00	168	0.40
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Excavators	3	8.00	425	0.38
Site Preparation	Off-Highway Trucks	3	8.00	300	0.38
Site Preparation	Plate Compactors	2	8.00	250	0.43
Site Preparation	Rollers	2	8.00	120	0.38
Site Preparation	Rubber Tired Dozers	2	8.00	250	0.40
Site Preparation	Skid Steer Loaders	2	8.00	225	0.37
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Aerial Lifts	5	8.00	75	0.31
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Pumps	1	8.00	200	0.74

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Tractors/Loaders/Backhoes	2	8.00	120	0.37
Building Construction	Welders	1	8.00	46	0.45
Apron Paving	Graders	1	8.00	200	0.41
Apron Paving	Other Construction Equipment	1	8.00	385	0.42
Apron Paving	Pavers	2	8.00	350	0.42
Apron Paving	Paving Equipment	2	8.00	132	0.36
Apron Paving	Rollers	2	8.00	120	0.38
MHE Installation	Aerial Lifts	3	8.00	75	0.31
MHE Installation	Cranes	0	7.00	231	0.29
MHE Installation	Forklifts	3	8.00	50	0.20
MHE Installation	Generator Sets	0	8.00	84	0.74
MHE Installation	Tractors/Loaders/Backhoes	1	8.00	120	0.37
MHE Installation	Welders	2	8.00	10	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	10	20.00	0.00	1,966.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	14	35.00	0.00	6,250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	15	240.00	100.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Apron Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
MHE Installation	9	240.00	100.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1908	0.0000	0.1908	0.0289	0.0000	0.0289	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1707	1.4744	1.3977	4.6400e-003		0.0603	0.0603		0.0555	0.0555	0.0000	407.8202	407.8202	0.1319	0.0000	411.1176
Total	**0.1707**	**1.4744**	**1.3977**	**4.6400e-003**	**0.1908**	**0.0603**	**0.2510**	**0.0289**	**0.0555**	**0.0843**	**0.0000**	**407.8202**	**407.8202**	**0.1319**	**0.0000**	**411.1176**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7800e-003	0.1140	0.0314	4.9000e-004	0.0152	7.7000e-004	0.0159	4.1600e-003	7.3000e-004	4.9000e-003	0.0000	49.1858	49.1858	3.1400e-003	7.8300e-003	51.5973
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	2.1200e-003	1.5000e-003	0.0222	7.0000e-005	8.5600e-003	5.0000e-005	8.6000e-003	2.2700e-003	4.0000e-005	2.3100e-003	0.0000	6.4726	6.4726	1.4000e-004	1.5000e-004	6.5207
Total	**3.9000e-003**	**0.1155**	**0.0536**	**5.6000e-004**	**0.0237**	**8.2000e-004**	**0.0245**	**6.4300e-003**	**7.7000e-004**	**7.2100e-003**	**0.0000**	**55.6584**	**55.6584**	**3.2800e-003**	**7.9800e-003**	**58.1180**

3.2 Demolition - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0744	0.0000	0.0744	0.0113	0.0000	0.0113	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0570	0.2469	2.2277	4.6400e-003		7.6000e-003	7.6000e-003		7.6000e-003	7.6000e-003	0.0000	407.8197	407.8197	0.1319	0.0000	411.1171
Total	**0.0570**	**0.2469**	**2.2277**	**4.6400e-003**	**0.0744**	**7.6000e-003**	**0.0820**	**0.0113**	**7.6000e-003**	**0.0189**	**0.0000**	**407.8197**	**407.8197**	**0.1319**	**0.0000**	**411.1171**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7800e-003	0.1140	0.0314	4.9000e-004	0.0152	7.7000e-004	0.0159	4.1600e-003	7.3000e-004	4.9000e-003	0.0000	49.1858	49.1858	3.1400e-003	7.8300e-003	51.5973
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	2.1200e-003	1.5000e-003	0.0222	7.0000e-005	8.5600e-003	5.0000e-005	8.6000e-003	2.2700e-003	4.0000e-005	2.3100e-003	0.0000	6.4726	6.4726	1.4000e-004	1.5000e-004	6.5207
Total	**3.9000e-003**	**0.1155**	**0.0536**	**5.6000e-004**	**0.0237**	**8.2000e-004**	**0.0245**	**6.4300e-003**	**7.7000e-004**	**7.2100e-003**	**0.0000**	**55.6584**	**55.6584**	**3.2800e-003**	**7.9800e-003**	**58.1180**

3.2 Demolition - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0220	0.0000	0.0220	3.3300e-003	0.0000	3.3300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0197	0.1701	0.1613	5.4000e-004		6.9600e-003	6.9600e-003		6.4000e-003	6.4000e-003	0.0000	47.0562	47.0562	0.0152	0.0000	47.4367
Total	**0.0197**	**0.1701**	**0.1613**	**5.4000e-004**	**0.0220**	**6.9600e-003**	**0.0290**	**3.3300e-003**	**6.4000e-003**	**9.7300e-003**	**0.0000**	**47.0562**	**47.0562**	**0.0152**	**0.0000**	**47.4367**

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	2.0000e-004	0.0130	3.6500e-003	6.0000e-005	1.7500e-003	9.0000e-005	1.8400e-003	4.8000e-004	8.0000e-005	5.6000e-004	0.0000	5.5685	5.5685	3.6000e-004	8.9000e-004	5.8418
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	2.3000e-004	1.6000e-004	2.4100e-003	1.0000e-005	9.9000e-004	0.0000	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7299	0.7299	1.0000e-005	2.0000e-005	0.7351
Total	**4.3000e-004**	**0.0132**	**6.0600e-003**	**7.0000e-005**	**2.7400e-003**	**9.0000e-005**	**2.8300e-003**	**7.4000e-004**	**8.0000e-005**	**8.3000e-004**	**0.0000**	**6.2984**	**6.2984**	**3.7000e-004**	**9.1000e-004**	**6.5769**

3.2 Demolition - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.5800e-003	0.0000	8.5800e-003	1.3000e-003	0.0000	1.3000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.5700e-003	0.0285	0.2570	5.4000e-004		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004	0.0000	47.0561	47.0561	0.0152	0.0000	47.4366
Total	**6.5700e-003**	**0.0285**	**0.2570**	**5.4000e-004**	**8.5800e-003**	**8.8000e-004**	**9.4600e-003**	**1.3000e-003**	**8.8000e-004**	**2.1800e-003**	**0.0000**	**47.0561**	**47.0561**	**0.0152**	**0.0000**	**47.4366**

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	2.0000e-004	0.0130	3.6500e-003	6.0000e-005	1.7500e-003	9.0000e-005	1.8400e-003	4.8000e-004	8.0000e-005	5.6000e-004	0.0000	5.5685	5.5685	3.6000e-004	8.9000e-004	5.8418
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	2.3000e-004	1.6000e-004	2.4100e-003	1.0000e-005	9.9000e-004	0.0000	9.9000e-004	2.6000e-004	0.0000	2.7000e-004	0.0000	0.7299	0.7299	1.0000e-005	2.0000e-005	0.7351
Total	**4.3000e-004**	**0.0132**	**6.0600e-003**	**7.0000e-005**	**2.7400e-003**	**9.0000e-005**	**2.8300e-003**	**7.4000e-004**	**8.0000e-005**	**8.3000e-004**	**0.0000**	**6.2984**	**6.2984**	**3.7000e-004**	**9.1000e-004**	**6.5769**

3.3 Site Preparation - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1358	0.0000	0.1358	0.0653	0.0000	0.0653	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0359	0.2886	0.2633	9.1000e-004		0.0119	0.0119		0.0110	0.0110	0.0000	80.3207	80.3207	0.0260	0.0000	80.9702
Total	**0.0359**	**0.2886**	**0.2633**	**9.1000e-004**	**0.1358**	**0.0119**	**0.1477**	**0.0653**	**0.0110**	**0.0763**	**0.0000**	**80.3207**	**80.3207**	**0.0260**	**0.0000**	**80.9702**

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	9.7000e-004	0.0623	0.0175	2.6000e-004	8.3700e-003	4.2000e-004	8.7900e-003	2.3000e-003	4.0000e-004	2.7000e-003	0.0000	26.6505	26.6505	1.7400e-003	4.2400e-003	27.9585
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.5000e-004	5.8000e-004	8.9100e-003	3.0000e-005	3.6500e-003	2.0000e-005	3.6700e-003	9.7000e-004	2.0000e-005	9.9000e-004	0.0000	2.6965	2.6965	5.0000e-005	6.0000e-005	2.7158
Total	**1.8200e-003**	**0.0629**	**0.0264**	**2.9000e-004**	**0.0120**	**4.4000e-004**	**0.0125**	**3.2700e-003**	**4.2000e-004**	**3.6900e-003**	**0.0000**	**29.3470**	**29.3470**	**1.7900e-003**	**4.3000e-003**	**30.6743**

3.3 Site Preparation - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0530	0.0000	0.0530	0.0255	0.0000	0.0255	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0112	0.0487	0.4349	9.1000e-004		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003	0.0000	80.3206	80.3206	0.0260	0.0000	80.9701
Total	**0.0112**	**0.0487**	**0.4349**	**9.1000e-004**	**0.0530**	**1.5000e-003**	**0.0545**	**0.0255**	**1.5000e-003**	**0.0270**	**0.0000**	**80.3206**	**80.3206**	**0.0260**	**0.0000**	**80.9701**

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	9.7000e-004	0.0623	0.0175	2.6000e-004	8.3700e-003	4.2000e-004	8.7900e-003	2.3000e-003	4.0000e-004	2.7000e-003	0.0000	26.6505	26.6505	1.7400e-003	4.2400e-003	27.9585
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.5000e-004	5.8000e-004	8.9100e-003	3.0000e-005	3.6500e-003	2.0000e-005	3.6700e-003	9.7000e-004	2.0000e-005	9.9000e-004	0.0000	2.6965	2.6965	5.0000e-005	6.0000e-005	2.7158
Total	**1.8200e-003**	**0.0629**	**0.0264**	**2.9000e-004**	**0.0120**	**4.4000e-004**	**0.0125**	**3.2700e-003**	**4.2000e-004**	**3.6900e-003**	**0.0000**	**29.3470**	**29.3470**	**1.7900e-003**	**4.3000e-003**	**30.6743**

3.3 Site Preparation - 2027

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					0.6417	0.0000	0.6417	0.3434	0.0000	0.3434	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1945	1.5644	1.4275	4.9600e-003		0.0646	0.0646		0.0594	0.0594	0.0000	435.4228	435.4228	0.1408	0.0000	438.9434
Total	**0.1945**	**1.5644**	**1.4275**	**4.9600e-003**	**0.6417**	**0.0646**	**0.7062**	**0.3434**	**0.0594**	**0.4028**	**0.0000**	**435.4228**	**435.4228**	**0.1408**	**0.0000**	**438.9434**

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	5.2000e-003	0.3339	0.0955	1.4100e-003	0.0454	2.2700e-003	0.0477	0.0125	2.1800e-003	0.0146	0.0000	141.5873	141.5873	9.4400e-003	0.0226	148.5432
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	4.3700e-003	2.8800e-003	0.0457	1.5000e-004	0.0198	9.0000e-005	0.0199	5.2500e-003	9.0000e-005	5.3400e-003	0.0000	14.3170	14.3170	2.7000e-004	3.1000e-004	14.4161
Total	**9.5700e-003**	**0.3368**	**0.1413**	**1.5600e-003**	**0.0652**	**2.3600e-003**	**0.0675**	**0.0177**	**2.2700e-003**	**0.0200**	**0.0000**	**155.9043**	**155.9043**	**9.7100e-003**	**0.0229**	**162.9593**

3.3 Site Preparation - 2027

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					0.2503	0.0000	0.2503	0.1339	0.0000	0.1339	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0609	0.2640	2.3577	4.9600e-003		8.1200e-003	8.1200e-003		8.1200e-003	8.1200e-003	0.0000	435.4223	435.4223	0.1408	0.0000	438.9429
Total	**0.0609**	**0.2640**	**2.3577**	**4.9600e-003**	**0.2503**	**8.1200e-003**	**0.2584**	**0.1339**	**8.1200e-003**	**0.1420**	**0.0000**	**435.4223**	**435.4223**	**0.1408**	**0.0000**	**438.9429**

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	5.2000e-003	0.3339	0.0955	1.4100e-003	0.0454	2.2700e-003	0.0477	0.0125	2.1800e-003	0.0146	0.0000	141.5873	141.5873	9.4400e-003	0.0226	148.5432
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	4.3700e-003	2.8800e-003	0.0457	1.5000e-004	0.0198	9.0000e-005	0.0199	5.2500e-003	9.0000e-005	5.3400e-003	0.0000	14.3170	14.3170	2.7000e-004	3.1000e-004	14.4161
Total	**9.5700e-003**	**0.3368**	**0.1413**	**1.5600e-003**	**0.0652**	**2.3600e-003**	**0.0675**	**0.0177**	**2.2700e-003**	**0.0200**	**0.0000**	**155.9043**	**155.9043**	**9.7100e-003**	**0.0229**	**162.9593**

3.4 Building Construction - 2027

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	0.1221	1.1496	1.5155	3.1900e-003		0.0408	0.0408		0.0384	0.0384	0.0000	276.2425	276.2425	0.0575	0.0000	277.6794
Total	**0.1221**	**1.1496**	**1.5155**	**3.1900e-003**		**0.0408**	**0.0408**		**0.0384**	**0.0384**	**0.0000**	**276.2425**	**276.2425**	**0.0575**	**0.0000**	**277.6794**

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	5.0400e-003	0.1987	0.0710	8.9000e-004	0.0331	1.0700e-003	0.0342	9.5500e-003	1.0200e-003	0.0106	0.0000	87.2743	87.2743	3.4700e-003	0.0127	91.1562
Worker	0.0306	0.0201	0.3197	1.0400e-003	0.1382	6.5000e-004	0.1389	0.0367	6.0000e-004	0.0373	0.0000	100.0800	100.0800	1.9000e-003	2.1700e-003	100.7730
Total	**0.0356**	**0.2188**	**0.3907**	**1.9300e-003**	**0.1713**	**1.7200e-003**	**0.1731**	**0.0463**	**1.6200e-003**	**0.0479**	**0.0000**	**187.3543**	**187.3543**	**5.3700e-003**	**0.0149**	**191.9291**

3.4 Building Construction - 2027

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	0.0371	0.2036	1.8571	3.1900e-003		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003	0.0000	276.2422	276.2422	0.0575	0.0000	277.6791
Total	**0.0371**	**0.2036**	**1.8571**	**3.1900e-003**		**4.8000e-003**	**4.8000e-003**		**4.8000e-003**	**4.8000e-003**	**0.0000**	**276.2422**	**276.2422**	**0.0575**	**0.0000**	**277.6791**

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	5.0400e-003	0.1987	0.0710	8.9000e-004	0.0331	1.0700e-003	0.0342	9.5500e-003	1.0200e-003	0.0106	0.0000	87.2743	87.2743	3.4700e-003	0.0127	91.1562
Worker	0.0306	0.0201	0.3197	1.0400e-003	0.1382	6.5000e-004	0.1389	0.0367	6.0000e-004	0.0373	0.0000	100.0800	100.0800	1.9000e-003	2.1700e-003	100.7730
Total	**0.0356**	**0.2188**	**0.3907**	**1.9300e-003**	**0.1713**	**1.7200e-003**	**0.1731**	**0.0463**	**1.6200e-003**	**0.0479**	**0.0000**	**187.3543**	**187.3543**	**5.3700e-003**	**0.0149**	**191.9291**

3.4 Building Construction - 2028

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	0.1848	1.7408	2.2948	4.8300e-003		0.0617	0.0617		0.0581	0.0581	0.0000	418.3101	418.3101	0.0870	0.0000	420.4860
Total	**0.1848**	**1.7408**	**2.2948**	**4.8300e-003**		**0.0617**	**0.0617**		**0.0581**	**0.0581**	**0.0000**	**418.3101**	**418.3101**	**0.0870**	**0.0000**	**420.4860**

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	7.5000e-003	0.2989	0.1067	1.3200e-003	0.0501	1.6100e-003	0.0517	0.0145	1.5400e-003	0.0160	0.0000	129.6297	129.6297	5.2600e-003	0.0189	135.4033
Worker	0.0438	0.0281	0.4616	1.5400e-003	0.2093	9.2000e-004	0.2103	0.0556	8.4000e-004	0.0564	0.0000	148.7803	148.7803	2.6400e-003	3.1300e-003	149.7805
Total	**0.0513**	**0.3270**	**0.5683**	**2.8600e-003**	**0.2595**	**2.5300e-003**	**0.2620**	**0.0701**	**2.3800e-003**	**0.0725**	**0.0000**	**278.4099**	**278.4099**	**7.9000e-003**	**0.0221**	**285.1838**

3.4 Building Construction - 2028

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	0.0562	0.3083	2.8122	4.8300e-003		7.2600e-003	7.2600e-003		7.2600e-003	7.2600e-003	0.0000	418.3096	418.3096	0.0870	0.0000	420.4855
Total	**0.0562**	**0.3083**	**2.8122**	**4.8300e-003**		**7.2600e-003**	**7.2600e-003**		**7.2600e-003**	**7.2600e-003**	**0.0000**	**418.3096**	**418.3096**	**0.0870**	**0.0000**	**420.4855**

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	7.5000e-003	0.2989	0.1067	1.3200e-003	0.0501	1.6100e-003	0.0517	0.0145	1.5400e-003	0.0160	0.0000	129.6297	129.6297	5.2600e-003	0.0189	135.4033
Worker	0.0438	0.0281	0.4616	1.5400e-003	0.2093	9.2000e-004	0.2103	0.0556	8.4000e-004	0.0564	0.0000	148.7803	148.7803	2.6400e-003	3.1300e-003	149.7805
Total	**0.0513**	**0.3270**	**0.5683**	**2.8600e-003**	**0.2595**	**2.5300e-003**	**0.2620**	**0.0701**	**2.3800e-003**	**0.0725**	**0.0000**	**278.4099**	**278.4099**	**7.9000e-003**	**0.0221**	**285.1838**

3.5 Apron Paving - 2027

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	0.0528	0.5215	0.5309	1.5500e-003		0.0208	0.0208		0.0192	0.0192	0.0000	136.2964	136.2964	0.0441	0.0000	137.3985
Paving	8.5000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0537**	**0.5215**	**0.5309**	**1.5500e-003**		**0.0208**	**0.0208**		**0.0192**	**0.0192**	**0.0000**	**136.2964**	**136.2964**	**0.0441**	**0.0000**	**137.3985**

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	1.2100e-003	8.0000e-004	0.0127	4.0000e-005	5.4900e-003	3.0000e-005	5.5100e-003	1.4600e-003	2.0000e-005	1.4800e-003	0.0000	3.9714	3.9714	8.0000e-005	9.0000e-005	3.9989
Total	**1.2100e-003**	**8.0000e-004**	**0.0127**	**4.0000e-005**	**5.4900e-003**	**3.0000e-005**	**5.5100e-003**	**1.4600e-003**	**2.0000e-005**	**1.4800e-003**	**0.0000**	**3.9714**	**3.9714**	**8.0000e-005**	**9.0000e-005**	**3.9989**

3.5 Apron Paving - 2027

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	0.0192	0.0830	0.8254	1.5500e-003		2.5500e-003	2.5500e-003		2.5500e-003	2.5500e-003	0.0000	136.2963	136.2963	0.0441	0.0000	137.3983
Paving	8.5000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0200**	**0.0830**	**0.8254**	**1.5500e-003**		**2.5500e-003**	**2.5500e-003**		**2.5500e-003**	**2.5500e-003**	**0.0000**	**136.2963**	**136.2963**	**0.0441**	**0.0000**	**137.3983**

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	1.2100e-003	8.0000e-004	0.0127	4.0000e-005	5.4900e-003	3.0000e-005	5.5100e-003	1.4600e-003	2.0000e-005	1.4800e-003	0.0000	3.9714	3.9714	8.0000e-005	9.0000e-005	3.9989
Total	**1.2100e-003**	**8.0000e-004**	**0.0127**	**4.0000e-005**	**5.4900e-003**	**3.0000e-005**	**5.5100e-003**	**1.4600e-003**	**2.0000e-005**	**1.4800e-003**	**0.0000**	**3.9714**	**3.9714**	**8.0000e-005**	**9.0000e-005**	**3.9989**

3.5 Apron Paving - 2028

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	0.1109	1.0952	1.1149	3.2600e-003		0.0438	0.0438		0.0403	0.0403	0.0000	286.2225	286.2225	0.0926	0.0000	288.5368
Paving	1.7700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1127**	**1.0952**	**1.1149**	**3.2600e-003**		**0.0438**	**0.0438**		**0.0403**	**0.0403**	**0.0000**	**286.2225**	**286.2225**	**0.0926**	**0.0000**	**288.5368**

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	2.4100e-003	1.5500e-003	0.0254	8.0000e-005	0.0115	5.0000e-005	0.0116	3.0600e-003	5.0000e-005	3.1100e-003	0.0000	8.1876	8.1876	1.5000e-004	1.7000e-004	8.2426
Total	**2.4100e-003**	**1.5500e-003**	**0.0254**	**8.0000e-005**	**0.0115**	**5.0000e-005**	**0.0116**	**3.0600e-003**	**5.0000e-005**	**3.1100e-003**	**0.0000**	**8.1876**	**8.1876**	**1.5000e-004**	**1.7000e-004**	**8.2426**

3.5 Apron Paving - 2028

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	0.0402	0.1743	1.7334	3.2600e-003		5.3600e-003	5.3600e-003		5.3600e-003	5.3600e-003	0.0000	286.2222	286.2222	0.0926	0.0000	288.5364
Paving	1.7700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0420**	**0.1743**	**1.7334**	**3.2600e-003**		**5.3600e-003**	**5.3600e-003**		**5.3600e-003**	**5.3600e-003**	**0.0000**	**286.2222**	**286.2222**	**0.0926**	**0.0000**	**288.5364**

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	2.4100e-003	1.5500e-003	0.0254	8.0000e-005	0.0115	5.0000e-005	0.0116	3.0600e-003	5.0000e-005	3.1100e-003	0.0000	8.1876	8.1876	1.5000e-004	1.7000e-004	8.2426
Total	**2.4100e-003**	**1.5500e-003**	**0.0254**	**8.0000e-005**	**0.0115**	**5.0000e-005**	**0.0116**	**3.0600e-003**	**5.0000e-005**	**3.1100e-003**	**0.0000**	**8.1876**	**8.1876**	**1.5000e-004**	**1.7000e-004**	**8.2426**

3.6 MHE Installation - 2028

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	0.0759	0.6521	1.0265	1.4600e-003		0.0231	0.0231		0.0215	0.0215	0.0000	124.7939	124.7939	0.0385	0.0000	125.7569
Total	**0.0759**	**0.6521**	**1.0265**	**1.4600e-003**		**0.0231**	**0.0231**		**0.0215**	**0.0215**	**0.0000**	**124.7939**	**124.7939**	**0.0385**	**0.0000**	**125.7569**

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	9.8200e-003	0.3911	0.1396	1.7200e-003	0.0656	2.1100e-003	0.0677	0.0189	2.0200e-003	0.0209	0.0000	169.5784	169.5784	6.8800e-003	0.0248	177.1314
Worker	0.0573	0.0368	0.6038	2.0100e-003	0.2738	1.2000e-003	0.2750	0.0727	1.1000e-003	0.0738	0.0000	194.6308	194.6308	3.4600e-003	4.1000e-003	195.9393
Total	**0.0671**	**0.4278**	**0.7434**	**3.7300e-003**	**0.3394**	**3.3100e-003**	**0.3427**	**0.0917**	**3.1200e-003**	**0.0948**	**0.0000**	**364.2092**	**364.2092**	**0.0103**	**0.0289**	**373.0707**

3.6 MHE Installation - 2028

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	0.0192	0.2052	0.9783	1.4600e-003		2.1200e-003	2.1200e-003		2.1200e-003	2.1200e-003	0.0000	124.7937	124.7937	0.0385	0.0000	125.7568
Total	**0.0192**	**0.2052**	**0.9783**	**1.4600e-003**		**2.1200e-003**	**2.1200e-003**		**2.1200e-003**	**2.1200e-003**	**0.0000**	**124.7937**	**124.7937**	**0.0385**	**0.0000**	**125.7568**

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	9.8200e-003	0.3911	0.1396	1.7200e-003	0.0656	2.1100e-003	0.0677	0.0189	2.0200e-003	0.0209	0.0000	169.5784	169.5784	6.8800e-003	0.0248	177.1314
Worker	0.0573	0.0368	0.6038	2.0100e-003	0.2738	1.2000e-003	0.2750	0.0727	1.1000e-003	0.0738	0.0000	194.6308	194.6308	3.4600e-003	4.1000e-003	195.9393
Total	**0.0671**	**0.4278**	**0.7434**	**3.7300e-003**	**0.3394**	**3.3100e-003**	**0.3427**	**0.0917**	**3.1200e-003**	**0.0948**	**0.0000**	**364.2092**	**364.2092**	**0.0103**	**0.0289**	**373.0707**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.538188	0.064794	0.188198	0.125732	0.023928	0.006891	0.012829	0.008420	0.000820	0.000476	0.025563	0.000761	0.003401
Parking Lot	0.538188	0.064794	0.188198	0.125732	0.023928	0.006891	0.012829	0.008420	0.000820	0.000476	0.025563	0.000761	0.003401
Unrefrigerated Warehouse-No Rail	0.538188	0.064794	0.188198	0.125732	0.023928	0.006891	0.012829	0.008420	0.000820	0.000476	0.025563	0.000761	0.003401

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	1.2036	1.5000e-004	0.0171	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0334	0.0334	9.0000e-005	0.0000	0.0356
Unmitigated	1.2036	1.5000e-004	0.0171	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0334	0.0334	9.0000e-005	0.0000	0.0356

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	0.1393					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0627					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5700e-003	1.5000e-004	0.0171	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0334	0.0334	9.0000e-005	0.0000	0.0356
Total	**1.2036**	**1.5000e-004**	**0.0171**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0334**	**0.0334**	**9.0000e-005**	**0.0000**	**0.0356**

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	0.1393					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0627					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5700e-003	1.5000e-004	0.0171	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0334	0.0334	9.0000e-005	0.0000	0.0356
Total	**1.2036**	**1.5000e-004**	**0.0171**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0334**	**0.0334**	**9.0000e-005**	**0.0000**	**0.0356**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	166.3104	2.0757	0.0502	233.1659
Unmitigated	166.3104	2.0757	0.0502	233.1659

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	63.3209 / 0	166.3104	2.0757	0.0502	233.1659
Total		**166.3104**	**2.0757**	**0.0502**	**233.1659**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	63.3209 / 0	166.3104	2.0757	0.0502	233.1659
Total		**166.3104**	**2.0757**	**0.0502**	**233.1659**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	52.2478	3.0878	0.0000	129.4418
Unmitigated	52.2478	3.0878	0.0000	129.4418

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	257.39	52.2478	3.0878	0.0000	129.4418
Total		**52.2478**	**3.0878**	**0.0000**	**129.4418**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	257.39	52.2478	3.0878	0.0000	129.4418
Total		**52.2478**	**3.0878**	**0.0000**	**129.4418**

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

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

Ontario International Airport South Airport Cargo Center Project - Phase 2

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	246.82	1000sqft	2.40	246,825.00	0
Unrefrigerated Warehouse-No Rail	27.00	1000sqft	0.60	27,000.00	0
Other Non-Asphalt Surfaces	1,045.44	1000sqft	24.00	1,045,440.00	0
Parking Lot	28.00	Space	2.00	87,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Description

Construction Phase - Project Applicant, May 25, 2022

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Trips and VMT - Project Description

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

Demolition - CHA, November 22, 2021, Updated November 10, 2022

Grading - Project Description

Vehicle Trips - Motor vehicle emissions estimated externally

Energy Use - Calculations due to electrical usage are performed outside of the model and project would not use natural gas.

Construction Off-road Equipment Mitigation - Basic and Enhanced Emission Reduction Measures

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Parking	67994	53268
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	87.00
tblConstructionPhase	NumDays	20.00	122.00
tblConstructionPhase	NumDays	440.00	264.00
tblConstructionPhase	NumDays	35.00	155.00
tblConstructionPhase	NumDays	440.00	208.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	LightingElect	1.17	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	0.33	0.00
tblEnergyUse	T24NG	1.98	0.00

Ontario International Airport South Airport Cargo Center Project - Phase 2 - South Coast Air Basin, Summer

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

tblGrading	AcresOfGrading	122.00	35.00
tblGrading	MaterialImported	0.00	50,000.00
tblLandUse	LandUseSquareFeet	246,820.00	246,825.00
tblLandUse	LandUseSquareFeet	11,200.00	87,800.00
tblLandUse	LotAcreage	5.67	2.40
tblLandUse	LotAcreage	0.62	0.60
tblLandUse	LotAcreage	0.25	2.00
tblOffRoadEquipment	HorsePower	158.00	450.00
tblOffRoadEquipment	HorsePower	89.00	50.00
tblOffRoadEquipment	HorsePower	130.00	350.00
tblOffRoadEquipment	HorsePower	80.00	120.00
tblOffRoadEquipment	HorsePower	247.00	250.00
tblOffRoadEquipment	HorsePower	97.00	120.00
tblOffRoadEquipment	HorsePower	97.00	120.00
tblOffRoadEquipment	HorsePower	46.00	10.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	158.00	425.00
tblOffRoadEquipment	HorsePower	187.00	200.00
tblOffRoadEquipment	HorsePower	402.00	300.00
tblOffRoadEquipment	HorsePower	172.00	425.00
tblOffRoadEquipment	HorsePower	172.00	385.00
tblOffRoadEquipment	HorsePower	8.00	250.00
tblOffRoadEquipment	HorsePower	84.00	200.00
tblOffRoadEquipment	HorsePower	80.00	120.00
tblOffRoadEquipment	HorsePower	65.00	225.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	VendorTripNumber	231.00	100.00
tblTripsAndVMT	VendorTripNumber	231.00	100.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblTripsAndVMT	WorkerTripNumber	591.00	240.00
tblTripsAndVMT	WorkerTripNumber	591.00	240.00
tblVehicleTrips	ST_TR	1.74	0.00
tblVehicleTrips	SU_TR	1.74	0.00
tblVehicleTrips	WD_TR	1.74	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	4.4793	40.6132	37.2475	0.1335	5.5098	1.5666	7.0764	0.9082	1.4420	2.3501	0.0000	13,107.4053	13,107.4053	3.8208	0.2251	13,270.0025
2026	4.4755	40.5803	37.2194	0.1332	13.6817	1.5664	14.9820	7.0096	1.4418	8.2075	0.0000	13,076.9075	13,076.9075	3.8208	0.4986	13,238.2196
2027	5.2094	46.7339	58.4790	0.1623	13.6817	1.6439	14.9816	7.0096	1.5301	8.2071	0.0000	16,017.6946	16,017.6946	3.2656	0.4886	16,192.5263
2028	6.5582	56.8511	75.5301	0.2121	6.8692	1.8969	8.7661	1.8508	1.7659	3.6167	0.0000	21,211.8982	21,211.8982	3.7796	0.6083	21,487.6674
Maximum	**6.5582**	**56.8511**	**75.5301**	**0.2121**	**13.6817**	**1.8969**	**14.9820**	**7.0096**	**1.7659**	**8.2075**	**0.0000**	**21,211.8982**	**21,211.8982**	**3.8208**	**0.6083**	**21,487.6674**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	1.5631	9.1383	58.5293	0.1335	2.5262	0.2156	2.7418	0.4564	0.2147	0.6710	0.0000	13,107.4053	13,107.4053	3.8208	0.2251	13,270.0025
2026	1.5593	11.4003	58.5013	0.1332	6.1209	0.2155	6.3249	2.9468	0.2145	3.1487	0.0000	13,076.9075	13,076.9075	3.8208	0.4986	13,238.2196
2027	2.2446	11.3272	76.7680	0.1623	6.1209	0.2272	6.3245	2.9468	0.2253	3.1484	0.0000	16,017.6946	16,017.6946	3.2656	0.4886	16,192.5263
2028	3.0477	16.9952	93.3559	0.2121	6.8692	0.2784	7.1476	1.8508	0.2747	2.1255	0.0000	21,211.8982	21,211.8982	3.7796	0.6083	21,487.6674
Maximum	**3.0477**	**16.9952**	**93.3559**	**0.2121**	**6.8692**	**0.2784**	**7.1476**	**2.9468**	**0.2747**	**3.1487**	**0.0000**	**21,211.8982**	**21,211.8982**	**3.8208**	**0.6083**	**21,487.6674**

	ROG	**NOx**	**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	**59.39**	**73.56**	**-37.74**	**0.00**	**45.56**	**85.97**	**50.80**	**51.12**	**84.97**	**59.37**	**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	6.5987	1.2300e-003	0.1369	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004		0.2949	0.2949	7.6000e-004		0.3139
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	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	**6.5987**	**1.2300e-003**	**0.1369**	**1.0000e-005**	**0.0000**	**4.8000e-004**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**4.8000e-004**		**0.2949**	**0.2949**	**7.6000e-004**	**0.0000**	**0.3139**

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	6.5987	1.2300e-003	0.1369	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004		0.2949	0.2949	7.6000e-004		0.3139
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	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	**6.5987**	**1.2300e-003**	**0.1369**	**1.0000e-005**	**0.0000**	**4.8000e-004**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**4.8000e-004**		**0.2949**	**0.2949**	**7.6000e-004**	**0.0000**	**0.3139**

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

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/14/2025	1/13/2026	5	87	
2	Site Preparation	Site Preparation	12/6/2026	5/25/2027	5	122	
3	Building Construction	Building Construction	8/8/2027	8/10/2028	5	264	
4	Apron Paving	Paving	10/25/2027	5/26/2028	5	155	
5	MHE Installation	Building Construction	2/20/2028	12/6/2028	5	208	

Acres of Grading (Site Preparation Phase): 35

Acres of Grading (Grading Phase): 0

Acres of Paving: 26

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	3	8.00	450	0.38
Demolition	Other Construction Equipment	3	8.00	425	0.42
Demolition	Other Material Handling Equipment	1	8.00	168	0.40
Demolition	Other Material Handling Equipment	1	8.00	168	0.40
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

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

Site Preparation	Excavators	3	8.00	425	0.38
Site Preparation	Off-Highway Trucks	3	8.00	300	0.38
Site Preparation	Plate Compactors	2	8.00	250	0.43
Site Preparation	Rollers	2	8.00	120	0.38
Site Preparation	Rubber Tired Dozers	2	8.00	250	0.40
Site Preparation	Skid Steer Loaders	2	8.00	225	0.37
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Aerial Lifts	5	8.00	75	0.31
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Pumps	1	8.00	200	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Tractors/Loaders/Backhoes	2	8.00	120	0.37
Building Construction	Welders	1	8.00	46	0.45
Apron Paving	Graders	1	8.00	200	0.41
Apron Paving	Other Construction Equipment	1	8.00	385	0.42
Apron Paving	Pavers	2	8.00	350	0.42
Apron Paving	Paving Equipment	2	8.00	132	0.36
Apron Paving	Rollers	2	8.00	120	0.38
MHE Installation	Aerial Lifts	3	8.00	75	0.31
MHE Installation	Cranes	0	7.00	231	0.29
MHE Installation	Forklifts	3	8.00	50	0.20
MHE Installation	Generator Sets	0	8.00	84	0.74
MHE Installation	Tractors/Loaders/Backhoes	1	8.00	120	0.37
MHE Installation	Welders	2	8.00	10	0.45

Trips and VMT

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

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	10	20.00	0.00	1,966.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	14	35.00	0.00	6,250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	15	240.00	100.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Apron Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
MHE Installation	9	240.00	100.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.8912	0.0000	4.8912	0.7406	0.0000	0.7406			0.0000			0.0000
Off-Road	4.3771	37.8053	35.8391	0.1191		1.5458	1.5458		1.4221	1.4221		11,526.7894	11,526.7894	3.7280		11,619.9893
Total	**4.3771**	**37.8053**	**35.8391**	**0.1191**	**4.8912**	**1.5458**	**6.4369**	**0.7406**	**1.4221**	**2.1627**		**11,526.7894**	**11,526.7894**	**3.7280**		**11,619.9893**

3.2 Demolition - 2025

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	0.0468	2.7736	0.7997	0.0126	0.3951	0.0197	0.4148	0.1083	0.0188	0.1271		1,389.591 9	1,389.591 9	0.0888	0.2212	1,457.722 4
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0554	0.0343	0.6087	1.8300e-003	0.2236	1.1600e-003	0.2247	0.0593	1.0600e-003	0.0604		191.0240	191.0240	3.9200e-003	3.9200e-003	192.2908
Total	**0.1022**	**2.8079**	**1.4084**	**0.0144**	**0.6187**	**0.0208**	**0.6395**	**0.1676**	**0.0199**	**0.1874**		**1,580.615 9**	**1,580.615 9**	**0.0928**	**0.2251**	**1,650.013 2**

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					1.9076	0.0000	1.9076	0.2888	0.0000	0.2888			0.0000			0.0000
Off-Road	1.4609	6.3304	57.1209	0.1191		0.1948	0.1948		0.1948	0.1948	0.0000	11,526.78 94	11,526.78 94	3.7280		11,619.98 93
Total	**1.4609**	**6.3304**	**57.1209**	**0.1191**	**1.9076**	**0.1948**	**2.1023**	**0.2888**	**0.1948**	**0.4836**	**0.0000**	**11,526.78 94**	**11,526.78 94**	**3.7280**		**11,619.98 93**

3.2 Demolition - 2025

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	0.0468	2.7736	0.7997	0.0126	0.3951	0.0197	0.4148	0.1083	0.0188	0.1271		1,389.591 9	1,389.591 9	0.0888	0.2212	1,457.722 4
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0554	0.0343	0.6087	1.8300e-003	0.2236	1.1600e-003	0.2247	0.0593	1.0600e-003	0.0604		191.0240	191.0240	3.9200e-003	3.9200e-003	192.2908
Total	**0.1022**	**2.8079**	**1.4084**	**0.0144**	**0.6187**	**0.0208**	**0.6395**	**0.1676**	**0.0199**	**0.1874**		**1,580.615 9**	**1,580.615 9**	**0.0928**	**0.2251**	**1,650.013 2**

3.2 Demolition - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.8912	0.0000	4.8912	0.7406	0.0000	0.7406			0.0000			0.0000
Off-Road	4.3771	37.8053	35.8391	0.1191		1.5458	1.5458		1.4221	1.4221		11,526.78 94	11,526.78 94	3.7280		11,619.98 93
Total	**4.3771**	**37.8053**	**35.8391**	**0.1191**	**4.8912**	**1.5458**	**6.4369**	**0.7406**	**1.4221**	**2.1627**		**11,526.78 94**	**11,526.78 94**	**3.7280**		**11,619.98 93**

3.2 Demolition - 2026

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	0.0463	2.7439	0.8078	0.0123	0.3951	0.0196	0.4147	0.1083	0.0187	0.1270		1,363.4391	1,363.4391	0.0892	0.2171	1,430.3597
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0521	0.0312	0.5726	1.7800e-003	0.2236	1.1000e-003	0.2247	0.0593	1.0100e-003	0.0603		186.6790	186.6790	3.5600e-003	3.7000e-003	187.8706
Total	**0.0985**	**2.7750**	**1.3804**	**0.0141**	**0.6187**	**0.0207**	**0.6393**	**0.1676**	**0.0197**	**0.1873**		**1,550.1181**	**1,550.1181**	**0.0928**	**0.2208**	**1,618.2303**

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					1.9076	0.0000	1.9076	0.2888	0.0000	0.2888			0.0000			0.0000
Off-Road	1.4609	6.3304	57.1209	0.1191		0.1948	0.1948		0.1948	0.1948	0.0000	11,526.7894	11,526.7894	3.7280		11,619.9893
Total	**1.4609**	**6.3304**	**57.1209**	**0.1191**	**1.9076**	**0.1948**	**2.1023**	**0.2888**	**0.1948**	**0.4836**	**0.0000**	**11,526.7894**	**11,526.7894**	**3.7280**		**11,619.9893**

3.2 Demolition - 2026

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	0.0463	2.7439	0.8078	0.0123	0.3951	0.0196	0.4147	0.1083	0.0187	0.1270		1,363.439 1	1,363.439 1	0.0892	0.2171	1,430.359 7
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0521	0.0312	0.5726	1.7800e-003	0.2236	1.1000e-003	0.2247	0.0593	1.0100e-003	0.0603		186.6790	186.6790	3.5600e-003	3.7000e-003	187.8706
Total	**0.0985**	**2.7750**	**1.3804**	**0.0141**	**0.6187**	**0.0207**	**0.6393**	**0.1676**	**0.0197**	**0.1873**		**1,550.118 1**	**1,550.118 1**	**0.0928**	**0.2208**	**1,618.230 3**

3.3 Site Preparation - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.3948	0.0000	12.3948	6.6603	0.0000	6.6603			0.0000			0.0000
Off-Road	3.7759	30.3763	27.7186	0.0963		1.2540	1.2540		1.1537	1.1537		9,319.834 8	9,319.834 8	3.0142		9,395.190 4
Total	**3.7759**	**30.3763**	**27.7186**	**0.0963**	**12.3948**	**1.2540**	**13.6488**	**6.6603**	**1.1537**	**7.8140**		**9,319.834 8**	**9,319.834 8**	**3.0142**		**9,395.190 4**

3.3 Site Preparation - 2026

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	0.1050	6.2204	1.8312	0.0279	0.8957	0.0444	0.9401	0.2455	0.0425	0.2880		3,090.947 8	3,090.947 8	0.2022	0.4921	3,242.658 2
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0912	0.0545	1.0020	3.1100e-003	0.3912	1.9200e-003	0.3931	0.1038	1.7700e-003	0.1055		326.6883	326.6883	6.2300e-003	6.4800e-003	328.7736
Total	**0.1962**	**6.2749**	**2.8333**	**0.0310**	**1.2870**	**0.0463**	**1.3333**	**0.3493**	**0.0442**	**0.3935**		**3,417.636 1**	**3,417.636 1**	**0.2085**	**0.4986**	**3,571.431 8**

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					4.8340	0.0000	4.8340	2.5975	0.0000	2.5975			0.0000			0.0000
Off-Road	1.1828	5.1253	45.7810	0.0963		0.1577	0.1577		0.1577	0.1577	0.0000	9,319.834 8	9,319.834 8	3.0142		9,395.190 3
Total	**1.1828**	**5.1253**	**45.7810**	**0.0963**	**4.8340**	**0.1577**	**4.9917**	**2.5975**	**0.1577**	**2.7552**	**0.0000**	**9,319.834 8**	**9,319.834 8**	**3.0142**		**9,395.190 3**

3.3 Site Preparation - 2026

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	0.1050	6.2204	1.8312	0.0279	0.8957	0.0444	0.9401	0.2455	0.0425	0.2880		3,090.9478	3,090.9478	0.2022	0.4921	3,242.6582
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0912	0.0545	1.0020	3.1100e-003	0.3912	1.9200e-003	0.3931	0.1038	1.7700e-003	0.1055		326.6883	326.6883	6.2300e-003	6.4800e-003	328.7736
Total	**0.1962**	**6.2749**	**2.8333**	**0.0310**	**1.2870**	**0.0463**	**1.3333**	**0.3493**	**0.0442**	**0.3935**		**3,417.6361**	**3,417.6361**	**0.2085**	**0.4986**	**3,571.4318**

3.3 Site Preparation - 2027

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					12.3948	0.0000	12.3948	6.6603	0.0000	6.6603			0.0000			0.0000
Off-Road	3.7759	30.3763	27.7186	0.0963		1.2540	1.2540		1.1537	1.1537		9,319.8348	9,319.8348	3.0142		9,395.1904
Total	**3.7759**	**30.3763**	**27.7186**	**0.0963**	**12.3948**	**1.2540**	**13.6488**	**6.6603**	**1.1537**	**7.8140**		**9,319.8348**	**9,319.8348**	**3.0142**		**9,395.1904**

3.3 Site Preparation - 2027

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	0.1039	6.1519	1.8456	0.0273	0.8957	0.0441	0.9399	0.2455	0.0422	0.2877		3,029.1784	3,029.1784	0.2022	0.4824	3,177.9972
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0861	0.0499	0.9485	3.0200e-003	0.3912	1.8000e-003	0.3930	0.1038	1.6600e-003	0.1054		319.9636	319.9636	5.6900e-003	6.1500e-003	321.9386
Total	**0.1900**	**6.2018**	**2.7941**	**0.0303**	**1.2870**	**0.0459**	**1.3329**	**0.3492**	**0.0439**	**0.3931**		**3,349.1421**	**3,349.1421**	**0.2079**	**0.4886**	**3,499.9359**

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					4.8340	0.0000	4.8340	2.5975	0.0000	2.5975			0.0000			0.0000
Off-Road	1.1828	5.1253	45.7810	0.0963		0.1577	0.1577		0.1577	0.1577	0.0000	9,319.8348	9,319.8348	3.0142		9,395.1903
Total	**1.1828**	**5.1253**	**45.7810**	**0.0963**	**4.8340**	**0.1577**	**4.9917**	**2.5975**	**0.1577**	**2.7552**	**0.0000**	**9,319.8348**	**9,319.8348**	**3.0142**		**9,395.1903**

3.3 Site Preparation - 2027

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	0.1039	6.1519	1.8456	0.0273	0.8957	0.0441	0.9399	0.2455	0.0422	0.2877		3,029.1784	3,029.1784	0.2022	0.4824	3,177.9972
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0861	0.0499	0.9485	3.0200e-003	0.3912	1.8000e-003	0.3930	0.1038	1.6600e-003	0.1054		319.9636	319.9636	5.6900e-003	6.1500e-003	321.9386
Total	**0.1900**	**6.2018**	**2.7941**	**0.0303**	**1.2870**	**0.0459**	**1.3329**	**0.3492**	**0.0439**	**0.3931**		**3,349.1421**	**3,349.1421**	**0.2079**	**0.4886**	**3,499.9359**

3.4 Building Construction - 2027

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	2.3250	21.8963	28.8657	0.0608		0.7765	0.7765		0.7313	0.7313		5,800.1004	5,800.1004	1.2068		5,830.2699
Total	**2.3250**	**21.8963**	**28.8657**	**0.0608**		**0.7765**	**0.7765**		**0.7313**	**0.7313**		**5,800.1004**	**5,800.1004**	**1.2068**		**5,830.2699**

3.4 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0982	3.6066	1.3318	0.0169	0.6402	0.0203	0.6605	0.1843	0.0194	0.2038		1,831.077 4	1,831.077 4	0.0729	0.2670	1,912.477 1
Worker	0.5904	0.3422	6.5039	0.0207	2.6826	0.0124	2.6950	0.7115	0.0114	0.7228		2,194.036 4	2,194.036 4	0.0390	0.0422	2,207.579 3
Total	**0.6886**	**3.9487**	**7.8357**	**0.0376**	**3.3228**	**0.0327**	**3.3555**	**0.8958**	**0.0308**	**0.9266**		**4,025.113 7**	**4,025.113 7**	**0.1120**	**0.3092**	**4,120.056 4**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7070	3.8776	35.3734	0.0608		0.0913	0.0913		0.0913	0.0913	0.0000	5,800.100 4	5,800.100 4	1.2068		5,830.269 9
Total	**0.7070**	**3.8776**	**35.3734**	**0.0608**		**0.0913**	**0.0913**		**0.0913**	**0.0913**	**0.0000**	**5,800.100 4**	**5,800.100 4**	**1.2068**		**5,830.269 9**

3.4 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0982	3.6066	1.3318	0.0169	0.6402	0.0203	0.6605	0.1843	0.0194	0.2038		1,831.0774	1,831.0774	0.0729	0.2670	1,912.4771
Worker	0.5904	0.3422	6.5039	0.0207	2.6826	0.0124	2.6950	0.7115	0.0114	0.7228		2,194.0364	2,194.0364	0.0390	0.0422	2,207.5793
Total	**0.6886**	**3.9487**	**7.8357**	**0.0376**	**3.3228**	**0.0327**	**3.3555**	**0.8958**	**0.0308**	**0.9266**		**4,025.1137**	**4,025.1137**	**0.1120**	**0.3092**	**4,120.0564**

3.4 Building Construction - 2028

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	2.3250	21.8963	28.8657	0.0608		0.7765	0.7765		0.7313	0.7313		5,800.1004	5,800.1004	1.2068		5,830.2699
Total	**2.3250**	**21.8963**	**28.8657**	**0.0608**		**0.7765**	**0.7765**		**0.7313**	**0.7313**		**5,800.1004**	**5,800.1004**	**1.2068**		**5,830.2699**

3.4 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0966	3.5836	1.3226	0.0166	0.6402	0.0202	0.6605	0.1843	0.0194	0.2037		1,796.028 4	1,796.028 4	0.0731	0.2622	1,875.980 7
Worker	0.5584	0.3156	6.1985	0.0202	2.6826	0.0115	2.6942	0.7115	0.0106	0.7221		2,153.946 4	2,153.946 4	0.0359	0.0403	2,166.856 8
Total	**0.6550**	**3.8992**	**7.5211**	**0.0368**	**3.3228**	**0.0318**	**3.3546**	**0.8958**	**0.0300**	**0.9258**		**3,949.974 8**	**3,949.974 8**	**0.1090**	**0.3025**	**4,042.837 5**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7070	3.8776	35.3734	0.0608		0.0913	0.0913		0.0913	0.0913	0.0000	5,800.100 4	5,800.100 4	1.2068		5,830.269 9
Total	**0.7070**	**3.8776**	**35.3734**	**0.0608**		**0.0913**	**0.0913**		**0.0913**	**0.0913**	**0.0000**	**5,800.100 4**	**5,800.100 4**	**1.2068**		**5,830.269 9**

3.4 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0966	3.5836	1.3226	0.0166	0.6402	0.0202	0.6605	0.1843	0.0194	0.2037		1,796.0284	1,796.0284	0.0731	0.2622	1,875.9807
Worker	0.5584	0.3156	6.1985	0.0202	2.6826	0.0115	2.6942	0.7115	0.0106	0.7221		2,153.9464	2,153.9464	0.0359	0.0403	2,166.8568
Total	**0.6550**	**3.8992**	**7.5211**	**0.0368**	**3.3228**	**0.0318**	**3.3546**	**0.8958**	**0.0300**	**0.9258**		**3,949.9748**	**3,949.9748**	**0.1090**	**0.3025**	**4,042.8375**

3.5 Apron Paving - 2027

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	2.1128	20.8603	21.2357	0.0621		0.8337	0.8337		0.7670	0.7670		6,009.6441	6,009.6441	1.9436		6,058.2351
Paving	0.0338					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.1466**	**20.8603**	**21.2357**	**0.0621**		**0.8337**	**0.8337**		**0.7670**	**0.7670**		**6,009.6441**	**6,009.6441**	**1.9436**		**6,058.2351**

3.5 Apron Paving - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0492	0.0285	0.5420	1.7300e-003	0.2236	1.0300e-003	0.2246	0.0593	9.5000e-004	0.0602		182.8364	182.8364	3.2500e-003	3.5100e-003	183.9649
Total	**0.0492**	**0.0285**	**0.5420**	**1.7300e-003**	**0.2236**	**1.0300e-003**	**0.2246**	**0.0593**	**9.5000e-004**	**0.0602**		**182.8364**	**182.8364**	**3.2500e-003**	**3.5100e-003**	**183.9649**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7661	3.3197	33.0169	0.0621		0.1021	0.1021		0.1021	0.1021	0.0000	6,009.644 1	6,009.644 1	1.9436		6,058.235 1
Paving	0.0338					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7999**	**3.3197**	**33.0169**	**0.0621**		**0.1021**	**0.1021**		**0.1021**	**0.1021**	**0.0000**	**6,009.644 1**	**6,009.644 1**	**1.9436**		**6,058.235 1**

3.5 Apron Paving - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0492	0.0285	0.5420	1.7300e-003	0.2236	1.0300e-003	0.2246	0.0593	9.5000e-004	0.0602		182.8364	182.8364	3.2500e-003	3.5100e-003	183.9649
Total	**0.0492**	**0.0285**	**0.5420**	**1.7300e-003**	**0.2236**	**1.0300e-003**	**0.2246**	**0.0593**	**9.5000e-004**	**0.0602**		**182.8364**	**182.8364**	**3.2500e-003**	**3.5100e-003**	**183.9649**

3.5 Apron Paving - 2028

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	2.1128	20.8603	21.2357	0.0621		0.8337	0.8337		0.7670	0.7670		6,009.6441	6,009.6441	1.9436		6,058.2351
Paving	0.0338					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.1466**	**20.8603**	**21.2357**	**0.0621**		**0.8337**	**0.8337**		**0.7670**	**0.7670**		**6,009.6441**	**6,009.6441**	**1.9436**		**6,058.2351**

3.5 Apron Paving - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0465	0.0263	0.5165	1.6800e-003	0.2236	9.6000e-004	0.2245	0.0593	8.9000e-004	0.0602		179.4955	179.4955	2.9900e-003	3.3600e-003	180.5714
Total	**0.0465**	**0.0263**	**0.5165**	**1.6800e-003**	**0.2236**	**9.6000e-004**	**0.2245**	**0.0593**	**8.9000e-004**	**0.0602**		**179.4955**	**179.4955**	**2.9900e-003**	**3.3600e-003**	**180.5714**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7661	3.3197	33.0169	0.0621		0.1021	0.1021		0.1021	0.1021	0.0000	6,009.6441	6,009.6441	1.9436		6,058.2351
Paving	0.0338					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7999**	**3.3197**	**33.0169**	**0.0621**		**0.1021**	**0.1021**		**0.1021**	**0.1021**	**0.0000**	**6,009.6441**	**6,009.6441**	**1.9436**		**6,058.2351**

3.5 Apron Paving - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0465	0.0263	0.5165	1.6800e-003	0.2236	9.6000e-004	0.2245	0.0593	8.9000e-004	0.0602		179.4955	179.4955	2.9900e-003	3.3600e-003	180.5714
Total	**0.0465**	**0.0263**	**0.5165**	**1.6800e-003**	**0.2236**	**9.6000e-004**	**0.2245**	**0.0593**	**8.9000e-004**	**0.0602**		**179.4955**	**179.4955**	**2.9900e-003**	**3.3600e-003**	**180.5714**

3.6 MHE Installation - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7301	6.2697	9.8700	0.0140		0.2221	0.2221		0.2067	0.2067		1,322.7086	1,322.7086	0.4083		1,332.9160
Total	**0.7301**	**6.2697**	**9.8700**	**0.0140**		**0.2221**	**0.2221**		**0.2067**	**0.2067**		**1,322.7086**	**1,322.7086**	**0.4083**		**1,332.9160**

3.6 MHE Installation - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0966	3.5836	1.3226	0.0166	0.6402	0.0202	0.6605	0.1843	0.0194	0.2037		1,796.0284	1,796.0284	0.0731	0.2622	1,875.9807
Worker	0.5584	0.3156	6.1985	0.0202	2.6826	0.0115	2.6942	0.7115	0.0106	0.7221		2,153.9464	2,153.9464	0.0359	0.0403	2,166.8568
Total	**0.6550**	**3.8992**	**7.5211**	**0.0368**	**3.3228**	**0.0318**	**3.3546**	**0.8958**	**0.0300**	**0.9258**		**3,949.9748**	**3,949.9748**	**0.1090**	**0.3025**	**4,042.8375**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1843	1.9732	9.4068	0.0140		0.0203	0.0203		0.0203	0.0203	0.0000	1,322.7086	1,322.7086	0.4083		1,332.9160
Total	**0.1843**	**1.9732**	**9.4068**	**0.0140**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**1,322.7086**	**1,322.7086**	**0.4083**		**1,332.9160**

3.6 MHE Installation - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0966	3.5836	1.3226	0.0166	0.6402	0.0202	0.6605	0.1843	0.0194	0.2037		1,796.028 4	1,796.028 4	0.0731	0.2622	1,875.980 7
Worker	0.5584	0.3156	6.1985	0.0202	2.6826	0.0115	2.6942	0.7115	0.0106	0.7221		2,153.946 4	2,153.946 4	0.0359	0.0403	2,166.856 8
Total	**0.6550**	**3.8992**	**7.5211**	**0.0368**	**3.3228**	**0.0318**	**3.3546**	**0.8958**	**0.0300**	**0.9258**		**3,949.974 8**	**3,949.974 8**	**0.1090**	**0.3025**	**4,042.837 5**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.538188	0.064794	0.188198	0.125732	0.023928	0.006891	0.012829	0.008420	0.000820	0.000476	0.025563	0.000761	0.003401
Parking Lot	0.538188	0.064794	0.188198	0.125732	0.023928	0.006891	0.012829	0.008420	0.000820	0.000476	0.025563	0.000761	0.003401
Unrefrigerated Warehouse-No Rail	0.538188	0.064794	0.188198	0.125732	0.023928	0.006891	0.012829	0.008420	0.000820	0.000476	0.025563	0.000761	0.003401

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	6.5987	1.2300e-003	0.1369	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004		0.2949	0.2949	7.6000e-004		0.3139
Unmitigated	6.5987	1.2300e-003	0.1369	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004		0.2949	0.2949	7.6000e-004		0.3139

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7631					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8231					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0125	1.2300e-003	0.1369	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004		0.2949	0.2949	7.6000e-004		0.3139
Total	**6.5987**	**1.2300e-003**	**0.1369**	**1.0000e-005**		**4.8000e-004**	**4.8000e-004**		**4.8000e-004**	**4.8000e-004**		**0.2949**	**0.2949**	**7.6000e-004**		**0.3139**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7631					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8231					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0125	1.2300e-003	0.1369	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004		0.2949	0.2949	7.6000e-004		0.3139
Total	**6.5987**	**1.2300e-003**	**0.1369**	**1.0000e-005**		**4.8000e-004**	**4.8000e-004**		**4.8000e-004**	**4.8000e-004**		**0.2949**	**0.2949**	**7.6000e-004**		**0.3139**

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

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

Ontario International Airport South Airport Cargo Center Project - Phase 2

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	246.82	1000sqft	2.40	246,825.00	0
Unrefrigerated Warehouse-No Rail	27.00	1000sqft	0.60	27,000.00	0
Other Non-Asphalt Surfaces	1,045.44	1000sqft	24.00	1,045,440.00	0
Parking Lot	28.00	Space	2.00	87,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Description

Construction Phase - Project Applicant, May 25, 2022

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Off-road Equipment - Project proponent, December 15, 2021

Trips and VMT - Project Description

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

Demolition - CHA, November 22, 2021, Updated November 10, 2022

Grading - Project Description

Vehicle Trips - Motor vehicle emissions estimated externally

Energy Use - Calculations due to electrical usage are performed outside of the model and project would not use natural gas.

Construction Off-road Equipment Mitigation - Basic and Enhanced Emission Reduction Measures

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Parking	67994	53268
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	87.00
tblConstructionPhase	NumDays	20.00	122.00
tblConstructionPhase	NumDays	440.00	264.00
tblConstructionPhase	NumDays	35.00	155.00
tblConstructionPhase	NumDays	440.00	208.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	LightingElect	1.17	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	0.33	0.00
tblEnergyUse	T24NG	1.98	0.00

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

tblGrading	AcresOfGrading	122.00	35.00
tblGrading	MaterialImported	0.00	50,000.00
tblLandUse	LandUseSquareFeet	246,820.00	246,825.00
tblLandUse	LandUseSquareFeet	11,200.00	87,800.00
tblLandUse	LotAcreage	5.67	2.40
tblLandUse	LotAcreage	0.62	0.60
tblLandUse	LotAcreage	0.25	2.00
tblOffRoadEquipment	HorsePower	158.00	450.00
tblOffRoadEquipment	HorsePower	89.00	50.00
tblOffRoadEquipment	HorsePower	130.00	350.00
tblOffRoadEquipment	HorsePower	80.00	120.00
tblOffRoadEquipment	HorsePower	247.00	250.00
tblOffRoadEquipment	HorsePower	97.00	120.00
tblOffRoadEquipment	HorsePower	97.00	120.00
tblOffRoadEquipment	HorsePower	46.00	10.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	158.00	425.00
tblOffRoadEquipment	HorsePower	187.00	200.00
tblOffRoadEquipment	HorsePower	402.00	300.00
tblOffRoadEquipment	HorsePower	172.00	425.00
tblOffRoadEquipment	HorsePower	172.00	385.00
tblOffRoadEquipment	HorsePower	8.00	250.00
tblOffRoadEquipment	HorsePower	84.00	200.00
tblOffRoadEquipment	HorsePower	80.00	120.00
tblOffRoadEquipment	HorsePower	65.00	225.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	VendorTripNumber	231.00	100.00
tblTripsAndVMT	VendorTripNumber	231.00	100.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblTripsAndVMT	WorkerTripNumber	591.00	240.00
tblTripsAndVMT	WorkerTripNumber	591.00	240.00
tblVehicleTrips	ST_TR	1.74	0.00
tblVehicleTrips	SU_TR	1.74	0.00
tblVehicleTrips	WD_TR	1.74	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	4.4802	40.7416	37.2047	0.1334	5.5098	1.5666	7.0764	0.9082	1.4420	2.3501	0.0000	13,098.2488	13,098.2488	3.8207	0.2256	13,260.9867
2026	4.4764	40.7074	37.1800	0.1331	13.6817	1.5665	14.9821	7.0096	1.4419	8.2076	0.0000	13,067.9916	13,067.9916	3.8207	0.4995	13,229.4393
2027	5.2548	46.9406	57.9120	0.1611	13.6817	1.6440	14.9817	7.0096	1.5302	8.2072	0.0000	15,889.0022	15,889.0022	3.2662	0.4895	16,064.8781
2028	6.6427	57.2550	74.5010	0.2099	6.8692	1.8970	8.7663	1.8508	1.7660	3.6169	0.0000	20,969.2971	20,969.2971	3.7806	0.6147	21,247.0025
Maximum	**6.6427**	**57.2550**	**74.5010**	**0.2099**	**13.6817**	**1.8970**	**14.9821**	**7.0096**	**1.7660**	**8.2076**	**0.0000**	**20,969.2971**	**20,969.2971**	**3.8207**	**0.6147**	**21,247.0025**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2025	1.5640	9.2667	58.4865	0.1334	2.5262	0.2156	2.7419	0.4564	0.2147	0.6711	0.0000	13,098.2488	13,098.2488	3.8207	0.2256	13,260.9866
2026	1.5602	11.6867	58.4618	0.1331	6.1209	0.2155	6.3250	2.9468	0.2146	3.1488	0.0000	13,067.9916	13,067.9916	3.8207	0.4995	13,229.4393
2027	2.2900	11.6107	76.2011	0.1611	6.1209	0.2273	6.3246	2.9468	0.2254	3.1484	0.0000	15,889.0021	15,889.0021	3.2662	0.4895	16,064.8781
2028	3.1322	17.3991	92.3268	0.2099	6.8692	0.2785	7.1478	1.8508	0.2748	2.1257	0.0000	20,969.2971	20,969.2971	3.7806	0.6147	21,247.0025
Maximum	**3.1322**	**17.3991**	**92.3268**	**0.2099**	**6.8692**	**0.2785**	**7.1478**	**2.9468**	**0.2748**	**3.1488**	**0.0000**	**20,969.2971**	**20,969.2971**	**3.8207**	**0.6147**	**21,247.0025**

	ROG	NOx	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	**59.02**	**73.09**	**-38.05**	**0.00**	**45.56**	**85.96**	**50.79**	**51.12**	**84.96**	**59.37**	**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	6.5987	1.2300e-003	0.1369	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004		0.2949	0.2949	7.6000e-004		0.3139
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	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	**6.5987**	**1.2300e-003**	**0.1369**	**1.0000e-005**	**0.0000**	**4.8000e-004**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**4.8000e-004**		**0.2949**	**0.2949**	**7.6000e-004**	**0.0000**	**0.3139**

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	6.5987	1.2300e-003	0.1369	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004		0.2949	0.2949	7.6000e-004		0.3139
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	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	**6.5987**	**1.2300e-003**	**0.1369**	**1.0000e-005**	**0.0000**	**4.8000e-004**	**4.8000e-004**	**0.0000**	**4.8000e-004**	**4.8000e-004**		**0.2949**	**0.2949**	**7.6000e-004**	**0.0000**	**0.3139**

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

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/14/2025	1/13/2026	5	87	
2	Site Preparation	Site Preparation	12/6/2026	5/25/2027	5	122	
3	Building Construction	Building Construction	8/8/2027	8/10/2028	5	264	
4	Apron Paving	Paving	10/25/2027	5/26/2028	5	155	
5	MHE Installation	Building Construction	2/20/2028	12/6/2028	5	208	

Acres of Grading (Site Preparation Phase): 35

Acres of Grading (Grading Phase): 0

Acres of Paving: 26

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	3	8.00	450	0.38
Demolition	Other Construction Equipment	3	8.00	425	0.42
Demolition	Other Material Handling Equipment	1	8.00	168	0.40
Demolition	Other Material Handling Equipment	1	8.00	168	0.40
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

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

Site Preparation	Excavators	3	8.00	425	0.38
Site Preparation	Off-Highway Trucks	3	8.00	300	0.38
Site Preparation	Plate Compactors	2	8.00	250	0.43
Site Preparation	Rollers	2	8.00	120	0.38
Site Preparation	Rubber Tired Dozers	2	8.00	250	0.40
Site Preparation	Skid Steer Loaders	2	8.00	225	0.37
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Aerial Lifts	5	8.00	75	0.31
Building Construction	Cranes	2	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Pumps	1	8.00	200	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Tractors/Loaders/Backhoes	2	8.00	120	0.37
Building Construction	Welders	1	8.00	46	0.45
Apron Paving	Graders	1	8.00	200	0.41
Apron Paving	Other Construction Equipment	1	8.00	385	0.42
Apron Paving	Pavers	2	8.00	350	0.42
Apron Paving	Paving Equipment	2	8.00	132	0.36
Apron Paving	Rollers	2	8.00	120	0.38
MHE Installation	Aerial Lifts	3	8.00	75	0.31
MHE Installation	Cranes	0	7.00	231	0.29
MHE Installation	Forklifts	3	8.00	50	0.20
MHE Installation	Generator Sets	0	8.00	84	0.74
MHE Installation	Tractors/Loaders/Backhoes	1	8.00	120	0.37
MHE Installation	Welders	2	8.00	10	0.45

Trips and VMT

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

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	10	20.00	0.00	1,966.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	14	35.00	0.00	6,250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	15	240.00	100.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Apron Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
MHE Installation	9	240.00	100.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.8912	0.0000	4.8912	0.7406	0.0000	0.7406			0.0000			0.0000
Off-Road	4.3771	37.8053	35.8391	0.1191		1.5458	1.5458		1.4221	1.4221		11,526.7894	11,526.7894	3.7280		11,619.9893
Total	**4.3771**	**37.8053**	**35.8391**	**0.1191**	**4.8912**	**1.5458**	**6.4369**	**0.7406**	**1.4221**	**2.1627**		**11,526.7894**	**11,526.7894**	**3.7280**		**11,619.9893**

3.2 Demolition - 2025

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	0.0438	2.8987	0.8101	0.0126	0.3951	0.0197	0.4148	0.1083	0.0188	0.1271		1,391.0562	1,391.0562	0.0887	0.2214	1,459.2530
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0593	0.0376	0.5556	1.7300e-003	0.2236	1.1600e-003	0.2247	0.0593	1.0600e-003	0.0604		180.4033	180.4033	3.9900e-003	4.1700e-003	181.7444
Total	**0.1031**	**2.9363**	**1.3656**	**0.0143**	**0.6187**	**0.0209**	**0.6395**	**0.1676**	**0.0199**	**0.1875**		**1,571.4594**	**1,571.4594**	**0.0927**	**0.2256**	**1,640.9973**

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					1.9076	0.0000	1.9076	0.2888	0.0000	0.2888			0.0000			0.0000
Off-Road	1.4609	6.3304	57.1209	0.1191		0.1948	0.1948		0.1948	0.1948	0.0000	11,526.7894	11,526.7894	3.7280		11,619.9893
Total	**1.4609**	**6.3304**	**57.1209**	**0.1191**	**1.9076**	**0.1948**	**2.1023**	**0.2888**	**0.1948**	**0.4836**	**0.0000**	**11,526.7894**	**11,526.7894**	**3.7280**		**11,619.9893**

3.2 Demolition - 2025

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	0.0438	2.8987	0.8101	0.0126	0.3951	0.0197	0.4148	0.1083	0.0188	0.1271		1,391.056 2	1,391.056 2	0.0887	0.2214	1,459.253 0
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0593	0.0376	0.5556	1.7300e-003	0.2236	1.1600e-003	0.2247	0.0593	1.0600e-003	0.0604		180.4033	180.4033	3.9900e-003	4.1700e-003	181.7444
Total	**0.1031**	**2.9363**	**1.3656**	**0.0143**	**0.6187**	**0.0209**	**0.6395**	**0.1676**	**0.0199**	**0.1875**		**1,571.459 4**	**1,571.459 4**	**0.0927**	**0.2256**	**1,640.997 3**

3.2 Demolition - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.8912	0.0000	4.8912	0.7406	0.0000	0.7406			0.0000			0.0000
Off-Road	4.3771	37.8053	35.8391	0.1191		1.5458	1.5458		1.4221	1.4221		11,526.78 94	11,526.78 94	3.7280		11,619.98 93
Total	**4.3771**	**37.8053**	**35.8391**	**0.1191**	**4.8912**	**1.5458**	**6.4369**	**0.7406**	**1.4221**	**2.1627**		**11,526.78 94**	**11,526.78 94**	**3.7280**		**11,619.98 93**

3.2 Demolition - 2026

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	0.0433	2.8679	0.8180	0.0123	0.3951	0.0196	0.4147	0.1083	0.0188	0.1271		1,364.891 7	1,364.891 7	0.0890	0.2173	1,431.878 0
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0561	0.0341	0.5229	1.6800e-003	0.2236	1.1000e-003	0.2247	0.0593	1.0100e-003	0.0603		176.3105	176.3105	3.6300e-003	3.9300e-003	177.5720
Total	**0.0993**	**2.9021**	**1.3409**	**0.0140**	**0.6187**	**0.0207**	**0.6394**	**0.1676**	**0.0198**	**0.1874**		**1,541.202 2**	**1,541.202 2**	**0.0927**	**0.2213**	**1,609.450 0**

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					1.9076	0.0000	1.9076	0.2888	0.0000	0.2888			0.0000			0.0000
Off-Road	1.4609	6.3304	57.1209	0.1191		0.1948	0.1948		0.1948	0.1948	0.0000	11,526.78 94	11,526.78 94	3.7280		11,619.98 93
Total	**1.4609**	**6.3304**	**57.1209**	**0.1191**	**1.9076**	**0.1948**	**2.1023**	**0.2888**	**0.1948**	**0.4836**	**0.0000**	**11,526.78 94**	**11,526.78 94**	**3.7280**		**11,619.98 93**

3.2 Demolition - 2026

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	0.0433	2.8679	0.8180	0.0123	0.3951	0.0196	0.4147	0.1083	0.0188	0.1271		1,364.8917	1,364.8917	0.0890	0.2173	1,431.8780
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0561	0.0341	0.5229	1.6800e-003	0.2236	1.1000e-003	0.2247	0.0593	1.0100e-003	0.0603		176.3105	176.3105	3.6300e-003	3.9300e-003	177.5720
Total	**0.0993**	**2.9021**	**1.3409**	**0.0140**	**0.6187**	**0.0207**	**0.6394**	**0.1676**	**0.0198**	**0.1874**		**1,541.2022**	**1,541.2022**	**0.0927**	**0.2213**	**1,609.4500**

3.3 Site Preparation - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.3948	0.0000	12.3948	6.6603	0.0000	6.6603			0.0000			0.0000
Off-Road	3.7759	30.3763	27.7186	0.0963		1.2540	1.2540		1.1537	1.1537		9,319.8348	9,319.8348	3.0142		9,395.1904
Total	**3.7759**	**30.3763**	**27.7186**	**0.0963**	**12.3948**	**1.2540**	**13.6488**	**6.6603**	**1.1537**	**7.8140**		**9,319.8348**	**9,319.8348**	**3.0142**		**9,395.1904**

3.3 Site Preparation - 2026

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	0.0981	6.5016	1.8545	0.0279	0.8957	0.0445	0.9402	0.2455	0.0426	0.2881		3,094.2409	3,094.2409	0.2018	0.4927	3,246.1004
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0981	0.0597	0.9150	2.9400e-003	0.3912	1.9200e-003	0.3931	0.1038	1.7700e-003	0.1055		308.5434	308.5434	6.3500e-003	6.8800e-003	310.7509
Total	**0.1962**	**6.5614**	**2.7695**	**0.0309**	**1.2870**	**0.0464**	**1.3334**	**0.3493**	**0.0443**	**0.3936**		**3,402.7843**	**3,402.7843**	**0.2082**	**0.4995**	**3,556.8514**

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					4.8340	0.0000	4.8340	2.5975	0.0000	2.5975			0.0000			0.0000
Off-Road	1.1828	5.1253	45.7810	0.0963		0.1577	0.1577		0.1577	0.1577	0.0000	9,319.8348	9,319.8348	3.0142		9,395.1903
Total	**1.1828**	**5.1253**	**45.7810**	**0.0963**	**4.8340**	**0.1577**	**4.9917**	**2.5975**	**0.1577**	**2.7552**	**0.0000**	**9,319.8348**	**9,319.8348**	**3.0142**		**9,395.1903**

3.3 Site Preparation - 2026

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	0.0981	6.5016	1.8545	0.0279	0.8957	0.0445	0.9402	0.2455	0.0426	0.2881		3,094.2409	3,094.2409	0.2018	0.4927	3,246.1004
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0981	0.0597	0.9150	2.9400e-003	0.3912	1.9200e-003	0.3931	0.1038	1.7700e-003	0.1055		308.5434	308.5434	6.3500e-003	6.8800e-003	310.7509
Total	**0.1962**	**6.5614**	**2.7695**	**0.0309**	**1.2870**	**0.0464**	**1.3334**	**0.3493**	**0.0443**	**0.3936**		**3,402.7843**	**3,402.7843**	**0.2082**	**0.4995**	**3,556.8514**

3.3 Site Preparation - 2027

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					12.3948	0.0000	12.3948	6.6603	0.0000	6.6603			0.0000			0.0000
Off-Road	3.7759	30.3763	27.7186	0.0963		1.2540	1.2540		1.1537	1.1537		9,319.8348	9,319.8348	3.0142		9,395.1904
Total	**3.7759**	**30.3763**	**27.7186**	**0.0963**	**12.3948**	**1.2540**	**13.6488**	**6.6603**	**1.1537**	**7.8140**		**9,319.8348**	**9,319.8348**	**3.0142**		**9,395.1904**

3.3 Site Preparation - 2027

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	0.0970	6.4307	1.8687	0.0273	0.8957	0.0442	0.9399	0.2455	0.0423	0.2878		3,032.4424	3,032.4424	0.2018	0.4830	3,181.4089
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0928	0.0547	0.8665	2.8500e-003	0.3912	1.8000e-003	0.3930	0.1038	1.6600e-003	0.1054		302.2022	302.2022	5.8100e-003	6.5300e-003	304.2928
Total	**0.1898**	**6.4854**	**2.7351**	**0.0302**	**1.2870**	**0.0460**	**1.3330**	**0.3492**	**0.0440**	**0.3932**		**3,334.6446**	**3,334.6446**	**0.2076**	**0.4895**	**3,485.7017**

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					4.8340	0.0000	4.8340	2.5975	0.0000	2.5975			0.0000			0.0000
Off-Road	1.1828	5.1253	45.7810	0.0963		0.1577	0.1577		0.1577	0.1577	0.0000	9,319.8348	9,319.8348	3.0142		9,395.1903
Total	**1.1828**	**5.1253**	**45.7810**	**0.0963**	**4.8340**	**0.1577**	**4.9917**	**2.5975**	**0.1577**	**2.7552**	**0.0000**	**9,319.8348**	**9,319.8348**	**3.0142**		**9,395.1903**

3.3 Site Preparation - 2027

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	0.0970	6.4307	1.8687	0.0273	0.8957	0.0442	0.9399	0.2455	0.0423	0.2878		3,032.4424	3,032.4424	0.2018	0.4830	3,181.4089
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0928	0.0547	0.8665	2.8500e-003	0.3912	1.8000e-003	0.3930	0.1038	1.6600e-003	0.1054		302.2022	302.2022	5.8100e-003	6.5300e-003	304.2928
Total	**0.1898**	**6.4854**	**2.7351**	**0.0302**	**1.2870**	**0.0460**	**1.3330**	**0.3492**	**0.0440**	**0.3932**		**3,334.6446**	**3,334.6446**	**0.2076**	**0.4895**	**3,485.7017**

3.4 Building Construction - 2027

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	2.3250	21.8963	28.8657	0.0608		0.7765	0.7765		0.7313	0.7313		5,800.1004	5,800.1004	1.2068		5,830.2699
Total	**2.3250**	**21.8963**	**28.8657**	**0.0608**		**0.7765**	**0.7765**		**0.7313**	**0.7313**		**5,800.1004**	**5,800.1004**	**1.2068**		**5,830.2699**

3.4 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0936	3.7779	1.3741	0.0169	0.6402	0.0204	0.6606	0.1843	0.0195	0.2038		1,834.327 0	1,834.327 0	0.0726	0.2677	1,915.912 2
Worker	0.6365	0.3749	5.9415	0.0196	2.6826	0.0124	2.6950	0.7115	0.0114	0.7228		2,072.243 6	2,072.243 6	0.0398	0.0448	2,086.579 3
Total	**0.7301**	**4.1528**	**7.3156**	**0.0365**	**3.3228**	**0.0328**	**3.3556**	**0.8958**	**0.0309**	**0.9267**		**3,906.570 7**	**3,906.570 7**	**0.1125**	**0.3124**	**4,002.491 5**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7070	3.8776	35.3734	0.0608		0.0913	0.0913		0.0913	0.0913	0.0000	5,800.100 4	5,800.100 4	1.2068		5,830.269 9
Total	**0.7070**	**3.8776**	**35.3734**	**0.0608**		**0.0913**	**0.0913**		**0.0913**	**0.0913**	**0.0000**	**5,800.100 4**	**5,800.100 4**	**1.2068**		**5,830.269 9**

3.4 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0936	3.7779	1.3741	0.0169	0.6402	0.0204	0.6606	0.1843	0.0195	0.2038		1,834.3270	1,834.3270	0.0726	0.2677	1,915.9122
Worker	0.6365	0.3749	5.9415	0.0196	2.6826	0.0124	2.6950	0.7115	0.0114	0.7228		2,072.2436	2,072.2436	0.0398	0.0448	2,086.5793
Total	**0.7301**	**4.1528**	**7.3156**	**0.0365**	**3.3228**	**0.0328**	**3.3556**	**0.8958**	**0.0309**	**0.9267**		**3,906.5707**	**3,906.5707**	**0.1125**	**0.3124**	**4,002.4915**

3.4 Building Construction - 2028

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	2.3250	21.8963	28.8657	0.0608		0.7765	0.7765		0.7313	0.7313		5,800.1004	5,800.1004	1.2068		5,830.2699
Total	**2.3250**	**21.8963**	**28.8657**	**0.0608**		**0.7765**	**0.7765**		**0.7313**	**0.7313**		**5,800.1004**	**5,800.1004**	**1.2068**		**5,830.2699**

3.4 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0920	3.7542	1.3644	0.0166	0.6402	0.0203	0.6605	0.1843	0.0194	0.2038		1,799.254 0	1,799.254 0	0.0728	0.2628	1,879.388 1
Worker	0.6034	0.3457	5.6644	0.0191	2.6826	0.0115	2.6942	0.7115	0.0106	0.7221		2,034.401 3	2,034.401 3	0.0367	0.0428	2,048.066 6
Total	**0.6954**	**4.0999**	**7.0288**	**0.0357**	**3.3228**	**0.0319**	**3.3547**	**0.8958**	**0.0301**	**0.9258**		**3,833.655 3**	**3,833.655 3**	**0.1094**	**0.3056**	**3,927.454 6**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7070	3.8776	35.3734	0.0608		0.0913	0.0913		0.0913	0.0913	0.0000	5,800.100 4	5,800.100 4	1.2068		5,830.269 9
Total	**0.7070**	**3.8776**	**35.3734**	**0.0608**		**0.0913**	**0.0913**		**0.0913**	**0.0913**	**0.0000**	**5,800.100 4**	**5,800.100 4**	**1.2068**		**5,830.269 9**

3.4 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0920	3.7542	1.3644	0.0166	0.6402	0.0203	0.6605	0.1843	0.0194	0.2038		1,799.2540	1,799.2540	0.0728	0.2628	1,879.3881
Worker	0.6034	0.3457	5.6644	0.0191	2.6826	0.0115	2.6942	0.7115	0.0106	0.7221		2,034.4013	2,034.4013	0.0367	0.0428	2,048.0666
Total	**0.6954**	**4.0999**	**7.0288**	**0.0357**	**3.3228**	**0.0319**	**3.3547**	**0.8958**	**0.0301**	**0.9258**		**3,833.6553**	**3,833.6553**	**0.1094**	**0.3056**	**3,927.4546**

3.5 Apron Paving - 2027

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	2.1128	20.8603	21.2357	0.0621		0.8337	0.8337		0.7670	0.7670		6,009.6441	6,009.6441	1.9436		6,058.2351
Paving	0.0338					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.1466**	**20.8603**	**21.2357**	**0.0621**		**0.8337**	**0.8337**		**0.7670**	**0.7670**		**6,009.6441**	**6,009.6441**	**1.9436**		**6,058.2351**

3.5 Apron Paving - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0530	0.0312	0.4951	1.6300e-003	0.2236	1.0300e-003	0.2246	0.0593	9.5000e-004	0.0602		172.6870	172.6870	3.3200e-003	3.7300e-003	173.8816
Total	**0.0530**	**0.0312**	**0.4951**	**1.6300e-003**	**0.2236**	**1.0300e-003**	**0.2246**	**0.0593**	**9.5000e-004**	**0.0602**		**172.6870**	**172.6870**	**3.3200e-003**	**3.7300e-003**	**173.8816**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7661	3.3197	33.0169	0.0621		0.1021	0.1021		0.1021	0.1021	0.0000	6,009.644 1	6,009.644 1	1.9436		6,058.235 1
Paving	0.0338					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7999**	**3.3197**	**33.0169**	**0.0621**		**0.1021**	**0.1021**		**0.1021**	**0.1021**	**0.0000**	**6,009.644 1**	**6,009.644 1**	**1.9436**		**6,058.235 1**

3.5 Apron Paving - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0530	0.0312	0.4951	1.6300e-003	0.2236	1.0300e-003	0.2246	0.0593	9.5000e-004	0.0602		172.6870	172.6870	3.3200e-003	3.7300e-003	173.8816
Total	**0.0530**	**0.0312**	**0.4951**	**1.6300e-003**	**0.2236**	**1.0300e-003**	**0.2246**	**0.0593**	**9.5000e-004**	**0.0602**		**172.6870**	**172.6870**	**3.3200e-003**	**3.7300e-003**	**173.8816**

3.5 Apron Paving - 2028

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	2.1128	20.8603	21.2357	0.0621		0.8337	0.8337		0.7670	0.7670		6,009.6441	6,009.6441	1.9436		6,058.2351
Paving	0.0338					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.1466**	**20.8603**	**21.2357**	**0.0621**		**0.8337**	**0.8337**		**0.7670**	**0.7670**		**6,009.6441**	**6,009.6441**	**1.9436**		**6,058.2351**

3.5 Apron Paving - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0503	0.0288	0.4720	1.5900e-003	0.2236	9.6000e-004	0.2245	0.0593	8.9000e-004	0.0602		169.5334	169.5334	3.0600e-003	3.5700e-003	170.6722
Total	**0.0503**	**0.0288**	**0.4720**	**1.5900e-003**	**0.2236**	**9.6000e-004**	**0.2245**	**0.0593**	**8.9000e-004**	**0.0602**		**169.5334**	**169.5334**	**3.0600e-003**	**3.5700e-003**	**170.6722**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7661	3.3197	33.0169	0.0621		0.1021	0.1021		0.1021	0.1021	0.0000	6,009.6441	6,009.6441	1.9436		6,058.2351
Paving	0.0338					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7999**	**3.3197**	**33.0169**	**0.0621**		**0.1021**	**0.1021**		**0.1021**	**0.1021**	**0.0000**	**6,009.6441**	**6,009.6441**	**1.9436**		**6,058.2351**

3.5 Apron Paving - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0503	0.0288	0.4720	1.5900e-003	0.2236	9.6000e-004	0.2245	0.0593	8.9000e-004	0.0602		169.5334	169.5334	3.0600e-003	3.5700e-003	170.6722
Total	**0.0503**	**0.0288**	**0.4720**	**1.5900e-003**	**0.2236**	**9.6000e-004**	**0.2245**	**0.0593**	**8.9000e-004**	**0.0602**		**169.5334**	**169.5334**	**3.0600e-003**	**3.5700e-003**	**170.6722**

3.6 MHE Installation - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7301	6.2697	9.8700	0.0140		0.2221	0.2221		0.2067	0.2067		1,322.7086	1,322.7086	0.4083		1,332.9160
Total	**0.7301**	**6.2697**	**9.8700**	**0.0140**		**0.2221**	**0.2221**		**0.2067**	**0.2067**		**1,322.7086**	**1,322.7086**	**0.4083**		**1,332.9160**

3.6 MHE Installation - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0920	3.7542	1.3644	0.0166	0.6402	0.0203	0.6605	0.1843	0.0194	0.2038		1,799.254 0	1,799.254 0	0.0728	0.2628	1,879.388 1
Worker	0.6034	0.3457	5.6644	0.0191	2.6826	0.0115	2.6942	0.7115	0.0106	0.7221		2,034.401 3	2,034.401 3	0.0367	0.0428	2,048.066 6
Total	**0.6954**	**4.0999**	**7.0288**	**0.0357**	**3.3228**	**0.0319**	**3.3547**	**0.8958**	**0.0301**	**0.9258**		**3,833.655 3**	**3,833.655 3**	**0.1094**	**0.3056**	**3,927.454 6**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1843	1.9732	9.4068	0.0140		0.0203	0.0203		0.0203	0.0203	0.0000	1,322.708 6	1,322.708 6	0.4083		1,332.916 0
Total	**0.1843**	**1.9732**	**9.4068**	**0.0140**		**0.0203**	**0.0203**		**0.0203**	**0.0203**	**0.0000**	**1,322.708 6**	**1,322.708 6**	**0.4083**		**1,332.916 0**

3.6 MHE Installation - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0920	3.7542	1.3644	0.0166	0.6402	0.0203	0.6605	0.1843	0.0194	0.2038		1,799.254 0	1,799.254 0	0.0728	0.2628	1,879.388 1
Worker	0.6034	0.3457	5.6644	0.0191	2.6826	0.0115	2.6942	0.7115	0.0106	0.7221		2,034.401 3	2,034.401 3	0.0367	0.0428	2,048.066 6
Total	**0.6954**	**4.0999**	**7.0288**	**0.0357**	**3.3228**	**0.0319**	**3.3547**	**0.8958**	**0.0301**	**0.9258**		**3,833.655 3**	**3,833.655 3**	**0.1094**	**0.3056**	**3,927.454 6**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.538188	0.064794	0.188198	0.125732	0.023928	0.006891	0.012829	0.008420	0.000820	0.000476	0.025563	0.000761	0.003401
Parking Lot	0.538188	0.064794	0.188198	0.125732	0.023928	0.006891	0.012829	0.008420	0.000820	0.000476	0.025563	0.000761	0.003401
Unrefrigerated Warehouse-No Rail	0.538188	0.064794	0.188198	0.125732	0.023928	0.006891	0.012829	0.008420	0.000820	0.000476	0.025563	0.000761	0.003401

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	6.5987	1.2300e-003	0.1369	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004		0.2949	0.2949	7.6000e-004		0.3139
Unmitigated	6.5987	1.2300e-003	0.1369	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004		0.2949	0.2949	7.6000e-004		0.3139

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7631					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8231					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0125	1.2300e-003	0.1369	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004		0.2949	0.2949	7.6000e-004		0.3139
Total	**6.5987**	**1.2300e-003**	**0.1369**	**1.0000e-005**		**4.8000e-004**	**4.8000e-004**		**4.8000e-004**	**4.8000e-004**		**0.2949**	**0.2949**	**7.6000e-004**		**0.3139**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7631					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.8231					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0125	1.2300e-003	0.1369	1.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004		0.2949	0.2949	7.6000e-004		0.3139
Total	**6.5987**	**1.2300e-003**	**0.1369**	**1.0000e-005**		**4.8000e-004**	**4.8000e-004**		**4.8000e-004**	**4.8000e-004**		**0.2949**	**0.2949**	**7.6000e-004**		**0.3139**

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

Asphalt/Concrete Recycling Plant (Phase 1)

Operating Assumptions

Hourly Process Rate (ton)	650	325	Hourly Process Rate (cubic yards)
Daily Process Rate (ton)	5,200	2,600	Daily Process Rate (cubic yards)
Annual Process Rate (ton)	119,600	59,800	Annual Process Rate (cubic yards)

Equipment	Process Rate (ton/hr)	Number of Transfers	Daily Operation (hours)	Uncontrolled Emission Factor (lb/ton)	Controlled Emission Factor (lb/ton)	PM10 Hourly (lb/hr)	PM10 Daily (lb/day)	PM10 Annual (ton/yr)	PM2.5 Hourly (lb/hr)	PM2.5 Daily (lb/day)	PM2.5 Annual (ton/yr)
Jaw Crusher	650	1	8	0.0024	0.00054	0.35	2.81	0.03	0.05	0.42	0.00
Cone Crusher	650	1	8	0.0024	0.00054	0.35	2.81	0.03	0.05	0.42	0.00
Primary Screening	650	1	8	0.0087	0.00074	0.48	3.85	0.04	0.07	0.58	0.01
Deck Conveyor	650	1	8	0.0011	0.000046	0.03	0.24	0.00	0.00	0.04	0.00
Secondary Crusher	650	1	8	0.0024	0.00054	0.35	2.81	0.03	0.05	0.42	0.00
Secondary Conveyor	650	1	8	0.0011	0.000046	0.03	0.24	0.00	0.00	0.04	0.00
Secondary Screen	650	1	8	0.072	0.0022	1.43	11.4	0.13	0.21	1.72	0.02
Total Asphalt/Concrete Recycling Plant Emissions						***3.02***	***24.2***	***0.28***	***0.45***	***3.63***	***0.04***

Asphalt/Concrete Recycling Plant (Phase 2)

Operating Assumptions

Hourly Process Rate (ton)	650	325	Hourly Process Rate (cubic yards)
Daily Process Rate (ton)	5,200	2,600	Daily Process Rate (cubic yards)
Annual Process Rate (ton)	41,600	20,800	Annual Process Rate (cubic yards)

Equipment	Process Rate (ton/hr)	Number of Transfers	Daily Operation (hours)	Uncontrolled Emission Factor (lb/ton)	Controlled Emission Factor (lb/ton)	PM10 Hourly (lb/hr)	PM10 Daily (lb/day)	PM10 Annual (ton/yr)	PM2.5 Hourly (lb/hr)	PM2.5 Daily (lb/day)	PM2.5 Annual (ton/yr)
Jaw Crusher	650	1	8	0.0024	0.00054	0.35	2.81	0.01	0.05	0.42	0.00
Cone Crusher	650	1	8	0.0024	0.00054	0.35	2.81	0.01	0.05	0.42	0.00
Primary Screening	650	1	8	0.0087	0.00074	0.48	3.85	0.02	0.07	0.58	0.00
Deck Conveyor	650	1	8	0.0011	0.000046	0.03	0.24	0.00	0.00	0.04	0.00
Secondary Crusher	650	1	8	0.0024	0.00054	0.35	2.81	0.01	0.05	0.42	0.00
Secondary Conveyor	650	1	8	0.0011	0.000046	0.03	0.24	0.00	0.00	0.04	0.00
Secondary Screen	650	1	8	0.072	0.0022	1.43	11.4	0.05	0.21	1.72	0.01
Total Asphalt/Concrete Recycling Plant Emissions						***3.02***	***24.2***	***0.10***	***0.45***	***3.63***	***0.01***

Attachment B

Operational Emissions Inventory

Aircraft/APU/GSE

Motor Vehicles

Trucks

Generators

AptLayout	Mode	Formaldeh	Methyl alc	Benzene IF	Acetaldehy	Naphthale	O-xylene II	Isopropylb	Ethylbenze	Styrene IRI	1,3-butadi	Acrolein IR	Toluene IR	Phenol (ca	M & P-xyle	Propionald	Acetone IR	2-methyln	Benzaldeh	N-heptane IRIS (ST)
2021 Baseline	Taxi Out	8.31E+00	1.21E+00	1.13E+00	2.88E+00	3.65E-01	1.12E-01	2.02E-03	1.17E-01	2.09E-01	1.14E+00	1.65E+00	4.33E-01	4.89E-01	1.90E-01	4.91E-01	2.54E-01	1.39E-01	3.17E-01	4.32E-02
2021 Baseline	Climb Ground	8.39E+00	1.23E+00	1.14E+00	2.91E+00	3.68E-01	1.13E-01	2.04E-03	1.18E-01	2.11E-01	1.15E+00	1.67E+00	4.37E-01	4.93E-01	1.92E-01	4.95E-01	2.56E-01	1.40E-01	3.20E-01	4.36E-02
2021 Baseline	Climb Below 1000 ft AFE	8.42E+00	1.23E+00	1.15E+00	2.92E+00	3.70E-01	1.14E-01	2.05E-03	1.19E-01	2.12E-01	1.15E+00	1.67E+00	4.39E-01	4.95E-01	1.93E-01	4.98E-01	2.58E-01	1.40E-01	3.22E-01	4.38E-02
2021 Baseline	Climb Below Mixing Height	8.51E+00	1.24E+00	1.16E+00	2.95E+00	3.74E-01	1.15E-01	2.06E-03	1.20E-01	2.14E-01	1.17E+00	1.69E+00	4.43E-01	5.00E-01	1.95E-01	5.03E-01	2.62E-01	1.42E-01	3.25E-01	4.42E-02
2021 Baseline	Descend Below Mixing Height	3.99E+00	5.81E-01	5.45E-01	1.38E+00	1.75E-01	5.38E-02	9.66E-04	5.63E-02	1.00E-01	5.46E-01	7.93E-01	2.08E-01	2.34E-01	9.13E-02	2.36E-01	1.25E-01	6.63E-02	1.52E-01	2.07E-02
2021 Baseline	Descend Below 1000 ft AFE	3.75E+00	5.47E-01	5.12E-01	1.30E+00	1.65E-01	5.06E-02	9.09E-04	5.29E-02	9.42E-02	5.13E-01	7.45E-01	1.95E-01	2.20E-01	8.58E-02	2.22E-01	1.16E-01	6.24E-02	1.43E-01	1.95E-02
2021 Baseline	Descend Ground	3.69E+00	5.39E-01	5.03E-01	1.28E+00	1.62E-01	4.97E-02	8.95E-04	5.21E-02	9.26E-02	5.05E-01	7.33E-01	1.92E-01	2.17E-01	8.44E-02	2.18E-01	1.13E-01	6.15E-02	1.41E-01	1.92E-02
2021 Baseline	Taxi In	3.60E+00	5.26E-01	4.92E-01	1.25E+00	1.58E-01	4.86E-02	8.75E-04	5.09E-02	9.04E-02	4.93E-01	7.16E-01	1.88E-01	2.12E-01	8.25E-02	2.13E-01	1.10E-01	6.01E-02	1.38E-01	1.87E-02
2021 Baseline	APU	9.02E-02	1.32E-02	1.23E-02	3.13E-02	3.97E-03	1.22E-03	2.20E-05	1.28E-03	2.27E-03	1.24E-02	1.80E-02	4.71E-03	5.32E-03	2.07E-03	5.33E-03	2.71E-03	1.51E-03	3.45E-03	4.69E-04
		1.26E+01	1.83E+00	1.72E+00	4.36E+00	5.53E-01	1.70E-01	3.05E-03	1.78E-01	3.16E-01	1.73E+00	2.50E+00	6.56E-01	7.39E-01	2.88E-01	7.44E-01	3.90E-01	2.10E-01	4.80E-01	6.54E-02

Operation Group	Mode	Fuel (ST)	Distance (r	Duration	CO (ST)	THC (ST)	TOG (ST)	VOC (ST)	NMHC (ST)	NOx (ST)	nvPM Mas	nvPM Nur	PMSO (ST)	PMFO (ST)	CO2 (ST)	H2O (ST)	SOx (ST)	PM 2.5 (ST	PM 10 (ST)
2021 Baseline	Startup	0	0	00:00.0	0.00E+00	1.68E+01	1.95E+01	1.94E+01	1.95E+01	0.00E+00	N/A	N/A	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2021 Baseline	Taxi Out	10948.14	0	57:54.0	3.61E+02	5.84E+01	6.75E+01	6.71E+01	6.74E+01	4.40E+01	2.56E+05	1.32E+22	4.73E-01	3.34E-01	3.45E+04	1.35E+04	1.28E+01	1.09E+00	1.09E+00
2021 Baseline	Climb Ground	17260.15	43109.59	28:25.7	3.65E+02	7.57E+01	8.75E+01	8.71E+01	8.75E+01	2.15E+02	5.94E+05	1.56E+22	7.46E-01	3.94E-01	5.45E+04	2.14E+04	2.02E+01	1.79E+00	1.79E+00
2021 Baseline	Climb Below 1000 ft AFE	20103.42	84781.93	45:33.8	3.70E+02	7.60E+01	8.79E+01	8.74E+01	8.78E+01	2.92E+02	7.46E+05	1.67E+22	8.68E-01	4.23E-01	6.34E+04	2.49E+04	2.35E+01	2.11E+00	2.11E+00
2021 Baseline	Climb Below Mixing Height	26368.26	217876.4	30:37.9	3.79E+02	7.66E+01	8.85E+01	8.80E+01	8.85E+01	4.55E+02	1.07E+06	1.92E+22	1.14E+00	4.79E-01	8.32E+04	3.26E+04	3.09E+01	2.80E+00	2.80E+00
2021 Baseline	Climb Below 10000 ft AFE	49135.95	1030401	54:59.2	4.23E+02	7.90E+01	9.12E+01	9.07E+01	9.12E+01	1.00E+03	2.13E+06	2.71E+22	1.97E+00	1.12E+00	1.55E+05	6.08E+04	5.75E+01	5.44E+00	5.44E+00
2021 Baseline	Above 10000 ft AFE	60.8349	3397.64	00:44.7	3.11E-02	4.73E-03	5.47E-03	5.44E-03	5.47E-03	1.54E+00	3.10E+03	2.86E+19	2.19E-03	1.83E-03	1.92E+02	7.53E+01	7.13E-02	7.43E-03	7.43E-03
2021 Baseline	Descend Below 10000 ft AFE	18178.88	1321269	48:43.9	2.86E+02	3.79E+01	4.37E+01	4.34E+01	4.37E+01	1.34E+02	3.93E+05	1.93E+22	7.66E-01	4.10E-01	5.74E+04	2.25E+04	2.13E+01	1.61E+00	1.61E+00
2021 Baseline	Descend Below Mixing Height	13898.85	493580.8	11:06.9	2.00E+02	2.80E+01	3.24E+01	3.22E+01	3.24E+01	1.08E+02	3.13E+05	1.53E+22	6.00E-01	3.07E-01	4.39E+04	1.72E+04	1.63E+01	1.25E+00	1.25E+00
2021 Baseline	Descend Below 1000 ft AFE	7749.431	147327.6	56:03.4	1.72E+02	2.64E+01	3.04E+01	3.03E+01	3.04E+01	4.85E+01	1.60E+05	8.12E+21	3.35E-01	1.90E-01	2.44E+04	9.59E+03	9.08E+00	7.01E-01	7.01E-01
2021 Baseline	Descend Ground	5730.483	32771.55	06:04.6	1.62E+02	2.59E+01	2.99E+01	2.98E+01	2.99E+01	2.79E+01	1.33E+05	6.76E+21	2.48E-01	1.63E-01	1.81E+04	7.09E+03	6.71E+00	5.57E-01	5.57E-01
2021 Baseline	Taxi In	4747.688	0	45:18.0	1.56E+02	2.53E+01	2.93E+01	2.91E+01	2.92E+01	1.91E+01	1.11E+05	5.73E+21	2.05E-01	1.45E-01	1.50E+04	5.87E+03	5.56E+00	4.72E-01	4.72E-01
2021 Baseline	Full Flight	67375.67	2355067	44:27.8	7.09E+02	1.17E+02	1.35E+02	1.34E+02	1.35E+02	1.14E+03	2.52E+06	4.64E+22	2.74E+00	1.53E+00	2.13E+05	8.33E+04	7.89E+01	7.05E+00	7.05E+00
2021 Existing	APU	0	0	40:00.0	9.54E+00	6.34E-01	7.33E-01	7.29E-01	7.33E-01	1.13E+01	N/A	N/A	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E+00	1.27E+00	1.27E+00
		4.03E+04			5.89E+02	1.05E+02	1.22E+02	1.21E+02	1.22E+02	5.74E+02					1.27E+05		4.86E+01	5.32E+00	5.32E+00

AptLayout	Mode	Formaldeh	Methyl alc	Benzene IF	Acetaldehy	Naphthale	O-xylene II	Isopropylb	Ethylbenze	Styrene IRI	1,3-butadi	Acrolein IR	Toluene IR	Phenol (ca	M & P-xyle	Propionald	Acetone IR	2-methyln	Benzaldeh	N-heptane IRIS (ST)
2025 No Project	Taxi Out	9.64E+00	1.41E+00	1.32E+00	3.34E+00	4.23E-01	1.30E-01	2.34E-03	1.36E-01	2.42E-01	1.32E+00	1.92E+00	5.02E-01	5.67E-01	2.21E-01	5.70E-01	2.96E-01	1.61E-01	3.68E-01	5.01E-02
2025 No Project	Climb Ground	9.72E+00	1.42E+00	1.33E+00	3.37E+00	4.27E-01	1.31E-01	2.36E-03	1.37E-01	2.44E-01	1.33E+00	1.93E+00	5.06E-01	5.72E-01	2.23E-01	5.74E-01	2.99E-01	1.62E-01	3.71E-01	5.05E-02
2025 No Project	Climb Below 1000 ft AFE	9.76E+00	1.42E+00	1.33E+00	3.39E+00	4.29E-01	1.32E-01	2.37E-03	1.38E-01	2.45E-01	1.34E+00	1.94E+00	5.08E-01	5.74E-01	2.23E-01	5.77E-01	3.01E-01	1.63E-01	3.73E-01	5.07E-02
2025 No Project	Climb Below Mixing Height	9.85E+00	1.44E+00	1.34E+00	3.42E+00	4.32E-01	1.33E-01	2.39E-03	1.39E-01	2.47E-01	1.35E+00	1.96E+00	5.13E-01	5.78E-01	2.25E-01	5.82E-01	3.05E-01	1.64E-01	3.76E-01	5.11E-02
2025 No Project	Descend Below Mixing Height	4.18E+00	6.07E-01	5.70E-01	1.45E+00	1.83E-01	5.63E-02	1.01E-03	5.89E-02	1.05E-01	5.72E-01	8.30E-01	2.17E-01	2.45E-01	9.56E-02	2.47E-01	1.32E-01	6.93E-02	1.60E-01	2.17E-02
2025 No Project	Descend Below 1000 ft AFE	3.93E+00	5.73E-01	5.37E-01	1.36E+00	1.73E-01	5.30E-02	9.53E-04	5.55E-02	9.88E-02	5.39E-01	7.81E-01	2.05E-01	2.31E-01	9.00E-02	2.32E-01	1.23E-01	6.54E-02	1.50E-01	2.04E-02
2025 No Project	Descend Ground	3.87E+00	5.65E-01	5.29E-01	1.34E+00	1.70E-01	5.22E-02	9.39E-04	5.47E-02	9.72E-02	5.30E-01	7.69E-01	2.02E-01	2.28E-01	8.86E-02	2.29E-01	1.19E-01	6.45E-02	1.48E-01	2.01E-02
2025 No Project	Taxi In	3.78E+00	5.52E-01	5.16E-01	1.31E+00	1.66E-01	5.10E-02	9.18E-04	5.34E-02	9.49E-02	5.18E-01	7.51E-01	1.97E-01	2.22E-01	8.66E-02	2.23E-01	1.16E-01	6.30E-02	1.44E-01	1.96E-02
2025 No Project	APU	9.73E-02	1.43E-02	1.33E-02	3.38E-02	4.28E-03	1.31E-03	2.37E-05	1.38E-03	2.44E-03	1.33E-02	1.94E-02	5.08E-03	5.74E-03	2.23E-03	5.75E-03	2.92E-03	1.63E-03	3.72E-03	5.06E-04
		1.41E+01	2.06E+00	1.92E+00	4.90E+00	6.19E-01	1.91E-01	3.42E-03	1.99E-01	3.54E-01	1.94E+00	2.81E+00	7.35E-01	8.29E-01	3.23E-01	8.35E-01	4.40E-01	2.35E-01	5.40E-01	7.33E-02

AptLayout	Mode	Formaldeh	Methyl alc	Benzene IF	Acetaldehy	Naphthale	O-xylene II	Isopropylb	Ethylbenze	Styrene IRI	1,3-butadi	Acrolein IR	Toluene IR	Phenol (ca	M & P-xyle	Propionalc	Acetone IR	2-methyln	Benzaldeh	N-heptane IRIS (ST)
2025 Project	Taxi Out	1.02E+01	1.49E+00	1.40E+00	3.55E+00	4.49E-01	1.38E-01	2.48E-03	1.44E-01	2.57E-01	1.40E+00	2.03E+00	5.33E-01	6.02E-01	2.34E-01	6.05E-01	3.14E-01	1.71E-01	3.91E-01	5.32E-02
2025 Project	Climb Ground	1.03E+01	1.51E+00	1.41E+00	3.58E+00	4.53E-01	1.39E-01	2.50E-03	1.46E-01	2.59E-01	1.41E+00	2.05E+00	5.37E-01	6.06E-01	2.36E-01	6.09E-01	3.17E-01	1.72E-01	3.94E-01	5.36E-02
2025 Project	Climb Below 1000 ft AFE	1.04E+01	1.51E+00	1.41E+00	3.59E+00	4.55E-01	1.40E-01	2.51E-03	1.46E-01	2.60E-01	1.42E+00	2.06E+00	5.39E-01	6.08E-01	2.37E-01	6.12E-01	3.19E-01	1.72E-01	3.95E-01	5.38E-02
2025 Project	Climb Below Mixing Height	1.04E+01	1.52E+00	1.42E+00	3.62E+00	4.58E-01	1.41E-01	2.53E-03	1.47E-01	2.62E-01	1.43E+00	2.07E+00	5.43E-01	6.13E-01	2.39E-01	6.17E-01	3.23E-01	1.74E-01	3.99E-01	5.42E-02
2025 Project	Descend Below Mixing Height	4.25E+00	6.18E-01	5.80E-01	1.47E+00	1.87E-01	5.73E-02	1.03E-03	5.99E-02	1.07E-01	5.82E-01	8.44E-01	2.21E-01	2.49E-01	9.72E-02	2.51E-01	1.34E-01	7.05E-02	1.62E-01	2.21E-02
2025 Project	Descend Below 1000 ft AFE	4.01E+00	5.83E-01	5.47E-01	1.39E+00	1.76E-01	5.40E-02	9.70E-04	5.65E-02	1.01E-01	5.48E-01	7.95E-01	2.08E-01	2.35E-01	9.16E-02	2.37E-01	1.25E-01	6.66E-02	1.53E-01	2.08E-02
2025 Project	Descend Ground	3.94E+00	5.76E-01	5.38E-01	1.37E+00	1.73E-01	5.32E-02	9.57E-04	5.57E-02	9.90E-02	5.40E-01	7.83E-01	2.05E-01	2.32E-01	9.02E-02	2.33E-01	1.21E-01	6.57E-02	1.51E-01	2.05E-02
2025 Project	Taxi In	3.85E+00	5.63E-01	5.26E-01	1.34E+00	1.69E-01	5.19E-02	9.35E-04	5.44E-02	9.67E-02	5.28E-01	7.66E-01	2.01E-01	2.27E-01	8.82E-02	2.28E-01	1.18E-01	6.42E-02	1.47E-01	2.00E-02
2025 Project	APU	9.73E-02	1.43E-02	1.33E-02	3.38E-02	4.28E-03	1.31E-03	2.37E-05	1.38E-03	2.44E-03	1.33E-02	1.94E-02	5.08E-03	5.74E-03	2.23E-03	5.75E-03	2.92E-03	1.63E-03	3.72E-03	5.06E-04
		1.47E+01	2.15E+00	2.01E+00	5.12E+00	6.49E-01	2.00E-01	3.58E-03	2.08E-01	3.71E-01	2.03E+00	2.93E+00	7.69E-01	8.68E-01	3.38E-01	8.74E-01	4.60E-01	2.46E-01	5.65E-01	7.68E-02

Operation Group	Mode	Fuel (ST)	Distance (r	Duration	CO (ST)	THC (ST)	TOG (ST)	VOC (ST)	NMHC (ST)	NOx (ST)	nvPM Mas	nvPM Num	PMSO (ST)	PMFO (ST)	CO2 (ST)	H2O (ST)	SOx (ST)	PM 2.5 (ST	PM 10 (ST)
2025 Project	Startup	0	0	00:00.0	0.00E+00	1.84E+01	2.12E+01	2.11E+01	2.12E+01	0.00E+00	N/A	N/A	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2025 Project	Taxi Out	13875.25	0	40:26.0	4.55E+02	7.19E+01	8.31E+01	8.26E+01	8.31E+01	5.60E+01	3.04E+05	1.61E+22	5.99E-01	4.12E-01	4.38E+04	1.72E+04	1.63E+01	1.35E+00	1.35E+00
2025 Project	Climb Ground	20778.69	47224.68	13:53.2	4.60E+02	9.08E+01	1.05E+02	1.04E+02	1.05E+02	2.64E+02	6.23E+05	1.84E+22	8.98E-01	4.72E-01	6.56E+04	2.57E+04	2.43E+01	2.06E+00	2.06E+00
2025 Project	Climb Below 1000 ft AFE	23860.07	94410.61	34:41.1	4.66E+02	9.11E+01	1.05E+02	1.05E+02	1.05E+02	3.57E+02	7.65E+05	1.94E+22	1.03E+00	5.03E-01	7.53E+04	2.95E+04	2.79E+01	2.38E+00	2.38E+00
2025 Project	Climb Below Mixing Height	30741.85	249053.5	29:12.8	4.76E+02	9.17E+01	1.06E+02	1.05E+02	1.06E+02	5.45E+02	1.07E+06	2.17E+22	1.33E+00	5.60E-01	9.70E+04	3.80E+04	3.60E+01	3.06E+00	3.06E+00
2025 Project	Climb Below 10000 ft AFE	55176	1159545	30:23.4	5.29E+02	9.42E+01	1.09E+02	1.08E+02	1.09E+02	1.16E+03	2.02E+06	2.90E+22	2.22E+00	1.25E+00	1.74E+05	6.83E+04	6.46E+01	5.70E+00	5.70E+00
2025 Project	Above 10000 ft AFE	57.8432	7444.93	01:52.4	3.09E-01	5.96E-03	6.40E-03	5.98E-03	6.10E-03	1.27E+00	2.59E+03	2.42E+19	2.08E-03	1.74E-03	1.83E+02	7.16E+01	6.78E-02	6.67E-03	6.67E-03
2025 Project	Descend Below 10000 ft AFE	19437.85	1489715	45:47.1	3.20E+02	4.12E+01	4.76E+01	4.73E+01	4.75E+01	1.44E+02	3.73E+05	1.93E+22	8.21E-01	4.08E-01	6.13E+04	2.40E+04	2.28E+01	1.64E+00	1.64E+00
2025 Project	Descend Below Mixing Height	15058.4	547616.4	31:34.5	2.19E+02	2.99E+01	3.45E+01	3.43E+01	3.45E+01	1.18E+02	2.99E+05	1.54E+22	6.51E-01	3.08E-01	4.75E+04	1.86E+04	1.76E+01	1.29E+00	1.29E+00
2025 Project	Descend Below 1000 ft AFE	8152.399	153194.4	57:13.9	1.89E+02	2.81E+01	3.25E+01	3.23E+01	3.25E+01	4.97E+01	1.60E+05	8.39E+21	3.52E-01	1.97E-01	2.57E+04	1.01E+04	9.55E+00	7.26E-01	7.26E-01
2025 Project	Descend Ground	6272.122	36621.59	54:03.9	1.78E+02	2.77E+01	3.20E+01	3.18E+01	3.20E+01	3.09E+01	1.34E+05	7.05E+21	2.71E-01	1.71E-01	1.98E+04	7.76E+03	7.35E+00	5.90E-01	5.90E-01
2025 Project	Taxi In	5223.246	0	31:26.0	1.71E+02	2.71E+01	3.13E+01	3.11E+01	3.13E+01	2.11E+01	1.14E+05	6.05E+21	2.26E-01	1.55E-01	1.65E+04	6.46E+03	6.12E+00	5.07E-01	5.07E-01
2025 Project	Full Flight	74671.69	2656705	18:02.9	8.49E+02	1.35E+02	1.56E+02	1.55E+02	1.56E+02	1.31E+03	2.40E+06	4.83E+22	3.04E+00	1.66E+00	2.36E+05	9.24E+04	8.75E+01	7.34E+00	7.34E+00
2025 Project	APU	0	0	55:30.0	1.06E+01	6.84E-01	7.91E-01	7.86E-01	7.91E-01	1.30E+01	N/A	N/A	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+00	1.42E+00	1.42E+00
		4.58E+04			7.06E+02	1.22E+02	1.41E+02	1.40E+02	1.41E+02	6.76E+02					1.45E+05		5.52E+01	5.77E+00	5.77E+00

Operation Group	Mode	Fuel (ST)	Distance (r	Duration	CO (ST)	THC (ST)	TOG (ST)	VOC (ST)	NMHC (ST)	NOx (ST)	nvPM Mas	nvPM Num	PMSO (ST)	PMFO (ST)	CO2 (ST)	H2O (ST)	SOx (ST)	PM 2.5 (ST	PM 10 (ST)
2025 No Project	Startup	0	0	00:00.0	0.00E+00	1.84E+01	2.12E+01	2.11E+01	2.12E+01	0.00E+00	N/A	N/A	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2025 No Project	Taxi Out	13074.14	0	49:36.0	4.29E+02	6.78E+01	7.83E+01	7.78E+01	7.83E+01	5.27E+01	2.86E+05	1.51E+22	5.65E-01	3.88E-01	4.12E+04	1.62E+04	1.53E+01	1.27E+00	1.27E+00
2025 No Project	Climb Ground	19977.57	47224.68	23:03.2	4.34E+02	8.67E+01	1.00E+02	9.96E+01	1.00E+02	2.61E+02	6.05E+05	1.74E+22	8.63E-01	4.48E-01	6.30E+04	2.47E+04	2.34E+01	1.98E+00	1.98E+00
2025 No Project	Climb Below 1000 ft AFE	23058.96	94410.61	43:51.1	4.39E+02	8.70E+01	1.00E+02	9.99E+01	1.00E+02	3.54E+02	7.48E+05	1.85E+22	9.96E-01	4.79E-01	7.28E+04	2.85E+04	2.70E+01	2.30E+00	2.30E+00
2025 No Project	Climb Below Mixing Height	29940.74	249053.5	38:22.8	4.50E+02	8.76E+01	1.01E+02	1.01E+02	1.01E+02	5.42E+02	1.05E+06	2.07E+22	1.29E+00	5.37E-01	9.45E+04	3.70E+04	3.51E+01	2.99E+00	2.99E+00
2025 No Project	Climb Below 10000 ft AFE	54374.88	1159545	39:33.4	5.03E+02	9.00E+01	1.04E+02	1.03E+02	1.04E+02	1.16E+03	2.00E+06	2.80E+22	2.19E+00	1.22E+00	1.72E+05	6.73E+04	6.37E+01	5.62E+00	5.62E+00
2025 No Project	Above 10000 ft AFE	57.8432	7444.93	01:52.4	3.09E-01	5.96E-03	6.40E-03	5.98E-03	6.10E-03	1.27E+00	2.59E+03	2.42E+19	2.08E-03	1.74E-03	1.83E+02	7.16E+01	6.78E-02	6.67E-03	6.67E-03
2025 No Project	Descend Below 10000 ft AFE	19341.72	1489715	39:41.1	3.17E+02	4.07E+01	4.70E+01	4.67E+01	4.69E+01	1.44E+02	3.71E+05	1.92E+22	8.17E-01	4.05E-01	6.10E+04	2.39E+04	2.27E+01	1.63E+00	1.63E+00
2025 No Project	Descend Below Mixing Height	14962.27	547616.4	25:28.5	2.16E+02	2.94E+01	3.39E+01	3.37E+01	3.39E+01	1.17E+02	2.97E+05	1.53E+22	6.46E-01	3.05E-01	4.72E+04	1.85E+04	1.75E+01	1.28E+00	1.28E+00
2025 No Project	Descend Below 1000 ft AFE	8056.266	153194.4	51:07.9	1.86E+02	2.76E+01	3.19E+01	3.17E+01	3.19E+01	4.93E+01	1.58E+05	8.28E+21	3.48E-01	1.94E-01	2.54E+04	9.97E+03	9.44E+00	7.16E-01	7.16E-01
2025 No Project	Descend Ground	6175.989	36621.59	47:57.9	1.74E+02	2.72E+01	3.14E+01	3.13E+01	3.14E+01	3.05E+01	1.32E+05	6.93E+21	2.67E-01	1.69E-01	1.95E+04	7.64E+03	7.23E+00	5.80E-01	5.80E-01
2025 No Project	Taxi In	5127.113	0	25:20.0	1.68E+02	2.66E+01	3.07E+01	3.05E+01	3.07E+01	2.07E+01	1.12E+05	5.94E+21	2.21E-01	1.52E-01	1.62E+04	6.34E+03	6.00E+00	4.97E-01	4.97E-01
2025 No Project	Full Flight	73774.45	2656705	21:06.9	8.20E+02	1.31E+02	1.51E+02	1.50E+02	1.51E+02	1.31E+03	2.38E+06	4.72E+22	3.01E+00	1.63E+00	2.33E+05	9.13E+04	8.64E+01	7.26E+00	7.26E+00
2025 No Project	APU	0	0	55:30.0	1.06E+01	6.84E-01	7.91E-01	7.86E-01	7.91E-01	1.30E+01	N/A	N/A	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E+00	1.42E+00	1.42E+00
		4.49E+04			6.77E+02	1.18E+02	1.36E+02	1.35E+02	1.36E+02	6.72E+02					1.42E+05		5.42E+01	5.69E+00	5.69E+00

AptLayout	Mode	Formaldeh	Methyl alc	Benzene IF	Acetaldehy	Naphthale	O-xylene II	Isopropylb	Ethylbenze	Styrene IR	1,3-butadi	Acrolein IR	Toluene IR	Phenol (ca	M & P-xyle	Propionalc	Acetone IF	2-methyln	Benzaldeh	N-heptane IRIS (ST)
2029 No Project	Taxi Out	1.00E+01	1.46E+00	1.37E+00	3.48E+00	4.40E-01	1.35E-01	2.43E-03	1.42E-01	2.52E-01	1.37E+00	1.99E+00	5.22E-01	5.89E-01	2.29E-01	5.92E-01	3.08E-01	1.67E-01	3.83E-01	5.21E-02
2029 No Project	Climb Ground	1.01E+01	1.48E+00	1.38E+00	3.51E+00	4.44E-01	1.36E-01	2.45E-03	1.43E-01	2.54E-01	1.38E+00	2.01E+00	5.26E-01	5.94E-01	2.31E-01	5.97E-01	3.11E-01	1.68E-01	3.86E-01	5.25E-02
2029 No Project	Climb Below 1000 ft AFE	1.01E+01	1.48E+00	1.39E+00	3.52E+00	4.46E-01	1.37E-01	2.46E-03	1.43E-01	2.55E-01	1.39E+00	2.02E+00	5.28E-01	5.96E-01	2.32E-01	6.00E-01	3.13E-01	1.69E-01	3.87E-01	5.27E-02
2029 No Project	Climb Below Mixing Height	1.02E+01	1.49E+00	1.40E+00	3.55E+00	4.50E-01	1.38E-01	2.48E-03	1.45E-01	2.57E-01	1.40E+00	2.03E+00	5.33E-01	6.02E-01	2.34E-01	6.05E-01	3.17E-01	1.70E-01	3.91E-01	5.32E-02
2029 No Project	Descend Below Mixing Height	4.33E+00	6.29E-01	5.91E-01	1.50E+00	1.90E-01	5.84E-02	1.05E-03	6.11E-02	1.09E-01	5.93E-01	8.60E-01	2.25E-01	2.54E-01	9.90E-02	2.56E-01	1.37E-01	7.18E-02	1.65E-01	2.25E-02
2029 No Project	Descend Below 1000 ft AFE	4.09E+00	5.95E-01	5.58E-01	1.42E+00	1.79E-01	5.51E-02	9.89E-04	5.76E-02	1.03E-01	5.59E-01	8.11E-01	2.13E-01	2.40E-01	9.35E-02	2.41E-01	1.27E-01	6.79E-02	1.56E-01	2.12E-02
2029 No Project	Descend Ground	4.02E+00	5.87E-01	5.49E-01	1.40E+00	1.77E-01	5.42E-02	9.76E-04	5.68E-02	1.01E-01	5.51E-01	8.00E-01	2.10E-01	2.37E-01	9.21E-02	2.38E-01	1.24E-01	6.70E-02	1.54E-01	2.09E-02
2029 No Project	Taxi In	3.93E+00	5.74E-01	5.36E-01	1.36E+00	1.73E-01	5.30E-02	9.53E-04	5.55E-02	9.86E-02	5.38E-01	7.81E-01	2.05E-01	2.31E-01	8.99E-02	2.32E-01	1.21E-01	6.55E-02	1.50E-01	2.04E-02
2029 No Project	APU	1.04E-01	1.52E-02	1.41E-02	3.60E-02	4.55E-03	1.40E-03	2.53E-05	1.46E-03	2.60E-03	1.42E-02	2.06E-02	5.40E-03	6.11E-03	2.37E-03	6.12E-03	3.11E-03	1.73E-03	3.96E-03	5.39E-04
		1.46E+01	2.13E+00	2.01E+00	5.09E+00	6.45E-01	1.98E-01	3.56E-03	2.08E-01	3.69E-01	2.01E+00	2.91E+00	7.63E-01	8.62E-01	3.35E-01	8.67E-01	4.57E-01	2.44E-01	5.60E-01	7.62E-02

AptLayout	Mode	Formaldeh	Methyl alc	Benzene IF	Acetaldehy	Naphthale	O-xylene II	Isopropylb	Ethylbenze	Styrene IRI	1,3-butadi	Acrolein IR	Toluene IR	Phenol (ca	M & P-xyle	Propionalc	Acetone IR	2-methyln	Benzaldeh	N-heptane IRIS (ST)
2029 Project	Taxi Out	1.06E+01	1.54E+00	1.44E+00	3.66E+00	4.64E-01	1.42E-01	2.56E-03	1.49E-01	2.65E-01	1.45E+00	2.10E+00	5.50E-01	6.21E-01	2.42E-01	6.24E-01	3.25E-01	1.76E-01	4.03E-01	5.49E-02
2029 Project	Climb Ground	1.06E+01	1.55E+00	1.45E+00	3.69E+00	4.67E-01	1.44E-01	2.58E-03	1.50E-01	2.67E-01	1.46E+00	2.12E+00	5.54E-01	6.26E-01	2.44E-01	6.29E-01	3.27E-01	1.77E-01	4.06E-01	5.53E-02
2029 Project	Climb Below 1000 ft AFE	1.07E+01	1.56E+00	1.46E+00	3.71E+00	4.69E-01	1.44E-01	2.59E-03	1.51E-01	2.68E-01	1.46E+00	2.12E+00	5.56E-01	6.28E-01	2.45E-01	6.31E-01	3.30E-01	1.78E-01	4.08E-01	5.55E-02
2029 Project	Climb Below Mixing Height	1.08E+01	1.57E+00	1.47E+00	3.74E+00	4.73E-01	1.45E-01	2.61E-03	1.52E-01	2.71E-01	1.48E+00	2.14E+00	5.61E-01	6.33E-01	2.47E-01	6.37E-01	3.34E-01	1.79E-01	4.12E-01	5.60E-02
2029 Project	Descend Below Mixing Height	4.39E+00	6.38E-01	5.99E-01	1.52E+00	1.93E-01	5.92E-02	1.06E-03	6.19E-02	1.10E-01	6.01E-01	8.72E-01	2.28E-01	2.57E-01	1.00E-01	2.60E-01	1.39E-01	7.28E-02	1.68E-01	2.28E-02
2029 Project	Descend Below 1000 ft AFE	4.15E+00	6.04E-01	5.66E-01	1.44E+00	1.82E-01	5.59E-02	1.00E-03	5.85E-02	1.04E-01	5.68E-01	8.23E-01	2.16E-01	2.43E-01	9.49E-02	2.45E-01	1.29E-01	6.89E-02	1.58E-01	2.15E-02
2029 Project	Descend Ground	4.08E+00	5.96E-01	5.58E-01	1.42E+00	1.79E-01	5.51E-02	9.91E-04	5.77E-02	1.03E-01	5.59E-01	8.12E-01	2.13E-01	2.40E-01	9.35E-02	2.41E-01	1.26E-01	6.81E-02	1.56E-01	2.12E-02
2029 Project	Taxi In	3.99E+00	5.82E-01	5.45E-01	1.38E+00	1.75E-01	5.38E-02	9.68E-04	5.63E-02	1.00E-01	5.46E-01	7.93E-01	2.08E-01	2.35E-01	9.13E-02	2.36E-01	1.23E-01	6.65E-02	1.52E-01	2.07E-02
2029 Project	APU	1.04E-01	1.52E-02	1.41E-02	3.60E-02	4.55E-03	1.40E-03	2.53E-05	1.46E-03	2.60E-03	1.42E-02	2.06E-02	5.40E-03	6.11E-03	2.37E-03	6.12E-03	3.11E-03	1.73E-03	3.96E-03	5.39E-04
		1.53E+01	2.22E+00	2.08E+00	5.30E+00	6.71E-01	2.06E-01	3.70E-03	2.15E-01	3.84E-01	2.10E+00	3.03E+00	7.94E-01	8.96E-01	3.49E-01	9.03E-01	4.76E-01	2.54E-01	5.84E-01	7.93E-02

Operation Group	Mode	Fuel (ST)	Distance (r	Duration	CO (ST)	THC (ST)	TOG (ST)	VOC (ST)	NMHC (ST)	NOx (ST)	nvPM Mas	nvPM Num	PMSO (ST)	PMFO (ST)	CO2 (ST)	H2O (ST)	SOx (ST)	PM 2.5 (ST	PM 10 (ST)
2029 Project	Startup	0	0	00:00.0	0.00E+00	2.04E+01	2.35E+01	2.34E+01	2.35E+01	0.00E+00	N/A	N/A	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2029 Project	Taxi Out	15170.44	0	49:18.0	4.79E+02	7.42E+01	8.57E+01	8.53E+01	8.57E+01	6.14E+01	3.23E+05	1.76E+22	6.55E-01	4.25E-01	4.79E+04	1.88E+04	1.78E+01	1.44E+00	1.44E+00
2029 Project	Climb Ground	22844.45	51629.45	26:18.8	4.85E+02	9.52E+01	1.10E+02	1.09E+02	1.10E+02	3.07E+02	6.42E+05	1.99E+22	9.87E-01	4.90E-01	7.21E+04	2.83E+04	2.68E+01	2.18E+00	2.18E+00
2029 Project	Climb Below 1000 ft AFE	26157.51	99967.02	47:38.2	4.90E+02	9.55E+01	1.10E+02	1.10E+02	1.10E+02	4.12E+02	7.83E+05	2.10E+22	1.13E+00	5.22E-01	8.25E+04	3.24E+04	3.06E+01	2.51E+00	2.51E+00
2029 Project	Climb Below Mixing Height	34000.04	274965.9	45:47.1	5.02E+02	9.61E+01	1.11E+02	1.10E+02	1.11E+02	6.41E+02	1.08E+06	2.32E+22	1.47E+00	5.85E-01	1.07E+05	4.21E+04	3.98E+01	3.24E+00	3.24E+00
2029 Project	Climb Below 10000 ft AFE	61086.81	1280388	57:03.0	5.58E+02	9.87E+01	1.14E+02	1.13E+02	1.14E+02	1.37E+03	2.03E+06	3.08E+22	2.46E+00	1.35E+00	1.93E+05	7.56E+04	7.15E+01	6.05E+00	6.05E+00
2029 Project	Above 10000 ft AFE	53.41844	7425.85	01:38.5	3.92E-01	6.05E-03	6.35E-03	5.81E-03	5.96E-03	1.14E+00	2.31E+03	2.35E+19	1.92E-03	1.60E-03	1.69E+02	6.61E+01	6.26E-02	6.08E-03	6.08E-03
2029 Project	Descend Below 10000 ft AFE	21071.53	1645449	38:54.0	3.41E+02	4.30E+01	4.96E+01	4.93E+01	4.96E+01	1.57E+02	4.06E+05	2.15E+22	8.91E-01	4.01E-01	6.65E+04	2.61E+04	2.47E+01	1.74E+00	1.74E+00
2029 Project	Descend Below Mixing Height	16424.7	593145.7	12:50.7	2.32E+02	3.09E+01	3.56E+01	3.54E+01	3.56E+01	1.30E+02	3.25E+05	1.73E+22	7.10E-01	3.01E-01	5.18E+04	2.03E+04	1.92E+01	1.37E+00	1.37E+00
2029 Project	Descend Below 1000 ft AFE	8594.889	143532.2	22:12.3	1.99E+02	2.91E+01	3.37E+01	3.35E+01	3.36E+01	5.16E+01	1.70E+05	9.16E+21	3.71E-01	1.99E-01	2.71E+04	1.06E+04	1.01E+01	7.57E-01	7.57E-01
2029 Project	Descend Ground	6908.95	40898.95	23:46.2	1.88E+02	2.87E+01	3.32E+01	3.30E+01	3.32E+01	3.48E+01	1.44E+05	7.80E+21	2.98E-01	1.75E-01	2.18E+04	8.55E+03	8.09E+00	6.32E-01	6.32E-01
2029 Project	Taxi In	5730.666	0	58:36.0	1.81E+02	2.80E+01	3.24E+01	3.22E+01	3.24E+01	2.32E+01	1.22E+05	6.65E+21	2.48E-01	1.60E-01	1.81E+04	7.09E+03	6.71E+00	5.43E-01	5.43E-01
2029 Project	Full Flight	82211.77	2933263	37:35.6	8.99E+02	1.42E+02	1.64E+02	1.63E+02	1.63E+02	1.52E+03	2.44E+06	5.23E+22	3.35E+00	1.75E+00	2.59E+05	1.02E+05	9.63E+01	7.79E+00	7.79E+00
2029 Project	APU	0	0	47:00.0	1.12E+01	7.28E-01	8.42E-01	8.37E-01	8.42E-01	1.42E+01	N/A	N/A	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E+00	1.54E+00	1.54E+00
		5.04E+04			7.45E+02	1.28E+02	1.47E+02	1.46E+02	1.47E+02	7.85E+02					1.59E+05		6.07E+01	6.15E+00	6.15E+00

Operation Group	Mode	Fuel (ST)	Distance (r	Duration	CO (ST)	THC (ST)	TOG (ST)	VOC (ST)	NMHC (ST)	NOx (ST)	nvPM Mas	nvPM Num	PMSO (ST)	PMFO (ST)	CO2 (ST)	H2O (ST)	SOx (ST)	PM 2.5 (ST	PM 10 (ST)
2029 No Project	Startup	0	0	00:00.0	0.00E+00	2.04E+01	2.35E+01	2.34E+01	2.35E+01	0.00E+00	N/A	N/A	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2029 No Project	Taxi Out	14396.98	0	00:54.0	4.55E+02	7.04E+01	8.14E+01	8.09E+01	8.13E+01	5.83E+01	3.07E+05	1.67E+22	6.22E-01	4.03E-01	4.54E+04	1.78E+04	1.69E+01	1.36E+00	1.36E+00
2029 No Project	Climb Ground	22070.99	51629.45	37:54.8	4.60E+02	9.14E+01	1.06E+02	1.05E+02	1.06E+02	3.04E+02	6.26E+05	1.90E+22	9.53E-01	4.68E-01	6.96E+04	2.73E+04	2.59E+01	2.11E+00	2.11E+00
2029 No Project	Climb Below 1000 ft AFE	25384.04	99967.02	59:14.2	4.66E+02	9.17E+01	1.06E+02	1.05E+02	1.06E+02	4.09E+02	7.67E+05	2.01E+22	1.10E+00	5.00E-01	8.01E+04	3.14E+04	2.97E+01	2.44E+00	2.44E+00
2029 No Project	Climb Below Mixing Height	33226.57	274965.9	57:23.1	4.77E+02	9.23E+01	1.07E+02	1.06E+02	1.07E+02	6.38E+02	1.06E+06	2.23E+22	1.44E+00	5.63E-01	1.05E+05	4.11E+04	3.89E+01	3.17E+00	3.17E+00
2029 No Project	Climb Below 10000 ft AFE	60313.35	1280388	08:39.0	5.33E+02	9.49E+01	1.10E+02	1.09E+02	1.10E+02	1.36E+03	2.02E+06	2.99E+22	2.43E+00	1.32E+00	1.90E+05	7.46E+04	7.06E+01	5.98E+00	5.98E+00
2029 No Project	Above 10000 ft AFE	53.41844	7425.85	01:38.5	3.92E-01	6.05E-03	6.35E-03	5.81E-03	5.96E-03	1.14E+00	2.31E+03	2.35E+19	1.92E-03	1.60E-03	1.69E+02	6.61E+01	6.26E-02	6.08E-03	6.08E-03
2029 No Project	Descend Below 10000 ft AFE	20983.64	1645449	33:24.0	3.38E+02	4.26E+01	4.91E+01	4.88E+01	4.91E+01	1.57E+02	4.05E+05	2.14E+22	8.88E-01	3.99E-01	6.62E+04	2.60E+04	2.46E+01	1.73E+00	1.73E+00
2029 No Project	Descend Below Mixing Height	16336.81	593145.7	07:20.7	2.29E+02	3.04E+01	3.51E+01	3.49E+01	3.51E+01	1.30E+02	3.24E+05	1.72E+22	7.06E-01	2.98E-01	5.15E+04	2.02E+04	1.91E+01	1.36E+00	1.36E+00
2029 No Project	Descend Below 1000 ft AFE	8506.996	143532.2	16:42.3	1.97E+02	2.87E+01	3.32E+01	3.30E+01	3.31E+01	5.12E+01	1.68E+05	9.06E+21	3.68E-01	1.96E-01	2.68E+04	1.05E+04	9.96E+00	7.49E-01	7.49E-01
2029 No Project	Descend Ground	6821.056	40898.95	18:16.2	1.85E+02	2.83E+01	3.27E+01	3.25E+01	3.27E+01	3.45E+01	1.42E+05	7.70E+21	2.95E-01	1.73E-01	2.15E+04	8.44E+03	7.99E+00	6.24E-01	6.24E-01
2029 No Project	Taxi In	5642.772	0	53:06.0	1.78E+02	2.76E+01	3.19E+01	3.17E+01	3.19E+01	2.29E+01	1.20E+05	6.55E+21	2.44E-01	1.58E-01	1.78E+04	6.98E+03	6.61E+00	5.34E-01	5.34E-01
2029 No Project	Full Flight	81350.41	2933263	43:41.6	8.72E+02	1.38E+02	1.59E+02	1.58E+02	1.59E+02	1.52E+03	2.43E+06	5.13E+22	3.32E+00	1.72E+00	2.57E+05	1.01E+05	9.53E+01	7.71E+00	7.71E+00
2029 No Project	APU	0	0	47:00.0	1.12E+01	7.28E-01	8.42E-01	8.37E-01	8.42E-01	1.42E+01	N/A	N/A	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E+00	1.54E+00	1.54E+00
		4.96E+04			7.17E+02	1.23E+02	1.43E+02	1.42E+02	1.43E+02	7.82E+02					1.57E+05		5.97E+01	6.07E+00	6.07E+00

AptLayout	Mode	Formaldeh	Methyl alc	Benzene IF	Acetaldehy	Naphthale	O-xylene II	Isopropylb	Ethylbenze	Styrene IRI	1,3-butadi	Acrolein IR	Toluene IR	Phenol (ca	M & P-xyle	Propionald	Acetone IR	2-methyln	Benzaldeh	N-heptane IRIS (ST)
2025 Project	Taxi Out	1.76E+00	2.58E-01	2.40E-01	6.11E-01	7.74E-02	2.37E-02	4.29E-04	2.49E-02	4.42E-02	2.41E-01	3.50E-01	9.18E-02	1.04E-01	4.03E-02	1.04E-01	5.28E-02	2.95E-02	6.72E-02	9.16E-03
2025 Project	Climb Ground	1.78E+00	2.60E-01	2.42E-01	6.16E-01	7.80E-02	2.39E-02	4.33E-04	2.51E-02	4.46E-02	2.43E-01	3.53E-01	9.26E-02	1.05E-01	4.07E-02	1.05E-01	5.32E-02	2.97E-02	6.78E-02	9.23E-03
2025 Project	Climb Below 1000 ft AFE	1.78E+00	2.61E-01	2.43E-01	6.18E-01	7.83E-02	2.40E-02	4.34E-04	2.52E-02	4.47E-02	2.44E-01	3.55E-01	9.29E-02	1.05E-01	4.08E-02	1.05E-01	5.34E-02	2.98E-02	6.80E-02	9.26E-03
2025 Project	Climb Below Mixing Height	1.80E+00	2.64E-01	2.45E-01	6.24E-01	7.90E-02	2.42E-02	4.38E-04	2.54E-02	4.51E-02	2.46E-01	3.58E-01	9.37E-02	1.06E-01	4.12E-02	1.06E-01	5.39E-02	3.01E-02	6.86E-02	9.35E-03
2025 Project	Descend Below Mixing Height	7.26E-01	1.06E-01	9.91E-02	2.52E-01	3.19E-02	9.78E-03	1.77E-04	1.03E-02	1.82E-02	9.94E-02	1.44E-01	3.78E-02	4.28E-02	1.66E-02	4.29E-02	2.17E-02	1.21E-02	2.77E-02	3.77E-03
2025 Project	Descend Below 1000 ft AFE	6.97E-01	1.02E-01	9.51E-02	2.42E-01	3.06E-02	9.40E-03	1.70E-04	9.85E-03	1.75E-02	9.55E-02	1.39E-01	3.63E-02	4.11E-02	1.60E-02	4.11E-02	2.09E-02	1.17E-02	2.66E-02	3.62E-03
2025 Project	Descend Ground	6.85E-01	1.00E-01	9.35E-02	2.38E-01	3.01E-02	9.23E-03	1.67E-04	9.68E-03	1.72E-02	9.38E-02	1.36E-01	3.57E-02	4.04E-02	1.57E-02	4.04E-02	2.05E-02	1.15E-02	2.61E-02	3.56E-03
2025 Project	Taxi In	6.63E-01	9.72E-02	9.05E-02	2.30E-01	2.91E-02	8.94E-03	1.62E-04	9.37E-03	1.66E-02	9.08E-02	1.32E-01	3.46E-02	3.91E-02	1.52E-02	3.92E-02	1.99E-02	1.11E-02	2.53E-02	3.45E-03
2025 Project	APU	2.26E-02	3.32E-03	3.09E-03	7.86E-03	9.95E-04	3.05E-04	5.52E-06	3.20E-04	5.68E-04	3.10E-03	4.50E-03	1.18E-03	1.34E-03	5.19E-04	1.34E-03	6.79E-04	3.79E-04	8.64E-04	1.18E-04
		2.55E+00	3.73E-01	3.47E-01	8.84E-01	1.12E-01	3.43E-02	6.21E-04	3.60E-02	6.39E-02	3.49E-01	5.07E-01	1.33E-01	1.50E-01	5.83E-02	1.50E-01	7.63E-02	4.26E-02	9.72E-02	1.32E-02

Operation Group	Mode	Fuel (ST)	Distance (r	Duration	CO (ST)	THC (ST)	TOG (ST)	VOC (ST)	NMHC (ST)	NOx (ST)	nvPM Mas	nvPM Num	PMSO (ST)	PMFO (ST)	CO2 (ST)	H2O (ST)	SOx (ST)	PM 2.5 (ST	PM 10 (ST)
Phase 1 Local	Startup	0	0	00:00.0	0.00E+00	3.37E+00	3.89E+00	3.87E+00	3.89E+00	0.00E+00	N/A	N/A	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phase 1 Local	Taxi Out	2804.421	0	12:10.0	9.93E+01	1.24E+01	1.43E+01	1.42E+01	1.43E+01	1.26E+01	3.99E+04	2.74E+21	1.21E-01	7.08E-02	8.85E+03	3.47E+03	3.28E+00	2.36E-01	2.36E-01
Phase 1 Local	Climb Ground	4327.336	6435.38	15:36.4	1.00E+02	1.58E+01	1.83E+01	1.82E+01	1.83E+01	6.09E+01	7.30E+04	3.04E+21	1.87E-01	8.18E-02	1.37E+04	5.35E+03	5.07E+00	3.49E-01	3.49E-01
Phase 1 Local	Climb Below 1000 ft AFE	5048.32	12349.39	17:05.5	1.00E+02	1.59E+01	1.84E+01	1.83E+01	1.84E+01	8.52E+01	8.72E+04	3.19E+21	2.18E-01	8.68E-02	1.59E+04	6.24E+03	5.91E+00	4.01E-01	4.01E-01
Phase 1 Local	Climb Below Mixing Height	6726.312	32856.35	21:29.1	1.01E+02	1.60E+01	1.85E+01	1.84E+01	1.85E+01	1.33E+02	1.19E+05	3.53E+21	2.91E-01	9.64E-02	2.12E+04	8.32E+03	7.88E+00	5.18E-01	5.18E-01
Phase 1 Local	Climb Below 10000 ft AFE	12227.48	137592.6	36:35.8	1.03E+02	1.64E+01	1.89E+01	1.88E+01	1.89E+01	2.89E+02	2.02E+05	4.70E+21	4.92E-01	2.50E-01	3.86E+04	1.51E+04	1.43E+01	9.64E-01	9.64E-01
Phase 1 Local	Above 10000 ft AFE	0	0	00:00.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	N/A	N/A	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phase 1 Local	Descend Below 10000 ft AFE	3909.545	165138.9	05:14.8	6.97E+01	8.03E+00	9.28E+00	9.23E+00	9.28E+00	3.13E+01	8.68E+04	4.88E+21	1.66E-01	5.46E-02	1.23E+04	4.84E+03	4.58E+00	3.16E-01	3.16E-01
Phase 1 Local	Descend Below Mixing Height	2895.569	54650.84	44:33.9	4.43E+01	5.10E+00	5.89E+00	5.86E+00	5.89E+00	2.47E+01	6.23E+04	3.54E+21	1.25E-01	3.86E-02	9.14E+03	3.58E+03	3.39E+00	2.32E-01	2.32E-01
Phase 1 Local	Descend Below 1000 ft AFE	1596.448	17731.49	33:15.8	4.06E+01	4.90E+00	5.66E+00	5.63E+00	5.66E+00	1.01E+01	2.51E+04	1.58E+21	6.90E-02	3.09E-02	5.04E+03	1.97E+03	1.87E+00	1.27E-01	1.27E-01
Phase 1 Local	Descend Ground	1207.963	4202.37	29:30.0	3.92E+01	4.81E+00	5.56E+00	5.53E+00	5.56E+00	5.79E+00	1.96E+04	1.27E+21	5.22E-02	2.76E-02	3.81E+03	1.49E+03	1.41E+00	1.01E-01	1.01E-01
Phase 1 Local	Taxi In	1055.706	0	27:10.0	3.74E+01	4.66E+00	5.39E+00	5.36E+00	5.39E+00	4.73E+00	1.50E+04	1.03E+21	4.56E-02	2.67E-02	3.33E+03	1.31E+03	1.24E+00	8.88E-02	8.88E-02
Phase 1 Local	Full Flight	16137.02	302731.4	41:50.6	1.73E+02	2.44E+01	2.82E+01	2.80E+01	2.82E+01	3.20E+02	2.88E+05	9.58E+21	6.57E-01	3.05E-01	5.09E+04	2.00E+04	1.89E+01	1.28E+00	1.28E+00
Phase 1 Local	APU	0	0	10:00.0	2.31E+00	1.59E-01	1.84E-01	1.83E-01	1.84E-01	2.81E+00	N/A	N/A	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.45E-01	3.78E-01	3.78E-01
		9.62E+03			1.48E+02	2.13E+01	2.46E+01	2.44E+01	2.46E+01	1.61E+02					3.03E+04		1.16E+01	1.13E+00	1.13E+00

AptLayout	Mode	Formaldeh	Methyl alc	Benzene II	Acetaldehy	Naphthale	O-xylene II	Isopropylb	Ethylbenze	Styrene IRI	1,3-butadi	Acrolein IR	Toluene IR	Phenol (ca	M & P-xyle	Propionalc	Acetone IR	2-methyln	Benzaldeh	N-heptane IRIS (ST)
2029 Project	Taxi Out	2.73E+00	4.00E-01	3.72E-01	9.47E-01	1.20E-01	3.68E-02	6.65E-04	3.86E-02	6.85E-02	3.74E-01	5.43E-01	1.42E-01	1.61E-01	6.25E-02	1.61E-01	8.18E-02	4.56E-02	1.04E-01	1.42E-02
2029 Project	Climb Ground	2.75E+00	4.03E-01	3.76E-01	9.55E-01	1.21E-01	3.71E-02	6.70E-04	3.89E-02	6.91E-02	3.77E-01	5.47E-01	1.43E-01	1.62E-01	6.30E-02	1.62E-01	8.25E-02	4.60E-02	1.05E-01	1.43E-02
2029 Project	Climb Below 1000 ft AFE	2.76E+00	4.05E-01	3.77E-01	9.58E-01	1.21E-01	3.72E-02	6.73E-04	3.90E-02	6.93E-02	3.78E-01	5.49E-01	1.44E-01	1.63E-01	6.33E-02	1.63E-01	8.28E-02	4.62E-02	1.05E-01	1.44E-02
2029 Project	Climb Below Mixing Height	2.79E+00	4.09E-01	3.81E-01	9.67E-01	1.22E-01	3.76E-02	6.79E-04	3.94E-02	7.00E-02	3.82E-01	5.54E-01	1.45E-01	1.64E-01	6.38E-02	1.65E-01	8.35E-02	4.66E-02	1.06E-01	1.45E-02
2029 Project	Descend Below Mixing Height	1.13E+00	1.66E-01	1.54E-01	3.92E-01	4.97E-02	1.52E-02	2.76E-04	1.60E-02	2.84E-02	1.55E-01	2.25E-01	5.90E-02	6.67E-02	2.59E-02	6.68E-02	3.39E-02	1.89E-02	4.32E-02	5.88E-03
2029 Project	Descend Below 1000 ft AFE	1.08E+00	1.59E-01	1.48E-01	3.76E-01	4.76E-02	1.46E-02	2.64E-04	1.53E-02	2.72E-02	1.48E-01	2.16E-01	5.65E-02	6.39E-02	2.48E-02	6.40E-02	3.25E-02	1.81E-02	4.14E-02	5.63E-03
2029 Project	Descend Ground	1.06E+00	1.56E-01	1.45E-01	3.69E-01	4.68E-02	1.44E-02	2.59E-04	1.50E-02	2.67E-02	1.46E-01	2.12E-01	5.55E-02	6.28E-02	2.44E-02	6.28E-02	3.19E-02	1.78E-02	4.06E-02	5.53E-03
2029 Project	Taxi In	1.03E+00	1.51E-01	1.41E-01	3.58E-01	4.53E-02	1.39E-02	2.51E-04	1.46E-02	2.59E-02	1.41E-01	2.05E-01	5.37E-02	6.08E-02	2.36E-02	6.09E-02	3.09E-02	1.72E-02	3.93E-02	5.36E-03
2029 Project	APU	3.48E-02	5.10E-03	4.75E-03	1.21E-02	1.53E-03	4.69E-04	8.47E-06	4.91E-04	8.72E-04	4.76E-03	6.91E-03	1.81E-03	2.05E-03	7.96E-04	2.05E-03	1.04E-03	5.82E-04	1.33E-03	1.81E-04
		3.95E+00	5.80E-01	5.40E-01	1.37E+00	1.73E-01	5.33E-02	9.63E-04	5.59E-02	9.93E-02	5.42E-01	7.86E-01	2.06E-01	2.33E-01	9.05E-02	2.34E-01	1.18E-01	6.61E-02	1.51E-01	2.06E-02

Operation Group	Mode	Fuel (ST)	Distance (r	Duration	CO (ST)	THC (ST)	TOG (ST)	VOC (ST)	NMHC (ST)	NOx (ST)	nvPM Mas	nvPM Nur	PMSO (ST)	PMFO (ST)	CO2 (ST)	H2O (ST)	SOx (ST)	PM 2.5 (ST	PM 10 (ST)
Phase 2 Local	Startup	0	0	00:00.0	0.00E+00	5.39E+00	6.24E+00	6.20E+00	6.24E+00	0.00E+00	N/A	N/A	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phase 2 Local	Taxi Out	4453.246	0	11:55.0	1.54E+02	1.92E+01	2.22E+01	2.20E+01	2.22E+01	1.97E+01	6.34E+04	4.23E+21	1.92E-01	1.10E-01	1.41E+04	5.51E+03	5.22E+00	3.72E-01	3.72E-01
Phase 2 Local	Climb Ground	6870.693	10021.83	15:16.0	1.55E+02	2.47E+01	2.86E+01	2.84E+01	2.86E+01	9.58E+01	1.16E+05	4.70E+21	2.97E-01	1.27E-01	2.17E+04	8.50E+03	8.05E+00	5.52E-01	5.52E-01
Phase 2 Local	Climb Below 1000 ft AFE	7896.915	18606.39	16:36.0	1.55E+02	2.48E+01	2.87E+01	2.85E+01	2.87E+01	1.30E+02	1.38E+05	4.92E+21	3.41E-01	1.35E-01	2.49E+04	9.77E+03	9.25E+00	6.29E-01	6.29E-01
Phase 2 Local	Climb Below Mixing Height	10695.01	51295.92	21:00.2	1.57E+02	2.50E+01	2.89E+01	2.87E+01	2.89E+01	2.11E+02	1.89E+05	5.44E+21	4.62E-01	1.51E-01	3.37E+04	1.32E+04	1.25E+01	8.22E-01	8.22E-01
Phase 2 Local	Climb Below 10000 ft AFE	19363.26	214030.8	35:50.6	1.60E+02	2.56E+01	2.96E+01	2.94E+01	2.96E+01	4.56E+02	3.20E+05	7.19E+21	7.79E-01	3.94E-01	6.11E+04	2.40E+04	2.27E+01	1.53E+00	1.53E+00
Phase 2 Local	Above 10000 ft AFE	0	0	00:00.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	N/A	N/A	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phase 2 Local	Descend Below 10000 ft AFE	6322.719	261180.8	05:14.8	1.08E+02	1.24E+01	1.44E+01	1.43E+01	1.44E+01	5.04E+01	1.55E+05	8.54E+21	2.68E-01	8.66E-02	1.99E+04	7.82E+03	7.41E+00	5.26E-01	5.26E-01
Phase 2 Local	Descend Below Mixing Height	4678.157	86621.97	44:33.9	6.90E+01	7.94E+00	9.18E+00	9.14E+00	9.18E+00	3.96E+01	1.10E+05	6.13E+21	2.02E-01	6.12E-02	1.48E+04	5.79E+03	5.48E+00	3.85E-01	3.85E-01
Phase 2 Local	Descend Below 1000 ft AFE	2523.878	27415.63	33:15.8	6.31E+01	7.61E+00	8.80E+00	8.76E+00	8.80E+00	1.57E+01	4.11E+04	2.52E+21	1.09E-01	4.83E-02	7.96E+03	3.12E+03	2.96E+00	2.03E-01	2.03E-01
Phase 2 Local	Descend Ground	1935.11	6804.08	29:30.0	6.10E+01	7.48E+00	8.64E+00	8.60E+00	8.64E+00	9.20E+00	3.23E+04	2.03E+21	8.36E-02	4.30E-02	6.11E+03	2.39E+03	2.27E+00	1.62E-01	1.62E-01
Phase 2 Local	Taxi In	1682.223	0	27:10.0	5.82E+01	7.24E+00	8.37E+00	8.33E+00	8.37E+00	7.45E+00	2.39E+04	1.60E+21	7.27E-02	4.14E-02	5.31E+03	2.08E+03	1.97E+00	1.41E-01	1.41E-01
Phase 2 Local	Full Flight	25685.98	475211.7	41:05.4	2.69E+02	3.80E+01	4.39E+01	4.37E+01	4.39E+01	5.07E+02	4.75E+05	1.57E+22	1.05E+00	4.80E-01	8.10E+04	3.18E+04	3.01E+01	2.05E+00	2.05E+00
Phase 2 Local	APU	0	0	10:00.0	3.65E+00	2.44E-01	2.82E-01	2.81E-01	2.82E-01	4.46E+00	N/A	N/A	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.53E-01	6.17E-01	6.17E-01

Operational Employee Vehicle Emissions

	Daily	Emission Factor (g/mile)									Daily Emissions (pounds/day)									Annual Emissions (tons/year)									Annual Emissions (metric tons/year)	Fuel
Condition	Miles	ROG	CO	NOX	CO2	CH4	N2O	PM10	PM2.5	SO2	ROG	CO	NOX	CO2	CH4	N2O	PM10	PM2.5	SO2	ROG	CO	NOX	CO2	CH4	N2O	PM10	PM2.5	SO2	CO2e	(gallons)
Phase 1	35,402	0.01	0.78	0.07	300	0.003	0.006	0.02	0.01	0.003	0.96	60.8	5.43	23,428	0.22	0.50	1.82	0.74	0.23	0.18	11.1	0.99	4,276	0.04	0.09	0.33	0.13	0.04	3,902	437,888
Phase 2	35,540	0.01	0.63	0.05	278	0.002	0.005	0.02	0.01	0.003	0.68	49.6	3.80	21,764	0.16	0.43	1.77	0.69	0.21	0.12	9.05	0.69	3,972	0.03	0.08	0.32	0.13	0.04	3,623	406,608

Operational Truck Emissions

	Daily	Emission Factor (g/mile)									Daily Emissions (pounds/day)									Annual Emissions (tons/year)									Annual Emissions (metric tons/year)	Fuel
Condition	Miles	ROG	CO	NOX	CO2	CH4	N2O	PM10	PM2.5	SO2	ROG	CO	NOX	CO2	CH4	N2O	PM10	PM2.5	SO2	ROG	CO	NOX	CO2	CH4	N2O	PM10	PM2.5	SO2	CO2e	(gallons)
Phase 1	9,889	0.04	1.32	0.11	421	0.008	0.009	0.02	0.01	0.004	0.97	29	2.4	9,171	0.18	0.20	0.47	0.19	0.09	0.18	5.3	0.45	1,674	0.03	0.04	0.09	0.04	0.02	1,528	150,556
Phase 2	14,623	0.01	0.79	0.06	385	0.003	0.006	0.02	0.01	0.004	0.37	25.5	1.97	12,414	0.09	0.20	0.66	0.26	0.12	0.07	4.7	0.36	2,266	0.02	0.04	0.12	0.05	0.02	2,064	203,390

Phase 1	EF (g/hp-hr)	HP	Annual Emissions (tons)	Daily Emissions (lbs)				
NOx	0.50	2,682	0.37	5.91	50	hours per year	2,000	kw
CO	2.60	2,682	1.92	30.7	2	hours per day	2,682	hp
SOx	0.37	2,682	0.27	4.34	5	Units		
PM10/PM2.5	0.03	2,682	0.02	0.35				
CO2	526	2,682	389	6,222	353	metric tons		
TOC (ROG)	0.19	2,682	0.14	2.25	34,759	gallons		

Phase 2	EF (g/hp-hr)	HP	Annual Emissions (tons)	Daily Emissions (lbs)				
NOx	0.50	2,682	0.15	5.91	50	hours per year	2,000	kw
CO	2.60	2,682	0.77	30.7	2	hours per day	2,682	hp
SOx	0.37	2,682	0.11	4.34	2	Units		
PM10/PM2.5	0.03	2,682	0.01	0.35				
CO2	526	2,682	156	6,222	141	metric tons		
TOC (ROG)	0.19	2,682	0.06	2.25	13,904	gallons		

Phase 1 and 2	EF (g/hp-hr)	HP	Annual Emissions (tons)	Daily Emissions (lbs)				
NOx	0.50	2,682	0.52	5.91	50	hours per year	2,000	kw
CO	2.60	2,682	2.69	30.7	2	hours per day	2,682	hp
SOx	0.37	2,682	0.38	4.34	7	Units		
PM10/PM2.5	0.03	2,682	0.03	0.35				
CO2	526	2,682	544	6,222	494	metric tons		
TOC (ROG)	0.19	2,682	0.20	2.25	48,662	gallons		

Source:
http://www.ourair.org/dice/emission-factors-2/

	EF (lb/hp-hr)	EF (g/hp-hr)
NOx (Uncontrolled)	0.024	10.9
NOx (Controlled)	0.013	5.90
CO	0.0055	2.49
SOx	0.000809	0.37
PM10/PM2.5	0.0007	0.32
CO2	1.16	526
TOC (ROG)	0.000705	0.32

Source: USEPA AP-42 Section 3.4

Attachment C

Health Risk Assessment Methodology and Assumptions

A health risk assessment (HRA) is accomplished in four steps: 1) hazards identification, 2) exposure assessment, 3) toxicity assessment, and 4) risk characterization. These steps cover the estimation of air emissions, the estimation of the air concentrations resulting from a dispersion analysis, the incorporation of the toxicity of the pollutants emitted, and the characterization of the risk based on exposure parameters such as breathing rate, age adjustment factors, and exposure duration; each depending on receptor type (i.e., residence, school, daycare centers, hospitals, senior care facilities, recreational areas, adult, infant, child, including onsite workers within the passenger terminal areas).

This HRA was conducted in accordance with technical guidelines developed by federal, state, and regional agencies, including United States Environmental Protection Agency (USEPA) *Guideline on Air Quality Models*[1], California Office of Environmental Health Hazard Assessment (OEHHA) *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*[2], the South Coast Air Quality Management District (SCAQMD) *AB 2588 and Rule 1402 Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act,*[3] and SCAQMD's *Risk Assessment Procedures for Rule 1401, 1401.1 and 212.*[4] This HRA addresses the emissions from construction activities (nonroad equipment at the project site and off-site truck travel along nearby roadways) with a specific focus is on diesel particulate matter (DPM) emissions. This HRA also addresses air toxic emissions from aircraft operations.

An HRA should not be interpreted as the expected rates of cancer or other potential human health effects, but rather as estimates of potential risk or likelihood of adverse effects based on current knowledge, under several highly conservative assumptions and the best assessment tools currently available.

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1 United States Environmental Protection Agency, *Guideline on Air Quality Models (Revised), 40 Code of Federal Regulations, Part 51, Appendix W,* November 2005.

2 Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, March 6, 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html

3 South Coast Air Quality Management District, *AB 2588 and Rule 1402 Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act*, July 2018, http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588supplementalguidelines.pdf

4 South Coast Air Quality Management District, *Risk Assessment Procedures for Rule 1401, 1401.1 and 212*, September 1, 2017, http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12.

TERMS AND DEFINITIONS

As the practice of conducting an HRA is particularly complex and involves concepts that are not altogether familiar to most people, several terms and definitions are provided that are considered essential to the understanding of the approach, methodology and results:

Acute effect – a health effect (non-cancer) produced within a short period of time (few minutes to several days) following an exposure to toxic air contaminants (TAC).

Cancer risk – the probability of an individual contracting cancer from a lifetime (i.e., 70 year) exposure to TAC such as DPM in the ambient air based on an exposure duration of 30 years.

Chronic effect – a health effect (non-cancer) produced from a continuous exposure occurring over an extended period of time (weeks, months, years).

Hazard Index (HI) – the unitless ratio of an exposure level over the acceptable reference dose. The HI can be applied to multiple compounds in an additive manner.

Hazard Quotient (HQ) – the unitless ratio of an exposure level over the acceptable reference dose. The HQ is applied to individual compounds.

Toxic Air Contaminants – any air pollutant that can cause short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). The current California list of TAC identify approximately 200 compounds, including particulate emissions from diesel-fueled engines.

Human Health Effects - comprise disorders such as eye watering, respiratory or heart ailments, and other (i.e., non-cancer) related diseases.

Health Risk Assessment – an analysis designed to predict the generation and dispersion of TAC in the outdoor environment, evaluate the potential for exposure of human populations, and to assess and quantify both the individual and population-wide health risks associated with those levels of exposure.

Incremental – under CEQA, the net difference (or change) in conditions or impacts when comparing the baseline to future year project conditions.

Maximum exposed individual (MEI) – an individual assumed to be located at the point where the highest concentrations of TAC, and therefore, health risks are predicted to occur.

Non-cancer risks – health risks such as eye watering, respiratory or heart ailments, and other non-cancer related diseases.

Receptors – the locations where potential health impacts or risks are predicted (i.e., schools, residences, and recreational sites).

LIMITATIONS AND UNCERTAINTIES

There are several important limitations and uncertainties commonly associated with a HRA due to the wide variability of human exposures to TAC, the extended timeframes over which the exposures are evaluated, and the inability to verify the results. Limitations and uncertainties associated with a HRA include: (a.) lack of reliable monitoring data; (b.) extrapolation of toxicity data in animals to humans; (c.) estimation errors in calculating TAC emissions; (d.) concentration prediction errors with dispersion models; and (e.) the variability in lifestyles, fitness and other confounding factors of the human population. This HRA was performed in accordance with USEPA, OEHHA, and SCAQMD guidance and requirements, notwithstanding the following uncertainties:

- There are uncertainties associated with the estimation of emissions from project activities. Where project-specific data, such as emission factors, are not available, default assumptions in emission models were used.

- The limitations of the air dispersion model provide a source of uncertainty in the estimation of exposure concentrations. According to USEPA, errors due to the limitation of the algorithms implemented in the air dispersion model in the highest estimated concentrations of +/- 10 percent to 40 percent are typical.[5]

- The source parameters used to model emission sources add uncertainty. For all emission sources, the source parameters used source-specific, recommended as defaults, or expected to produce more conservative results. Discrepancies might exist in actual emissions characteristics of an emission source and its representation in the dispersion model.

- The exposure duration estimates do not consider that people do not usually reside at the same location for 30 years and that other exposures (i.e., school children) are also of much shorter durations than was assumed in this HRA. This exposure duration is a highly conservative assumption since most people do not remain at home all day and on average residents change residences every 11 to 12 years. In addition, this assumption adopts that residents are experiencing outdoor concentrations for the entire exposure period. A school child exposure

[5] United States Environmental Protection Agency, *Guideline on Air Quality Models (Revised), 40 Code of Federal Regulations, Part 51, Appendix W,* November 2005.

duration is between ages 2 and 16 years old, which again is conservative because the elementary, middle, and high school are not often located at the same location.

- For the risk and hazards calculations as well as the cumulative health impact, numerous assumptions must be made to estimate human exposure to pollutants. These assumptions include parameters such as breathing rates, exposure time and frequency, exposure duration, and human activity patterns. While a mean value derived from scientifically defensible studies is the best estimate of central tendency, most of the exposure variables used in this HRA are high-end estimates. The combination of several high-end estimates used as exposure parameters may substantially overestimate pollutant intake. The excess lifetime cancer risks calculated in this HRA are therefore likely to be higher than may be required to be protective of public health.

- The OEHHA cancer potency factor for DPM was used to estimate cancer risks associated with exposure to DPM emissions from construction activities. However, the cancer potency factor derived by OEHHA for DPM is highly uncertain in both the estimation of response and dose. In the past, due to inadequate animal test data and epidemiology data on diesel exhaust, the International Agency for Research on Cancer (IARC), a branch of the World Health Organization, had classified DPM as Probably Carcinogenic to Humans (Group 2); the USEPA had also concluded that the existing data did not provide an adequate basis for quantitative risk assessment.[6] However, based on two recent scientific studies,[7] IARC recently re-classified DPM as Carcinogenic to Humans to Group 1,[8] which means that the agency has determined that there is "sufficient evidence of carcinogenicity" of a substance in humans and represents the strongest weight-of-evidence rating in IARC carcinogen classification scheme. This determination by the IARC may provide additional impetus for the USEPA to identify a quantitative dose-response relationship between exposure to DPM and cancer.

In summary, the estimated health impacts are based primarily on a series of conservative assumptions related to predicted environmental concentrations, exposure, and chemical toxicity. The use of conservative assumptions tends to produce upper-bound estimates of risk. The USEPA notes that the conservative assumptions used in a HRA are intended to assure that the estimated risks do not

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6 United States Environmental Protection Agency, *Health Assessment Document for Diesel Engine Exhaust*, May 2002, https://cfpub.epa.gov/si/si_public_record_report.cfm?dirEntryId=29060

7 Attfield MD, Schleiff PL, Lubin JH, Blair A, Stewart PA, Vermeulen R, Coble JB, Silverman DT, *The Diesel Exhaust in Miners Study: A Nested Case-Control Study of Lung Cancer and Diesel Exhaust*, June 2012, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3369553/

8 International Agency for Research on Cancer, *Diesel Engine Exhaust Carcinogenic*, June 2012, https://www.iarc.fr/en/media-centre/pr/2012/pdfs/pr213_E.pdf

underestimate the actual risks posed by a site and that the estimated risks do not necessarily represent actual risks experienced by populations at or near a site.[9]

HAZARDS IDENTIFICATION

Diesel exhaust is a complex mixture of numerous individual gaseous and particulate compounds emitted from diesel-fueled combustion engines. Diesel particulate matter is formed primarily through the incomplete combustion of diesel fuel. DPM is removed from the atmosphere through physical processes including atmospheric fall-out and washout by rain. Humans can be exposed to airborne DPM by deposition on water, soil, and vegetation, although the main pathway of exposure is inhalation. Cal/EPA has concluded that potential cancer risk from inhalation exposure to whole diesel exhaust outweigh the multi-pathway cancer risk from the speciated components.

In August 1998, the CARB identified DPM as an air toxic. CARB developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel- Fueled Engines and Vehicles* and *Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines* and approved these documents on September 28, 2000.[10,11] The documents represent proposals to reduce DPM emissions, with the goal of reducing emissions and the associated health risk by requiring the use of state-of-the-art catalyzed DPM filters and ultra-low-sulfur diesel fuel.

In 2001, CARB assessed the state-wide health risks from exposure to diesel exhaust and to other toxic air contaminants. It is difficult to distinguish the health risks of diesel emissions from those of other air toxics, since diesel exhaust contains approximately 40 different air toxics. The CARB study detected diesel exhaust by using ambient air carbon soot measurements as a surrogate for diesel emissions. The study reported that the state-wide cancer risk from exposure to diesel exhaust was about 540 per million population as compared to a total risk for exposure to all ambient air toxics of 760 per million. This estimate, which accounts for about 70 percent of the total risk from TAC, included both urban and rural areas in the state. The estimate can also be considered an average worst-case for the state, since it assumes constant exposure to outdoor concentrations of diesel exhaust and does not account for expected lower concentrations indoors, where most of time is spent. DPM is estimated to increase statewide cancer risk by 520 cancers per million residents exposed over a lifetime.[12]

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9 United States Environmental Protection Agency, *Risk Assessment Guidance for Superfund Human Health Risk Assessment*, December 1989, https://www.epa.gov/sites/production/files/2015-09/documents/rags_a.pdf

10 California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles,* October 2000, http://www.arb.ca.gov/diesel/documents/rrpfinal.pdf

11 California Air Resources Board, *Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines,* October 2000.

12 California Air Resources Board, *Summary: Diesel Particulate Matter Health Impacts*, April 12, 2016, https://www.arb.ca.gov/research/diesel/diesel-health_summ.htm

Exposure to DPM results in a greater incidence of chronic non-cancer health effects, such as cough, labored breathing, chest tightness, wheezing, and bronchitis. Individuals particularly vulnerable to DPM are children, whose lung tissue is still developing, the elderly and people with illnesses who may have other serious health problems that can be aggravated by exposure to DPM. In general, children are more vulnerable than adults to air pollutants because they have higher inhalation rates, narrower airways, and less mature immune systems. In addition, children with allergies may have an enhanced allergic response when exposed to diesel exhaust.

The FAA's Aviation Emissions and Air Quality Handbook, Chapter 6,[13] lists potential HAP included in the aircraft emissions inventory. Formaldehyde is emitted in the greatest amount, followed by acetaldehyde, acrolein, benzene, methyl alcohol, and 1,3-butadiene.

EXPOSURE PARAMETERS

Exposure to airborne chemicals occurs through inhalation and subsequent absorption into the body, potentially resulting in adverse health effects depending on toxicological properties of the chemical and other exposure parameters. This HRA was conducted in accordance with technical guidelines developed by federal, state, and regional agencies, including U.S. Environmental Protection Agency (USEPA), California Environmental Protection Agency (CalEPA), California Office of Environmental Health Hazard Assessment (OEHHA) *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*[14], the SCAQMD *AB 2588 and Rule 1402 Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act,*[15] and SCAQMD's *Risk Assessment Procedures for Rule 1401, 1401.1 and 212*.[16]

OEHHA's revisions to its *Guidance Manual* were primarily designed to ensure that the greater sensitivity of children to cancer and other health risks is reflected in HRAs. For example, OEHHA now recommends that risks be analyzed separately for multiple age groups, focusing especially on young children and teenagers, rather than the past practice of analyzing risks to the general population, without distinction by age. OEHHA also now recommends that statistical "age sensitivity factors" be incorporated into a HRA, and that children's relatively high breathing rates be accounted for. On the other hand, the

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[13] Federal Aviation Administration, Aviation Emissions and Air Quality Handbook, January 2015, Aviation Emissions and Air Quality Handbook (faa.gov)

[14] Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, March 6, 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html

[15] South Coast Air Quality Management District, *AB 2588 and Rule 1402 Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act*, September 2018, http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588supplementalguidelines.pdf

[16] South Coast Air Quality Management District, *Risk Assessment Procedures for Rule 1401, 1401.1 and 212*, September 1, 2017, http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12

Guidance Manual revisions also include some changes that would reduce calculated health risks. For example, under the former guidance, OEHHA recommended that residential cancer risks be assessed by assuming 70 years of exposure at a residential receptor; under the *Guidance Manual*, this assumption is lessened to 30 years. This is based on studies showing that 30 years is a reasonable estimate of the 90th to 95th percentile of residency duration in the population. Therefore, the health risk assessment provides that a receptor's exposure to a project's emissions for up to 30 years and that the cancer rick is then determined based on a 30-year lifetime for that receptor.

Scientific data have shown that young animals are more sensitive than adult animals to exposure to many carcinogens. Therefore, OEHHA developed age sensitivity factors (ASF) to consider the increased sensitivity to carcinogens during early-in-life exposures. OEHHA recommends that cancer risks be weighted by a factor of 10 for exposures that occur from the third trimester of pregnancy to 2 years of age, by a factor of 3 for exposures from 2 years through 16 years of age, and by a factor of 1 for exposures from 16 years through 30 years of age.

OEHHA and SCAQMD have developed exposure factors (e.g., daily breathing rates) for four age groups including the third trimester to birth, birth to 2 years, 2 to 16 years, and 16 to 30 years. These age bins allow for more refined exposure information to be used when estimating exposure and the potential for developing cancer over a lifetime. This means that exposure variates are needed for the third trimester, ages zero to less than two, ages two to than 16, and ages 16 to 30. Residential receptors utilize the 95th percentile breathing rate values. For residential exposures, the high-end daily breathing rates (e.g., 95th percentile) for children from the third trimester through age 2, and 80th percentile daily breathing rates for all other ages are recommended. The age-specific breathing rates for the four age groups are 361 liters per kilogram-day for third trimester, 1,060 liters per kilogram-day for ages less than 2 years, 572 liters per kilogram-day for ages 2 to 16 years, and 261 liters per kilogram-day for ages 16 to 30 years. A school child (age 2 to 9 years) breathing rate is 631 liters per kilogram-day and an off-site and onsite worker breathing rate is 230 liters per kilogram-day.[17] [18]

Based on OEHHA recommendations, the cancer risk to residential receptors assumes exposure occurs 24 hours per day for 350 days per year while accounting for a percentage of time at home. OEHHA evaluated information from activity pattern databases to estimate the fraction of time at home (FAH) during the day.

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17 Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, March 6, 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html.

18 South Coast Air Quality Management District, *Risk Assessment Procedures for Rule 1401, 1401.1 and 212*, September 1, 2017, http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12.

This information is used to adjust cancer risk from a project's emissions, assuming that exposure to the project's emissions is not occurring away from home. A FAH factor of 1.0 applies for the offsite workers since the offsite worker is assumed to be present for a typical eight-hour workday compared to the 8-hour construction schedule. In general, the FAH factors are age-specific and are 0.85 for ages less than 2 years, 0.72 for ages 2 to 16 years, and 0.73 for ages 16 to 30 years. However, SCAQMD recommends the FAH is assumed to be 1 for ages third trimester to age 16. As a conservative assumption, children are assumed to attend a daycare or school near their home and no discount should be taken for time spent outside of the area affected by the project's emissions.[19 20]

Based on OEHHA recommendations, for children at school sites, exposure is assumed to occur 10 hours per day for 180 days (or 36 weeks) per year. Cancer risk estimates for children at school sites are calculated based on nine-year exposure duration. School sites also include teachers and other adult staff which are treated as off-site workers. For occupational receptors, SCAQMD guidance suggests that the exposure be based on 8 hours per day, 5 days per week, 250 working days per year, and a 25-year working lifetime. This is a conservative assumption since most people do not remain at the same job for 25 years. For worker exposures, it is assumed that the working age begins at 16 years, and that exposures to project emissions occur during the work shift which is typically up to eight hours per day during workdays. Given the exposure durations of less than 24 hours, sensitive recreational receptors were evaluated for acute impacts only.[21 22]

Table C-1 presents a summary of the health risk assessment exposure factors.

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19 Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, March 6, 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html.

20 South Coast Air Quality Management District, *Risk Assessment Procedures for Rule 1401, 1401.1 and 212*, September 1, 2017, http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12.

21 Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, March 6, 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html.

22 South Coast Air Quality Management District, *Risk Assessment Procedures for Rule 1401, 1401.1 and 212*, September 1, 2017, http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12.

Table C-1
Health Risk Assessment Exposure Factors

Receptor	Age	Age Specific Factor	Breathing Rate (L/kg-day)	Fraction of Time	Daily Exposure	Annual Exposure
Worker	16 to 41	1	230	1	8 hours	250 days
Residential	Third Trimester	10	361	0.85	24 hours	350 days
	0 to 2	10	1,090	0.85	24 hours	350 days
	2 to 16	3	572	0.72	24 hours	350 days
	16 to 30	1	261	0.73	24 hours	350 days
School Child	2 to 16	3	581	1	10 hours	180 days

Source: Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, March 6, 2015, http://oehha.ca.gov/air/hot_spots/hotspots2015.html and South Coast Air Quality Management District, *Risk Assessment Procedures for Rule 1401, 1401.1 and 212*, September 1, 2017, http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12.

RECEPTOR LOCATIONS

Some receptors are considered more sensitive to air pollutants than others, because of preexisting health problems, proximity to the emissions source, or duration of exposure to air pollutants. Land uses such as primary and secondary schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because the very young, the old, and the infirm are more susceptible to respiratory infections and other air quality-related health problems than the general public. **Attachment A** of this technical report provides detailed information about receptor locations.

RISK CHARACTERIZATION

Cancer risk is defined as the lifetime probability of developing cancer from exposure to carcinogenic substances. Cancer risks are expressed as the chance in one million of getting cancer (i.e., number of cancer cases among one million people exposed). The cancer risks are assumed to occur exclusively through the inhalation pathway. The cancer risk can be estimated by using the cancer potency factor (milligrams per kilogram of body weight per day [mg/kg-day]), the 30-year annual average concentration (microgram per cubic meter [μg/m^3]), and the lifetime exposure adjustment based on a 30-year exposure duration.

Following guidelines established by OEHHA, the incremental cancer risks attributable to the proposed project were calculated by applying exposure parameters to modeled DPM concentrations in order to determine the inhalation dose (mg/kg-day) or the amount of pollutants inhaled per body weight mass per day. The cancer risks occur exclusively through the inhalation pathway; therefore, the cancer risks can be estimated from the following equation:

$$\text{Dose-inh} = \underline{C_{air} * \{DBR\} * A * ASF * FAH * EF * ED * 10^{-6}}$$

AT

where:

Dose-inh	= Dose of the toxic substance through inhalation in mg/kg-day
10^{-6}	= Micrograms to milligrams conversion, Liters to cubic meters conversion
C_{air}	= Concentration in air in microgram (µg)/cubic meter (m^3)
DBR	= Daily breathing rate in liter (L)/kg body weight – day
A	= Inhalation absorption factor, 1.0
ASF	= Age Sensitivity Factor
EF	= Exposure frequency (days/year)
ED	= Exposure duration (years)
FAH	= Fraction of Time at Home
AT	= Averaging time period over which exposure is averaged in days (25,550 days based on a 30-year exposure duration)

To determine incremental cancer risk, the estimated inhalation dose attributed to the proposed project was multiplied by the cancer potency slope factor (cancer risk per mg/kg-day). The cancer potency slope factor is the upper bound on the increased cancer risk from a lifetime exposure to a pollutant. These slope factors are based on epidemiological studies and are different values for different pollutants. This allows the estimated inhalation dose to be equated to a cancer risk.

Non-cancer adverse health impacts, acute (short-term) and chronic (long-term), are measured against a hazard index (HI), which is defined as the ratio of the predicted incremental exposure concentration from the proposed project to a published reference exposure level (REL) that could cause adverse health effects as established by OEHHA. The ratio (referred to as the Hazard Quotient [HQ]) of each non-carcinogenic substance that affects a certain organ system is added to produce an overall HI for that organ system. The overall HI is calculated for each organ system. If the overall HI for the highest-impacted organ system is greater than one, then the impact is significant.

The HI is an expression used for the potential for non-cancer health effects. The relationship for the non-cancer health effects is given by the annual concentration (in µg/m^3) and the REL (in µg/m^3). The acute hazard index was determined using the "simple" concurrent maximum approach, which tends to be conservative (i.e., overpredicts).

The relationship for the non-cancer health effects is given by the following equation:

$$HI = C/REL$$

Where:

HI	= Hazard index; an expression of the potential for non-cancer health effects.
C	= Annual average concentration ($\mu g/m^3$) during the 30-year exposure period.
REL	= Concentration at which no adverse health effects are anticipated.

The concentration level at or below which no adverse non-cancer health effects are anticipated for a specified exposure duration is termed the REL. REL are based on the most sensitive, relevant, adverse health effect reported in the medical and toxicological literature. REL are designed to protect the most sensitive individuals in the population by the inclusion of margins of safety. Since margins of safety are incorporated to address data gaps and uncertainties, exceeding the REL does not automatically indicate an adverse health impact.[23] **Table C-2** displays the toxicity values for the pollutants of concern associated with the proposed project construction (as in diesel particulate matter) and operations (other air toxics).

Table C-2
Health Risk Assessment Toxicity Values

Compound	Inhalation Slope Factor $(mg/kg\text{-}day)^{-1}$	Acute REL ($\mu g/m^3$)	Chronic REL ($\mu g/m^3$)
DPM	1.1	-	5.0
Acetaldehyde	0.01	470	140
Acetone	-	-	-
Acrolein	-	2.5	0.35
Benzaldehyde	-	-	-
Benzene	0.1	27	3
1,3-Butadiene	0.6	660	2
Ethylbenzene	0.0087	-	2000
Formaldehyde	0.021	55	9
N-heptane	-	-	-

23 Office of Environmental Health Hazards Assessment - Consolidated Health Values Table, August 20, 2018, https://www.arb.ca.gov/toxics/healthval/contable.pdf

Isopropyl benzene	-	-	-
Methyl alcohol (Methanol)	-	28000	4000
2-methylnaphthalene	-	-	-
Naphthalene	0.12	-	9
Phenol	-	5800	200
Propionaldehyde	-	-	-
Styrene	-	21000	900
Toluene	-	5000	420
m,p-Xylene	-	22000	700
o-Xylene	-	22000	700

Source: Office of Environmental Health Hazards Assessment - – *Chemical Database,* https://oehha.ca.gov/chemicals

The USEPA and FAA developed organic gas speciation profiles and best practices for use in preparing HAP emission inventories of aircraft with turbofan, turbojet, and turboprop engines fueled with kerosene-based jet-A fuel. These profiles and guidance were developed in tandem by both agencies, considering the most recent data and information available.

> Recommended Best Practice for Quantifying Speciated Organic Gas Emissions from Aircraft Equipped with Turbofan, Turbojet, and Turboprop Engines.[24]
>
> The aircraft-related speciation profile developed from this initiative was used to update the organic gas profile for aircraft in the USEPA SPECIATE database—the agency's multi-sector repository for such data. In this application, a *speciation profile* is the amount of organic gases emitted based on the amount of VOC emitted by an emission source.

FAA also published a document providing an approach to, and technical guidance for, preparing speciated organic gas emissions inventories for airport sources.

> Guidance for Quantifying Speciated Organic Gas Emissions from Airport Sources.[25]
>
> This guidance is intended to help ensure that OG/HAP emission inventories prepared in support of environmental documents prepared by, or on behalf of, the FAA are done so consistently. Importantly, it points out that emission inventories of aviation-related organic gases, which include the organic gases identified by the USEPA to be HAP and the organic gases listed in the USEPA's Integrated Risk Information System, are not

24 Federal Aviation Administration, Recommended Best Practice for Quantifying Speciated Organic Gas Emissions from Aircraft Equipped with Turbofan, Turbojet, and Turboprop Engines (Version 1.0), May 2009, http://www.epa.gov/nonroad/aviation/420r09901.pdf

25 Federal Aviation Administration, Guidance for Quantifying Speciated Organic Gas Emissions from Airport Sources, Version 1, September 2, 2009, http://www.faa.gov/regulations_policies/policy_guidance/envir_policy/media/Guidance%20for%20Quantifying%20Speciated%20Organic%20Gas%20Emissions%20from%20Airport%20Sources.pdf

required by current USEPA regulations. However, in those cases where it is necessary to prepare such an aviation-related HAP emissions inventory, the inventory must be prepared following this guidance and using AEDT.

Aircraft emissions for each phase of aircraft movement and each year/scenario for the proposed project using the FAA's AEDT. Emissions of air toxics from jet/turbine powered aircraft were calculated from the VOC emissions and the speciated fraction of air toxics in jet/turbine VOC in the USEPA's *Recommended Best Practice for Quantifying Speciated Organic Gas Emissions from Aircraft Equipped with Turbofan, Turbojet, and Turboprop Engines*. The aircraft mass fraction of each evaluated air toxics is shown in **Table C-3**. The values are the mass fraction for total hydrocarbon (THC) emissions. For the health risk assessment, the VOC concentrations were determined using AEDT/AERMOD. Therefore, to convert to VOC emissions multiple by 0.8534 (or THC to TOG of 1.16 and TOG to VOC of 0.99).[26] HAP emissions were determined via AEDT and VOC mass fraction are based on the AEDT VOC emissions and the individual HAP emissions.

Table C-3
Aircraft Air Toxics Emissions Mass Fraction for Turbofan, Turbojet, and Turboprop Engines

Compound	Aircraft Emission THC Mass Fraction	Aircraft Emission VOC Mass Fraction
Acetaldehyde	0.04272	0.03646
Acetone	0.00369	0.00315
Acrolein	0.02449	0.02090
Benzaldehyde	0.00470	0.00401
Benzene	0.01681	0.01435
1,3-Butadiene	0.01687	0.01440
Ethyl benzene	0.00174	0.00149
Formaldehyde	0.12308	0.10506
N-Heptane	0.00064	0.00055
Isopropyl benzene	0.00003	0.00003
Methyl alcohol (Methanol)	0.01805	0.01540
2-methyl naphthalene	0.00206	0.00173
Naphthalene	0.00541	0.00462
Phenol	0.00726	0.00548
Propionaldehyde	0.00727	0.00620
Styrene	0.00309	0.00264
Toluene	0.00642	0.00548
m,p-Xylene	0.00282	0.00241
o-Xylene	0.00166	0.00142

26 Federal Aviation Administration, Recommended Best Practice for Quantifying Speciated Organic Gas Emissions from Aircraft Equipped with Turbofan, Turbojet, and Turboprop Engines (Version 1.0), May 2009, http://www.epa.gov/nonroad/aviation/420r09901.pdf

Source: Federal Aviation Administration, Recommended Best Practice for Quantifying Speciated Organic Gas Emissions from Aircraft Equipped with Turbofan, Turbojet, and Turboprop Engines (Version 1.0), May 2009, http://www.epa.gov/nonroad/aviation/420r09901.pdf and Federal Aviation Administration, Aviation Environmental Design Tool (AEDT) User's Manual, March 29, 2021, https://aedt.faa.gov/Documents/AEDT3d_UserManual.pdf

A brief description of the air toxics of concern (those with toxicity values and aircraft emissions mass fractions) is provided within the following:

1,3-Butadiene

1,3-butadiene is a colorless gas. At room temperature, it has a gasoline-like odor. This pollutant is a byproduct of petroleum processing and is used in the production of synthetic rubber and plastics. It is also found in automobile exhaust, gasoline vapor, fossil fuel incineration products, and cigarette smoke. Most 1,3-butadiene is released into the air and humans are typically exposed to the pollutant via inhalation. Breathing very high levels of 1,3-butadiene, even for a short time, may cause central nervous system damage, blurred vision, nausea, fatigue, headache, decreased blood pressure and pulse rate, and unconsciousness. Breathing lower levels of this pollutant may cause irritation of the eyes, nose, and throat.[27]

Acetaldehyde

Acetaldehyde is a colorless, volatile liquid with a characteristic pungent, fruity odor. Acetaldehyde is used primarily as a chemical intermediate in the production of acetic acid and as a synthetic flavoring agent. Acetaldehyde is released to the environment in vehicle exhaust and as a product of open burning of gas, fuel oil, and coal. Acute exposure to acetaldehyde can cause eye, nose, and throat irritation and subsequent inflammation of the eyes and coughing.[28]

Acrolein

Acrolein is a clear or yellow liquid with a disagreeable odor. Acrolein is used as an intermediate in the production of acrylic acid, as well as a pesticide to control algae, weeds, bacteria, and mollusks. Small amounts of acrolein can be formed and emitted into the air when trees, tobacco, other plants, gasoline, and oil are burned. Acrolein may also be released into the environment in emissions and effluents from manufacturing and use facilities and in emissions from combustion. Exposure to high concentrations of acrolein may damage the lungs and could cause death. Breathing lower amounts may cause watery eyes, burning of the nose and throat, and decreased breathing rate.[29]

27 Agency for Toxic Substance and Disease Registry ToxFAQ for 1,3-Butadiene, https://www.atsdr.cdc.gov/substances/indexAZ.asp

28 National Center for Biotechnology Information, https://pubchem.ncbi.nlm.nih.gov/compound/Acetaldehyde

29 Agency for Toxic Substance and Disease Registry ToxFAQ for Acrolein, https://www.atsdr.cdc.gov/substances/indexAZ.asp

Benzene

Benzene is a volatile, colorless, flammable liquid that has a sweet odor. It is a chemical intermediate in the synthesis of compounds such as plastics, resins, nylon, synthetic fibers, synthetic rubber, lubricants, dyes, detergents, drugs, and pesticides. Major sources of atmospheric releases include vehicle exhaust emissions, evaporative gasoline fumes, emissions from vehicle service stations, and industrial emissions. Other sources of atmospheric benzene include cigarette smoke and landfill emissions. Acute inhalation exposure to benzene can result in death, while high levels can cause drowsiness, dizziness, rapid heart rate, headaches, tremors, confusion, and unconsciousness. Eating or drinking foods containing high levels of benzene can cause vomiting, irritation of the stomach, dizziness, sleepiness, convulsions, rapid heart rate, and death.[30]

Ethyl Benzene

Ethylbenzene is a colorless, flammable liquid that smells like gasoline. It is found in natural products such as coal tar and petroleum and is also found in manufactured products such as inks, insecticides, and paints. Ethylbenzene is used primarily to make styrene, another chemical. Other uses include as a solvent, in fuels, and to make other chemicals. You can smell ethylbenzene in the air at two parts of ethylbenzene per million parts of air (2 ppm). It evaporates at room temperature and burns easily. The median levels of ethylbenzene in air are 0.62 ppb in city and suburban locations.[31]

Formaldehyde

At room temperature, formaldehyde is a colorless, flammable gas with a distinct, pungent smell. Formaldehyde is a product of incomplete combustion and is emitted into the air by burning wood, coal, kerosene, and natural gas, by automobiles, and by cigarettes; it is also a naturally occurring substance. Formaldehyde can be released to soil, water, and air by industrial sources and can off-gas from materials made with it. Humans can be exposed to formaldehyde through inhalation of contaminated air and smog. Low levels of formaldehyde can cause irritation of the eyes, nose, throat, and skin. Some epidemiological studies found an increased incidence of nose and throat cancer in exposed individuals, but other studies could not confirm this finding.[32]

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30 Agency for Toxic Substance and Disease Registry ToxFAQ for Benzene, https://www.atsdr.cdc.gov/substances/indexAZ.asp

31 Agency for Toxic Substance and Disease Registry ToxFAQ for Ethyl Benzene, https://www.atsdr.cdc.gov/substances/indexAZ.asp

32 Agency for Toxic Substance and Disease Registry ToxFAQ for Formaldehyde, https://www.atsdr.cdc.gov/substances/indexAZ.asp

Methyl Alcohol

Methyl alcohol, or methanol, is a colorless, flammable liquid used to manufacture formaldehyde and acetic acid, in chemical synthesis, in antifreeze, and as a solvent. Methanol is released to the environment during industrial use and naturally from volcanic gases, vegetation, and microbes. Acute (short-term) or chronic (long-term) exposure of humans to methanol by inhalation of ingestions may result in blurred vision, headache, dizziness, and nausea. Methyl Alcohol is used as a solvent and as an intermediate in chemical synthesis.[33]

Naphthalene

Naphthalene is a white solid with the odor of mothballs or tar and is found naturally in fuels when they are burned. Burning tobacco or wood also produces naphthalene. The major commercial use of naphthalene is in the manufacture of polyvinyl chloride plastics. Naphthalene is released into the air through the burning of tobacco, wood, oil, and coal. Exposure to large amounts of naphthalene may damage or destroy some red blood cells. This condition is called hemolytic anemia, with symptoms including fatigue, lack of appetite, restlessness, and pale skin. Exposure to large amounts of naphthalene may also cause nausea, vomiting, diarrhea, blood in the urine, and a yellow color to the skin.[34]

Phenol

Phenol is both a manufactured chemical and a natural substance. It is a colorless-to-white solid when pure. Phenol has a distinct sickeningly sweet and tarry odor. You can taste and smell phenol at levels lower than those that are associated with harmful effects. Phenol evaporates more slowly than water, and a moderate amount can form a solution with water. Phenol is used primarily in the production of phenolic resins and in the manufacture of nylon and other synthetic fibers. It is also used in silicide's (chemicals that kill bacteria and fungi in slimes), as a disinfectant and antiseptic, and in medicinal preparations such as mouthwash and sore throat lozenges.[35]

Styrene

Styrene is primarily a synthetic chemical. It is a colorless liquid that evaporates easily and has a sweet smell. It often contains other chemicals that give it a sharp, unpleasant smell. It dissolves in some liquids but does not dissolve easily in water. It is used to make rubber, plastic, insulation, fiberglass, pipes,

33 United States Environmental Protection Agency, Hazard Summary for Methanol, https://www.epa.gov/sites/production/files/2016-09/documents/methanol.pdf

34 Agency for Toxic Substance and Disease Registry ToxFAQ for Naphthalene, https://www.atsdr.cdc.gov/substances/indexAZ.asp

35 Agency for Toxic Substance and Disease Registry ToxFAQ for Phenol, https://www.atsdr.cdc.gov/substances/indexAZ.asp

automobile parts, food containers, and carpet backing. Low levels of styrene also occur naturally in a variety of foods such as fruits, vegetables, nuts, beverages, and meats.[36]

Toluene

Toluene is a colorless, clear liquid that occurs naturally in crude oil. It is also produced in the manufacturing of gasoline and other fuels from crude oil. Airport-related sources of toluene include aircraft, ground service equipment, motor vehicles, heating plants, and gasoline fuel storage tanks. Low to moderate levels of toluene can affect the nervous system and cause tiredness, confusion, weakness, memory loss, nausea, loss of appetite, and hearing and color vision loss. Inhaling high levels of toluene in a short time can make a person feel light-headed, dizzy, or sleepy, and can cause unconsciousness and death.[37]

Xylenes

There are three forms of xylene in which the methyl groups vary on the benzene ring: meta-xylene, ortho-xylene, and para-xylene (m-, o-, and p-xylene). These different forms are referred to as isomers. Xylene is a colorless, sweet-smelling liquid that catches on fire easily. It occurs naturally in petroleum and coal tar. Chemical industries produce xylene from petroleum. It is one of the top 30 chemicals produced in the United States in terms of volume. Xylene is used as a solvent and in the printing, rubber, and leather industries. It is also used as a cleaning agent, a thinner for paint, and in paints and varnishes. It is found in small amounts in airplane fuel and gasoline.[38]

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36 Agency for Toxic Substance and Disease Registry ToxFAQ for Styrene, https://www.atsdr.cdc.gov/substances/indexAZ.asp

37 Agency for Toxic Substance and Disease Registry ToxFAQ for Toluene, https://www.atsdr.cdc.gov/substances/indexAZ.asp

38 Agency for Toxic Substance and Disease Registry ToxFAQ for Xylene, https://www.atsdr.cdc.gov/substances/indexAZ.asp

Health Impacts from Construction Activities – Onsite Worker - Cancer

Onsite Worker 0.58

Receptor Type	UTM X (m)	UTM Y (m)	2023	2024	2025	2026	2027	2028	Cancer Risk
Onsite Worker	444524	3767404	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Onsite Worker	444303	3767501	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Onsite Worker	444197	3767544	0.02	0.01	0.00	0.00	0.00	0.00	0.04
Onsite Worker	444115	3767561	0.02	0.01	0.00	0.00	0.00	0.00	0.04
Onsite Worker	444059	3767586	0.02	0.01	0.00	0.00	0.01	0.01	0.04
Onsite Worker	443977	3767658	0.02	0.01	0.00	0.00	0.01	0.01	0.05
Onsite Worker	443903	3767686	0.01	0.01	0.01	0.00	0.01	0.01	0.05
Onsite Worker	443833	3767688	0.01	0.01	0.01	0.00	0.01	0.01	0.05
Onsite Worker	443775	3767730	0.01	0.01	0.01	0.00	0.01	0.02	0.05
Onsite Worker	443676	3767756	0.01	0.00	0.01	0.00	0.01	0.01	0.04
Onsite Worker	443345	3767796	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Onsite Worker	443551	3767527	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Onsite Worker	443070	3767783	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Onsite Worker	442919	3767995	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Onsite Worker	442917	3767813	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Onsite Worker	442707	3767932	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442427	3767951	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442428	3767815	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442705	3767813	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Onsite Worker	442661	3768141	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442413	3768108	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442277	3768184	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442126	3768281	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	441908	3768481	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442044	3768264	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	441938	3768368	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445344	3767589	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445533	3767589	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445302	3767408	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445478	3767455	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445504	3767254	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444769	3767275	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Onsite Worker	444972	3767199	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445130	3767094	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445765	3767560	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445756	3767341	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445761	3767148	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445899	3767557	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445899	3767355	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445908	3767139	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446199	3767520	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446253	3767266	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447119	3767950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447116	3767769	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447299	3767950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447302	3767780	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447522	3767824	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446959	3767583	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447103	3767575	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447286	3767578	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447499	3767578	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446980	3767442	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447140	3767439	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447328	3767442	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446951	3767277	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447145	3767263	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Onsite Worker	447312	3767277	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446552	3767022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446631	3766876	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446600	3767544	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446932	3767104	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447921	3768348	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447913	3768168	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	448042	3768107	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	448047	3768320	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447937	3767968	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447903	3768542	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	448073	3768534	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	448042	3768773	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447727	3768794	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447727	3768977	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447926	3768909	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447696	3769245	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447887	3769250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447541	3769216	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447308	3769237	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442161	3769062	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442164	3769146	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442064	3769145	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442063	3769053	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442441	3769315	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442498	3769317	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442922	3769310	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443012	3769315	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442839	3769271	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442663	3769305	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442552	3769305	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442606	3769304	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443123	3769515	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443235	3769522	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443331	3769534	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443336	3769488	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443331	3769443	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443328	3769400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443225	3769409	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443231	3769447	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443116	3769427	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443451	3769430	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443457	3769520	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443449	3769588	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443551	3769609	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443569	3769505	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443506	3769455	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443519	3769403	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443583	3769444	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443781	3769458	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443728	3769440	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443686	3769530	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443720	3769585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443792	3769580	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443793	3769660	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443721	3769645	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443718	3769705	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443846	3769642	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Onsite Worker	444214	3769619	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444233	3769570	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444284	3769593	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444368	3769641	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444441	3769680	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444341	3769707	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444286	3769692	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444232	3769766	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444137	3769729	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444127	3769357	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444001	3769616	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444796	3769653	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444957	3769678	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445654	3769495	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445633	3769398	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445568	3769700	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446123	3769376	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446110	3769504	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446124	3769601	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446128	3769681	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446291	3769519	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446393	3769599	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446455	3769597	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446483	3769528	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446307	3769445	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446644	3769436	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446532	3769367	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446608	3769373	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446769	3769460	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447203	3769414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447145	3769571	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446990	3769579	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447256	3769625	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442659	3769073	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442748	3769070	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442858	3769073	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442951	3769079	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443098	3769168	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443190	3769029	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443222	3769162	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443340	3769142	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443340	3769021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443525	3769119	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443693	3768868	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443800	3768914	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443863	3768978	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444031	3769136	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444305	3769050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Onsite Worker	444778	3769018	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Onsite Worker	444897	3769015	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Onsite Worker	445070	3769006	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Onsite Worker	445613	3768992	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Onsite Worker	445711	3768995	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Onsite Worker	445804	3769001	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445913	3768995	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445728	3767932	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Onsite Worker	445737	3767791	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443364	3768091	0.00	0.00	0.00	0.00	0.00	0.00	0.01

Onsite Worker	443517	3768004	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Onsite Worker	443713	3768178	0.00	0.00	0.01	0.00	0.01	0.02	0.05
Onsite Worker	443909	3768143	0.01	0.01	0.08	0.03	0.19	0.20	0.53
Onsite Worker	443892	3768079	0.01	0.01	0.09	0.03	0.20	0.21	0.53
Onsite Worker	444007	3768155	0.01	0.01	0.09	0.03	0.20	0.21	0.56
Onsite Worker	444033	3768004	0.02	0.02	0.09	0.03	0.21	0.22	0.58
Onsite Worker	444501	3767872	0.21	0.14	0.00	0.00	0.00	0.00	0.37
Onsite Worker	444247	3768071	0.20	0.14	0.01	0.00	0.03	0.03	0.42

Health Impacts from Construction Activities – Onsite Worker - Chronic

Onsite Worker 0.01

Receptor Type	UTM X (m)	UTM Y (m)	2023	2024	2025	2026	2027	2028	Chronic Impact
Onsite Worker	444524	3767404	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444303	3767501	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444197	3767544	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444115	3767561	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444059	3767586	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443977	3767658	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443903	3767686	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443833	3767688	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443775	3767730	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443676	3767756	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443345	3767796	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443551	3767527	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443070	3767783	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442919	3767995	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442917	3767813	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442707	3767932	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442427	3767951	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442428	3767815	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442705	3767813	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442661	3768141	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442413	3768108	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442277	3768184	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442126	3768281	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	441908	3768481	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442044	3768264	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	441938	3768368	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445344	3767589	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445533	3767589	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445302	3767408	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445478	3767455	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445504	3767254	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444769	3767275	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444972	3767199	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445130	3767094	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445765	3767560	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445756	3767341	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445761	3767148	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445899	3767557	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445899	3767355	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445908	3767139	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446199	3767520	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446253	3767266	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447119	3767950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447116	3767769	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447299	3767950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447302	3767780	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447522	3767824	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446959	3767583	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447103	3767575	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447286	3767578	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447499	3767578	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446980	3767442	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447140	3767439	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447328	3767442	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446951	3767277	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447145	3767263	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Onsite Worker	447312	3767277	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446552	3767022	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446631	3766876	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446600	3767544	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446932	3767104	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447921	3768348	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447913	3768168	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	448042	3768107	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	448047	3768320	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447937	3767968	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447903	3768542	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	448073	3768534	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	448042	3768773	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447727	3768794	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447727	3768977	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447926	3768909	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447696	3769245	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447887	3769250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447541	3769216	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447308	3769237	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442161	3769062	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442164	3769146	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442064	3769145	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442063	3769053	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442441	3769315	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442498	3769317	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442922	3769310	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443012	3769315	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442839	3769271	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442663	3769305	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442552	3769305	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442606	3769304	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443123	3769515	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443235	3769522	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443331	3769534	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443336	3769488	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443331	3769443	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443328	3769400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443225	3769409	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443231	3769447	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443116	3769427	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443451	3769430	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443457	3769520	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443449	3769588	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443551	3769609	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443569	3769505	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443506	3769455	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443519	3769403	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443583	3769444	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443781	3769458	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443728	3769440	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443686	3769530	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443720	3769585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443792	3769580	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443793	3769660	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443721	3769645	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443718	3769705	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443846	3769642	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Onsite Worker	444214	3769619	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444233	3769570	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444284	3769593	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444368	3769641	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444441	3769680	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444341	3769707	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444286	3769692	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444232	3769766	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444137	3769729	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444127	3769357	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444001	3769616	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444796	3769653	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444957	3769678	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445654	3769495	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445633	3769398	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445568	3769700	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446123	3769376	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446110	3769504	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446124	3769601	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446128	3769681	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446291	3769519	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446393	3769599	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446455	3769597	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446483	3769528	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446307	3769445	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446644	3769436	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446532	3769367	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446608	3769373	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446769	3769460	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447203	3769414	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447145	3769571	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	446990	3769579	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	447256	3769625	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442659	3769073	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442748	3769070	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442858	3769073	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	442951	3769079	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443098	3769168	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443190	3769029	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443222	3769162	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443340	3769142	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443340	3769021	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443525	3769119	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443693	3768868	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443800	3768914	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443863	3768978	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444031	3769136	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444305	3769050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444778	3769018	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	444897	3769015	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445070	3769006	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445613	3768992	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445711	3768995	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445804	3769001	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445913	3768995	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445728	3767932	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	445737	3767791	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443364	3768091	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Onsite Worker	443517	3768004	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443713	3768178	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Onsite Worker	443909	3768143	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Onsite Worker	443892	3768079	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Onsite Worker	444007	3768155	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Onsite Worker	444033	3768004	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Onsite Worker	444501	3767872	0.01	0.01	0.00	0.00	0.00	0.00	0.01
Onsite Worker	444247	3768071	0.01	0.01	0.00	0.00	0.00	0.00	0.01

									Offsite Worker	0.06
Health Impacts from Construction Activities – Offsite Worker and Residence - Cancer									Residence	0.06
Receptor Type	**UTM X (m)**	**UTM Y (m)**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**Cancer Risk**	
Offsite Worker	443,250	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,300	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,350	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,400	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,450	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,500	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,550	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,650	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,700	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,750	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,800	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,850	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,900	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,950	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	444,000	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,250	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,300	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,350	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,400	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,450	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,500	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,550	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,650	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,700	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,750	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,800	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,850	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,900	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,950	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	444,000	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,250	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,300	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,350	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,400	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,450	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,500	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,550	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,650	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,700	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,750	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,800	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443,850	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443900	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443950	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	444000	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443250	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443300	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443350	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443400	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443450	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443500	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443550	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443650	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443700	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
Offsite Worker	443750	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01	

Offsite Worker	443800	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443850	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443900	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443950	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444000	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443250	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443350	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443400	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443450	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443500	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443550	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443650	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443700	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443750	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443800	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443850	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443900	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443950	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444000	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443250	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443350	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443400	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443450	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443500	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443550	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443650	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443700	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443750	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443800	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443850	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443900	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443950	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444000	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443250	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443350	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443400	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443450	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443500	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443550	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443650	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443700	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443750	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443800	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443850	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443900	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443950	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444000	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443250	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443350	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443400	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443450	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443500	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443550	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443650	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01

Offsite Worker	443700	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443750	3767150	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443800	3767150	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443850	3767150	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443900	3767150	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443950	3767150	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444000	3767150	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443250	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443350	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443400	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443450	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443500	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443550	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443650	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443700	3767200	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443750	3767200	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443800	3767200	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443850	3767200	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443900	3767200	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443950	3767200	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444000	3767200	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443250	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443350	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443400	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443450	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443500	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443550	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443650	3767250	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443700	3767250	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443750	3767250	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443800	3767250	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443850	3767250	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443900	3767250	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443950	3767250	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444000	3767250	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443250	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443350	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443400	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443450	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443500	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443550	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443650	3767300	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443700	3767300	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443750	3767300	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443800	3767300	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443850	3767300	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443900	3767300	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443950	3767300	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444000	3767300	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443250	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443350	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443400	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443450	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443500	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.02

Offsite Worker	443550	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443650	3767350	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443700	3767350	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443750	3767350	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443800	3767350	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443850	3767350	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443900	3767350	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443950	3767350	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444000	3767350	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443250	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443350	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443400	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443450	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443500	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443550	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443650	3767400	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443700	3767400	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443750	3767400	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443800	3767400	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443850	3767400	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443900	3767400	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443950	3767400	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444000	3767400	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443250	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443350	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443400	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443450	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443500	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443550	3767450	0.00	0.00	0.00	0.00	0.00	0.01	0.02
Offsite Worker	443650	3767450	0.01	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443700	3767450	0.01	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443750	3767450	0.01	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443800	3767450	0.01	0.01	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443850	3767450	0.01	0.01	0.00	0.00	0.00	0.01	0.03
Offsite Worker	443900	3767450	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	443950	3767450	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	444000	3767450	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	443250	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443350	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443400	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443450	3767500	0.00	0.00	0.00	0.00	0.00	0.01	0.02
Offsite Worker	443500	3767500	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443550	3767500	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443650	3767500	0.01	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443700	3767500	0.01	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443750	3767500	0.01	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443800	3767500	0.01	0.01	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443850	3767500	0.01	0.01	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443900	3767500	0.01	0.01	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443950	3767500	0.01	0.01	0.00	0.00	0.01	0.01	0.03
Offsite Worker	444000	3767500	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	443250	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443350	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443400	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.02

Offsite Worker	443450	3767550	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443500	3767550	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443550	3767550	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443650	3767550	0.01	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443700	3767550	0.01	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443750	3767550	0.01	0.01	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443800	3767550	0.01	0.01	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443850	3767550	0.01	0.01	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443900	3767550	0.01	0.01	0.00	0.00	0.01	0.01	0.04
Offsite Worker	443950	3767550	0.01	0.01	0.00	0.00	0.01	0.01	0.04
Offsite Worker	444000	3767550	0.01	0.01	0.00	0.00	0.01	0.01	0.04
Offsite Worker	443250	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443350	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443400	3767600	0.00	0.00	0.00	0.00	0.00	0.01	0.02
Offsite Worker	443450	3767600	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443500	3767600	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443550	3767600	0.00	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443650	3767600	0.01	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443700	3767600	0.01	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443750	3767600	0.01	0.01	0.00	0.00	0.01	0.01	0.04
Offsite Worker	443800	3767600	0.01	0.01	0.00	0.00	0.01	0.01	0.04
Offsite Worker	443850	3767600	0.01	0.01	0.00	0.00	0.01	0.01	0.04
Offsite Worker	443900	3767600	0.01	0.01	0.00	0.00	0.01	0.01	0.04
Offsite Worker	443950	3767600	0.01	0.01	0.00	0.00	0.01	0.01	0.04
Offsite Worker	444000	3767600	0.01	0.01	0.00	0.00	0.01	0.01	0.04
Offsite Worker	443250	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443350	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443400	3767650	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443450	3767650	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443500	3767650	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443550	3767650	0.00	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443650	3767650	0.01	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443700	3767650	0.01	0.00	0.00	0.00	0.01	0.01	0.04
Offsite Worker	443750	3767650	0.01	0.01	0.00	0.00	0.01	0.01	0.04
Offsite Worker	443800	3767650	0.01	0.01	0.00	0.00	0.01	0.01	0.04
Offsite Worker	443850	3767650	0.01	0.01	0.00	0.00	0.01	0.01	0.05
Offsite Worker	443900	3767650	0.01	0.01	0.00	0.00	0.01	0.01	0.05
Offsite Worker	443950	3767650	0.01	0.01	0.00	0.00	0.01	0.01	0.05
Offsite Worker	444000	3767650	0.02	0.01	0.00	0.00	0.01	0.01	0.05
Offsite Worker	443250	3767700	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767700	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443350	3767700	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443400	3767700	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443450	3767700	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443500	3767700	0.00	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443550	3767700	0.00	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443650	3767700	0.01	0.00	0.00	0.00	0.01	0.01	0.04
Offsite Worker	443700	3767700	0.01	0.00	0.00	0.00	0.01	0.01	0.04
Offsite Worker	443750	3767700	0.01	0.01	0.01	0.00	0.01	0.01	0.05
Offsite Worker	443800	3767700	0.01	0.01	0.01	0.00	0.01	0.01	0.05
Offsite Worker	443850	3767700	0.01	0.01	0.01	0.00	0.01	0.01	0.05
Offsite Worker	443900	3767700	0.01	0.01	0.01	0.00	0.01	0.01	0.06
Offsite Worker	443250	3767750	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767750	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443350	3767750	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443400	3767750	0.00	0.00	0.00	0.00	0.01	0.01	0.02

Offsite Worker	443450	3767750	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443500	3767750	0.00	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443550	3767750	0.00	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443650	3767750	0.01	0.00	0.01	0.00	0.01	0.01	0.04
Offsite Worker	443700	3767750	0.01	0.00	0.01	0.00	0.01	0.01	0.05
Offsite Worker	443750	3767750	0.01	0.01	0.01	0.00	0.02	0.02	0.05
Offsite Worker	443800	3767750	0.01	0.01	0.01	0.00	0.02	0.02	0.06
Offsite Worker	443250	3767800	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767800	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443350	3767800	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443400	3767800	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443450	3767800	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443500	3767800	0.00	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443550	3767800	0.00	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443650	3767800	0.01	0.00	0.01	0.00	0.01	0.01	0.04
Offsite Worker	443250	3767850	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767850	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443350	3767850	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443400	3767850	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443450	3767850	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Offsite Worker	443500	3767850	0.00	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443550	3767850	0.00	0.00	0.00	0.00	0.01	0.01	0.03
Offsite Worker	443250	3767900	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767900	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443350	3767900	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	443400	3767900	0.00	0.00	0.00	0.00	0.00	0.01	0.02
Offsite Worker	443250	3767950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	443300	3767950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444050	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444100	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444150	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444200	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444250	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444300	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444350	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444400	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444450	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444500	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444550	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444600	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444650	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444700	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444750	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444800	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444850	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444900	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444950	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445000	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445050	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445100	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445200	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444100	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444150	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444200	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444250	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444300	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.01

Offsite Worker	444350	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444400	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444450	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444500	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444550	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444600	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444650	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444700	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444750	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444800	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444850	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444900	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444950	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445000	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445050	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445100	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445200	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444100	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444150	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444200	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444250	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444300	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444350	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444400	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444450	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444500	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444550	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444600	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444650	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444700	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444750	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444800	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444850	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444900	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444950	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445000	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445050	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445100	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445200	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444100	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444150	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444200	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444250	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444300	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444350	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444400	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444450	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444500	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444550	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444600	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444650	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444700	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444750	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444800	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	444850	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444900	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444950	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445000	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445050	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445100	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445200	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444100	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444150	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444200	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444250	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444300	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444350	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444400	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444450	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444500	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444550	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444600	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444650	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444700	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444750	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444800	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444850	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444900	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444950	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445000	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445050	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445100	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445200	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444100	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444150	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444200	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444250	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444300	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444350	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444400	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444450	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444500	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444550	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444600	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444650	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444700	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444750	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444800	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444850	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444900	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444950	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445000	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445050	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445100	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445200	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444100	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01

Offsite Worker	444150	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444200	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444250	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444300	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444350	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444400	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444450	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444500	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444550	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444600	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444650	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444700	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444750	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444800	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444850	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444900	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444950	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445000	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445050	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445100	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445200	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767150	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444100	3767150	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444150	3767150	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444200	3767150	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444250	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444300	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444350	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444400	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444450	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444500	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444550	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444600	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444650	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444700	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444750	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444800	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444850	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444900	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444950	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445000	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445050	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445100	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445200	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767200	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444100	3767200	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444150	3767200	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444200	3767200	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444250	3767200	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444300	3767200	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444350	3767200	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444400	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444450	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444500	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444550	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444600	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01

Offsite Worker	444650	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444700	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444750	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444800	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444850	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444900	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444950	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445000	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445050	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445100	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767250	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444100	3767250	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444150	3767250	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444200	3767250	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444250	3767250	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444300	3767250	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444350	3767250	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444400	3767250	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444450	3767250	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444500	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444550	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444600	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444650	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444700	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444750	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444800	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444850	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444900	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444950	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445000	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767300	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444100	3767300	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444150	3767300	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444200	3767300	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444250	3767300	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444300	3767300	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444350	3767300	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444400	3767300	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444450	3767300	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444500	3767300	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444550	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444600	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444650	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444700	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444750	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444800	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444850	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444900	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444050	3767350	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444100	3767350	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444150	3767350	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444200	3767350	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444250	3767350	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444300	3767350	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444350	3767350	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444400	3767350	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444450	3767350	0.01	0.00	0.00	0.00	0.00	0.00	0.01

Offsite Worker	444500	3767350	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444550	3767350	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444600	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444650	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444700	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444750	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444050	3767400	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444100	3767400	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444150	3767400	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444200	3767400	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444250	3767400	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444300	3767400	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444350	3767400	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444400	3767400	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444450	3767400	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444500	3767400	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444550	3767400	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444600	3767400	0.01	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444650	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	444050	3767450	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	444100	3767450	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	444150	3767450	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	444200	3767450	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	444250	3767450	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	444300	3767450	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	444350	3767450	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444400	3767450	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444450	3767450	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444500	3767450	0.01	0.01	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444550	3767450	0.01	0.00	0.00	0.00	0.00	0.00	0.02
Offsite Worker	444050	3767500	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	444100	3767500	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	444150	3767500	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	444200	3767500	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	444250	3767500	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	444300	3767500	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	444350	3767500	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	444400	3767500	0.01	0.01	0.00	0.00	0.00	0.00	0.03
Offsite Worker	444050	3767550	0.01	0.01	0.00	0.00	0.01	0.01	0.04
Offsite Worker	444100	3767550	0.02	0.01	0.00	0.00	0.00	0.00	0.04
Offsite Worker	444150	3767550	0.02	0.01	0.00	0.00	0.00	0.00	0.04
Offsite Worker	444200	3767550	0.02	0.01	0.00	0.00	0.00	0.00	0.04
Offsite Worker	444250	3767550	0.02	0.01	0.00	0.00	0.00	0.00	0.04
Offsite Worker	444300	3767550	0.02	0.01	0.00	0.00	0.00	0.00	0.04
Offsite Worker	444050	3767600	0.02	0.01	0.00	0.00	0.01	0.01	0.04
Offsite Worker	444100	3767600	0.02	0.01	0.00	0.00	0.01	0.01	0.04
Offsite Worker	444150	3767600	0.02	0.01	0.00	0.00	0.00	0.00	0.04
Offsite Worker	444050	3767650	0.02	0.01	0.00	0.00	0.01	0.01	0.05
Offsite Worker	445300	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	445800	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	445600	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	445650	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	445850	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	446050	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Offsite Worker	445350	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Residence	445968	3767800	0.06	0.03	0.01	0.02	0.03	0.01	0.06

									Offsite Worker	0.00
Health Impacts from Construction Activities – Offsite Worker and Residence - Chronic									Residence	0.00
Receptor Type	**UTM X (m)**	**UTM Y (m)**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**Chronic Impact**	
Offsite Worker	443,250	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,300	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,350	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,400	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,450	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,500	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,550	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,650	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,700	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,750	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,800	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,850	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,900	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,950	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	444,000	3,766,800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,250	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,300	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,350	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,400	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,450	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,500	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,550	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,650	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,700	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,750	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,800	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,850	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,900	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,950	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	444,000	3,766,850	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,250	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,300	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,350	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,400	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,450	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,500	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,550	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,650	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,700	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,750	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,800	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443,850	3,766,900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443900	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443950	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	444000	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443250	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443300	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443350	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443400	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443450	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443500	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443550	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443650	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443700	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Offsite Worker	443750	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Offsite Worker	443800	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443850	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443900	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443950	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444000	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443350	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443400	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443450	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443500	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443550	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443650	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443700	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443750	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443800	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443850	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443900	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443950	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444000	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443350	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443400	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443450	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443500	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443550	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443650	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443700	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443750	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443800	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	443950	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444000	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443350	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443400	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443450	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443500	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443550	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443650	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443700	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443750	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443800	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443850	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443900	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443950	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444000	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443350	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443400	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443450	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443500	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443550	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443650	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	443700	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443750	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443800	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443850	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443900	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443950	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444000	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443350	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443400	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443450	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443500	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443550	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443650	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443700	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443750	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443800	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443850	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443900	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443950	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444000	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443350	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443400	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443450	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	443550	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443650	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443700	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443750	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443800	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443850	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443900	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443950	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444000	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443350	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443400	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443450	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443500	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443550	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443650	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443700	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443750	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443800	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443850	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443900	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443950	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444000	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	443450	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443500	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	443550	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443650	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443700	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443750	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443800	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443850	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443900	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443950	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444000	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443350	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443400	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443450	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443500	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443550	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443650	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443700	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443750	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443800	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443850	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443900	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443950	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444000	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443350	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443400	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443450	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443500	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443550	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443650	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443700	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443750	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443800	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443850	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443900	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443950	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444000	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443350	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443400	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443450	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443500	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443550	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443650	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443700	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443750	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443800	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443850	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443900	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443950	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444000	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443350	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443400	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	443450	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443500	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443550	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443650	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443700	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443750	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443800	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443850	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443900	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443950	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444000	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443350	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443400	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443450	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443500	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443550	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443650	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443700	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443750	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443800	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443850	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443900	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443950	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444000	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443350	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443400	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443450	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443500	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443550	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443650	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443700	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443750	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443800	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443850	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443900	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443950	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444000	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767700	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767700	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443350	3767700	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443400	3767700	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443450	3767700	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443500	3767700	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443550	3767700	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443650	3767700	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443700	3767700	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443750	3767700	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443800	3767700	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443850	3767700	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443900	3767700	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767750	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767750	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443350	3767750	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443400	3767750	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	443450	3767750	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443500	3767750	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443550	3767750	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443650	3767750	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443700	3767750	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443750	3767750	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443800	3767750	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443350	3767800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443400	3767800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443450	3767800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443500	3767800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443550	3767800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443650	3767800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443250	3767850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443350	3767850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443400	3767850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443450	3767850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443500	3767850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	443250	3767900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	443350	3767900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	443250	3767950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	443300	3767950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444100	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444150	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444200	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444250	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444300	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444350	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444400	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444450	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444500	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444550	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444600	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444650	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444700	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444750	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444800	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444850	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444900	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444950	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445000	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445050	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445100	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445200	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444100	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444150	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444200	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444250	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444300	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	444350	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444450	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444500	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444550	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444600	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444650	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444700	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444750	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444800	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444850	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444900	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444950	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445000	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445050	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445100	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445200	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444100	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444150	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444200	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444250	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444300	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444350	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444400	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444450	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444500	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444550	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444600	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444650	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444700	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444750	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444800	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444850	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444900	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444950	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445000	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445050	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445100	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445200	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444100	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444150	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444200	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444250	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444300	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444350	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444400	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444450	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444500	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444550	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444600	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444650	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444700	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444750	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444800	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	444850	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444900	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444950	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445000	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445050	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445100	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445200	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444100	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444150	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444200	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444250	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444300	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444350	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444400	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444450	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444500	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444550	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444600	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444650	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444700	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444750	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444800	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444850	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444900	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444950	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445000	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445050	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445100	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445200	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444100	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444150	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444200	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444250	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444300	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444350	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444400	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444450	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444500	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444550	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444600	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444650	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444700	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444750	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444800	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444850	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444900	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	445000	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445050	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445100	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445200	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444100	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	444150	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444200	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444250	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444300	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444350	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444450	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444650	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444750	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444900	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444950	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445000	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	445100	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445200	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444150	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444200	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444250	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444300	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444350	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	445100	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445200	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444100	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444200	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444250	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444300	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444350	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444400	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444450	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444500	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444550	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444600	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Offsite Worker	444700	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444750	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444800	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444850	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444900	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444950	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445000	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445050	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445100	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445150	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444100	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444150	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444200	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444250	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444350	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444450	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444500	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444550	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444650	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444700	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444750	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444800	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444850	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444900	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444100	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444150	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444550	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444750	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444850	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444150	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444250	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444350	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444550	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444600	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444650	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444700	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444750	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444100	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444150	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444200	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444250	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444400	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Offsite Worker	444500	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444550	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444600	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444650	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444100	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444150	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444200	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444250	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444300	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444350	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444400	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444450	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444500	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444550	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444100	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444150	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444200	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444250	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444300	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444350	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444400	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444100	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444150	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444200	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444250	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444300	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444100	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444150	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	444050	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	445800	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3766800	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3766850	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3766900	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3766950	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	445600	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767050	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767150	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	445650	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767200	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767250	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767300	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	445850	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767350	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767400	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767450	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offsite Worker	446050	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767500	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767550	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767600	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445300	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445350	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445400	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445450	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445500	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445550	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445600	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445650	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445700	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445750	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445800	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445850	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445900	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	445950	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446000	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446050	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446100	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite Worker	446150	3767650	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Residence	445968	3767800	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Health Impacts from Operational Activities Project Compared to Baseline – Residence and School - Cancer

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
R01	1,429	-739	445,947	3,767,790	2.52	4.66
R02	3,484	-3,450	448,002	3,765,079	0.16	0.24
R03	2,605	-3,150	447,123	3,765,379	0.27	0.33
R04	1,525	-2,879	446,043	3,765,650	0.42	0.61
R05	-1,580	-2,471	442,938	3,766,057	0.66	1.15
R06	-3,026	-2,312	441,491	3,766,217	0.55	0.78
R07	-4,014	-652	440,503	3,767,877	0.33	0.42
R08	-2,481	-440	442,037	3,768,089	1.11	1.37
R09	-3,195	-178	441,322	3,768,350	0.55	0.71
R10	-3,174	-84	441,344	3,768,445	0.56	0.73
R11	-3,360	619	441,158	3,769,147	0.37	0.51
R12	-3,320	651	441,198	3,769,180	0.36	0.50
R13	-2,994	700	441,523	3,769,229	0.39	0.53
R14	-2,398	746	442,120	3,769,275	0.48	0.66
R15	-1,989	801	442,529	3,769,330	0.63	0.82
R16	-599	1,196	443,919	3,769,725	1.00	1.31
R17	364	1,557	444,882	3,770,086	0.97	1.21
R18	1,506	1,549	446,024	3,770,078	1.14	1.43
R19	2,792	1,931	447,309	3,770,459	0.78	1.09
R20	-3,406	221	441,112	3,768,750	0.47	0.62
R21	-2,618	371	441,900	3,768,900	0.77	0.95
R22	-2,518	471	442,000	3,769,000	0.72	0.89
R23	-4,318	247	440,200	3,768,776	0.30	0.40
R24	-5,208	37	439,310	3,768,566	0.22	0.28
R25	-4,465	-1,358	440,053	3,767,171	0.26	0.37
R26	-4,494	-2,183	440,024	3,766,346	0.28	0.41
R27	-4,079	-2,715	440,439	3,765,814	0.36	0.50
R28	-2,439	-3,174	442,079	3,765,355	0.47	0.76
R29	-726	-3,969	443,792	3,764,560	0.24	0.48
R30	917	-4,031	445,435	3,764,498	0.26	0.41
R31	2,569	-3,950	447,087	3,764,579	0.23	0.28
R32	3,822	3,039	448,340	3,771,568	0.40	0.58
R33	313	3,071	444,831	3,771,600	0.29	0.37
R34	-819	2,823	443,699	3,771,352	0.21	0.31
R35	-1,475	2,426	443,043	3,770,955	0.22	0.31
R36	-3,640	2,426	440,878	3,770,955	0.11	0.17
S1	-4,119	-1,686	440,399	3,766,843	0.18	0.25
S2	-4,255	-1,885	440,262	3,766,643	0.17	0.24
S3	-4,222	-890	440,296	3,767,639	0.16	0.21
S4	-3,905	1,397	440,612	3,769,926	0.09	0.13
S5	-3,319	1,201	441,199	3,769,730	0.11	0.16
H1	-700	-2,595	443,818	3,765,934	0.33	0.57

Health Impacts from Operational Activities Project Compared to Baseline – Residence and School - Chronic

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
R01	1,429	-739	445,947	3,767,790	0.02	0.03
R02	3,484	-3,450	448,002	3,765,079	0.00	0.00
R03	2,605	-3,150	447,123	3,765,379	0.00	0.00
R04	1,525	-2,879	446,043	3,765,650	0.00	0.00
R05	-1,580	-2,471	442,938	3,766,057	0.00	0.01
R06	-3,026	-2,312	441,491	3,766,217	0.00	0.01
R07	-4,014	-652	440,503	3,767,877	0.00	0.00
R08	-2,481	-440	442,037	3,768,089	0.01	0.01
R09	-3,195	-178	441,322	3,768,350	0.00	0.00
R10	-3,174	-84	441,344	3,768,445	0.00	0.01
R11	-3,360	619	441,158	3,769,147	0.00	0.00
R12	-3,320	651	441,198	3,769,180	0.00	0.00
R13	-2,994	700	441,523	3,769,229	0.00	0.00
R14	-2,398	746	442,120	3,769,275	0.00	0.00
R15	-1,989	801	442,529	3,769,330	0.00	0.01
R16	-599	1,196	443,919	3,769,725	0.01	0.01
R17	364	1,557	444,882	3,770,086	0.01	0.01
R18	1,506	1,549	446,024	3,770,078	0.01	0.01
R19	2,792	1,931	447,309	3,770,459	0.01	0.01
R20	-3,406	221	441,112	3,768,750	0.00	0.00
R21	-2,618	371	441,900	3,768,900	0.01	0.01
R22	-2,518	471	442,000	3,769,000	0.01	0.01
R23	-4,318	247	440,200	3,768,776	0.00	0.00
R24	-5,208	37	439,310	3,768,566	0.00	0.00
R25	-4,465	-1,358	440,053	3,767,171	0.00	0.00
R26	-4,494	-2,183	440,024	3,766,346	0.00	0.00
R27	-4,079	-2,715	440,439	3,765,814	0.00	0.00
R28	-2,439	-3,174	442,079	3,765,355	0.00	0.01
R29	-726	-3,969	443,792	3,764,560	0.00	0.00
R30	917	-4,031	445,435	3,764,498	0.00	0.00
R31	2,569	-3,950	447,087	3,764,579	0.00	0.00
R32	3,822	3,039	448,340	3,771,568	0.00	0.00
R33	313	3,071	444,831	3,771,600	0.00	0.00
R34	-819	2,823	443,699	3,771,352	0.00	0.00
R35	-1,475	2,426	443,043	3,770,955	0.00	0.00
R36	-3,640	2,426	440,878	3,770,955	0.00	0.00
S1	-4,119	-1,686	440,399	3,766,843	0.00	0.00
S2	-4,255	-1,885	440,262	3,766,643	0.00	0.00
S3	-4,222	-890	440,296	3,767,639	0.00	0.00
S4	-3,905	1,397	440,612	3,769,926	0.00	0.00
S5	-3,319	1,201	441,199	3,769,730	0.00	0.00
H1	-700	-2,595	443,818	3,765,934	0.00	0.01

Health Impacts from Operational Activities Project Compared to Baseline – Residence and School - Acute

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
R01	1,429	-739	445,947	3,767,790	-0.08	0.06
R02	3,484	-3,450	448,002	3,765,079	0.01	0.00
R03	2,605	-3,150	447,123	3,765,379	-0.03	-0.01
R04	1,525	-2,879	446,043	3,765,650	0.03	0.05
R05	-1,580	-2,471	442,938	3,766,057	-0.01	0.04
R06	-3,026	-2,312	441,491	3,766,217	0.02	0.06
R07	-4,014	-652	440,503	3,767,877	-0.02	0.05
R08	-2,481	-440	442,037	3,768,089	-0.07	0.06
R09	-3,195	-178	441,322	3,768,350	0.11	0.18
R10	-3,174	-84	441,344	3,768,445	0.15	0.21
R11	-3,360	619	441,158	3,769,147	0.14	0.10
R12	-3,320	651	441,198	3,769,180	0.13	0.09
R13	-2,994	700	441,523	3,769,229	0.12	0.08
R14	-2,398	746	442,120	3,769,275	0.10	0.03
R15	-1,989	801	442,529	3,769,330	0.06	0.01
R16	-599	1,196	443,919	3,769,725	0.01	-0.02
R17	364	1,557	444,882	3,770,086	0.01	-0.01
R18	1,506	1,549	446,024	3,770,078	0.03	0.05
R19	2,792	1,931	447,309	3,770,459	-0.01	0.03
R20	-3,406	221	441,112	3,768,750	0.16	0.16
R21	-2,618	371	441,900	3,768,900	0.30	0.22
R22	-2,518	471	442,000	3,769,000	0.21	0.15
R23	-4,318	247	440,200	3,768,776	0.11	0.09
R24	-5,208	37	439,310	3,768,566	0.08	0.09
R25	-4,465	-1,358	440,053	3,767,171	0.00	0.05
R26	-4,494	-2,183	440,024	3,766,346	0.01	0.02
R27	-4,079	-2,715	440,439	3,765,814	-0.01	0.01
R28	-2,439	-3,174	442,079	3,765,355	0.00	0.03
R29	-726	-3,969	443,792	3,764,560	0.01	0.00
R30	917	-4,031	445,435	3,764,498	0.04	0.04
R31	2,569	-3,950	447,087	3,764,579	-0.03	-0.01
R32	3,822	3,039	448,340	3,771,568	-0.01	0.00
R33	313	3,071	444,831	3,771,600	-0.01	-0.02
R34	-819	2,823	443,699	3,771,352	0.01	-0.01
R35	-1,475	2,426	443,043	3,770,955	0.00	-0.01
R36	-3,640	2,426	440,878	3,770,955	0.01	0.04
S1	-4,119	-1,686	440,399	3,766,843	0.01	0.02
S2	-4,255	-1,885	440,262	3,766,643	0.02	0.03
S3	-4,222	-890	440,296	3,767,639	-0.03	0.01
S4	-3,905	1,397	440,612	3,769,926	0.04	-0.01
S5	-3,319	1,201	441,199	3,769,730	0.05	-0.02
H1	-700	-2,595	443,818	3,765,934	-0.01	0.01

Health Impacts from Operational Activities Project Compared to Without Project – Residence and School - Cancer

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
R01	1,429	-739	445,947	3,767,790	2.02	3.20
R02	3,484	-3,450	448,002	3,765,079	0.13	0.25
R03	2,605	-3,150	447,123	3,765,379	0.19	0.39
R04	1,525	-2,879	446,043	3,765,650	0.35	0.68
R05	-1,580	-2,471	442,938	3,766,057	0.66	0.90
R06	-3,026	-2,312	441,491	3,766,217	0.36	0.36
R07	-4,014	-652	440,503	3,767,877	0.23	0.14
R08	-2,481	-440	442,037	3,768,089	0.44	0.28
R09	-3,195	-178	441,322	3,768,350	0.30	0.21
R10	-3,174	-84	441,344	3,768,445	0.29	0.23
R11	-3,360	619	441,158	3,769,147	0.17	0.19
R12	-3,320	651	441,198	3,769,180	0.17	0.18
R13	-2,994	700	441,523	3,769,229	0.17	0.17
R14	-2,398	746	442,120	3,769,275	0.20	0.13
R15	-1,989	801	442,529	3,769,330	0.22	0.13
R16	-599	1,196	443,919	3,769,725	0.32	0.09
R17	364	1,557	444,882	3,770,086	0.37	0.12
R18	1,506	1,549	446,024	3,770,078	0.56	-0.71
R19	2,792	1,931	447,309	3,770,459	0.50	-1.01
R20	-3,406	221	441,112	3,768,750	0.23	0.25
R21	-2,618	371	441,900	3,768,900	0.28	0.29
R22	-2,518	471	442,000	3,769,000	0.25	0.24
R23	-4,318	247	440,200	3,768,776	0.17	0.17
R24	-5,208	37	439,310	3,768,566	0.14	0.12
R25	-4,465	-1,358	440,053	3,767,171	0.18	0.15
R26	-4,494	-2,183	440,024	3,766,346	0.16	0.15
R27	-4,079	-2,715	440,439	3,765,814	0.21	0.20
R28	-2,439	-3,174	442,079	3,765,355	0.41	0.52
R29	-726	-3,969	443,792	3,764,560	0.28	0.52
R30	917	-4,031	445,435	3,764,498	0.24	0.38
R31	2,569	-3,950	447,087	3,764,579	0.17	0.28
R32	3,822	3,039	448,340	3,771,568	0.25	-0.19
R33	313	3,071	444,831	3,771,600	0.15	0.11
R34	-819	2,823	443,699	3,771,352	0.10	0.12
R35	-1,475	2,426	443,043	3,770,955	0.11	0.11
R36	-3,640	2,426	440,878	3,770,955	0.06	0.06
S1	-4,119	-1,686	440,399	3,766,843	0.10	0.09
S2	-4,255	-1,885	440,262	3,766,643	0.10	0.09
S3	-4,222	-890	440,296	3,767,639	0.11	0.08
S4	-3,905	1,397	440,612	3,769,926	0.05	0.04
S5	-3,319	1,201	441,199	3,769,730	0.06	0.04
H1	-700	-2,595	443,818	3,765,934	0.34	0.56

Health Impacts from Operational Activities Project Compared to Without Project – Residence and School - Chronic

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
R01	1,429	-739	445,947	3,767,790	0.01	0.02
R02	3,484	-3,450	448,002	3,765,079	0.00	0.00
R03	2,605	-3,150	447,123	3,765,379	0.00	0.00
R04	1,525	-2,879	446,043	3,765,650	0.00	0.00
R05	-1,580	-2,471	442,938	3,766,057	0.00	0.01
R06	-3,026	-2,312	441,491	3,766,217	0.00	0.00
R07	-4,014	-652	440,503	3,767,877	0.00	0.00
R08	-2,481	-440	442,037	3,768,089	0.00	0.00
R09	-3,195	-178	441,322	3,768,350	0.00	0.00
R10	-3,174	-84	441,344	3,768,445	0.00	0.00
R11	-3,360	619	441,158	3,769,147	0.00	0.00
R12	-3,320	651	441,198	3,769,180	0.00	0.00
R13	-2,994	700	441,523	3,769,229	0.00	0.00
R14	-2,398	746	442,120	3,769,275	0.00	0.00
R15	-1,989	801	442,529	3,769,330	0.00	0.00
R16	-599	1,196	443,919	3,769,725	0.00	0.00
R17	364	1,557	444,882	3,770,086	0.00	0.00
R18	1,506	1,549	446,024	3,770,078	0.00	0.00
R19	2,792	1,931	447,309	3,770,459	0.00	-0.01
R20	-3,406	221	441,112	3,768,750	0.00	0.00
R21	-2,618	371	441,900	3,768,900	0.00	0.00
R22	-2,518	471	442,000	3,769,000	0.00	0.00
R23	-4,318	247	440,200	3,768,776	0.00	0.00
R24	-5,208	37	439,310	3,768,566	0.00	0.00
R25	-4,465	-1,358	440,053	3,767,171	0.00	0.00
R26	-4,494	-2,183	440,024	3,766,346	0.00	0.00
R27	-4,079	-2,715	440,439	3,765,814	0.00	0.00
R28	-2,439	-3,174	442,079	3,765,355	0.00	0.00
R29	-726	-3,969	443,792	3,764,560	0.00	0.00
R30	917	-4,031	445,435	3,764,498	0.00	0.00
R31	2,569	-3,950	447,087	3,764,579	0.00	0.00
R32	3,822	3,039	448,340	3,771,568	0.00	0.00
R33	313	3,071	444,831	3,771,600	0.00	0.00
R34	-819	2,823	443,699	3,771,352	0.00	0.00
R35	-1,475	2,426	443,043	3,770,955	0.00	0.00
R36	-3,640	2,426	440,878	3,770,955	0.00	0.00
S1	-4,119	-1,686	440,399	3,766,843	0.00	0.00
S2	-4,255	-1,885	440,262	3,766,643	0.00	0.00
S3	-4,222	-890	440,296	3,767,639	0.00	0.00
S4	-3,905	1,397	440,612	3,769,926	0.00	0.00
S5	-3,319	1,201	441,199	3,769,730	0.00	0.00
H1	-700	-2,595	443,818	3,765,934	0.00	0.01

Health Impacts from Operational Activities Project Compared to Without Project – Residence and School - Acute

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
R01	1,429	-739	445,947	3,767,790	-0.03	0.13
R02	3,484	-3,450	448,002	3,765,079	0.02	0.03
R03	2,605	-3,150	447,123	3,765,379	0.01	0.01
R04	1,525	-2,879	446,043	3,765,650	0.00	0.01
R05	-1,580	-2,471	442,938	3,766,057	0.04	0.01
R06	-3,026	-2,312	441,491	3,766,217	0.05	0.01
R07	-4,014	-652	440,503	3,767,877	0.04	0.05
R08	-2,481	-440	442,037	3,768,089	0.07	0.11
R09	-3,195	-178	441,322	3,768,350	0.09	0.10
R10	-3,174	-84	441,344	3,768,445	0.09	0.11
R11	-3,360	619	441,158	3,769,147	0.00	-0.06
R12	-3,320	651	441,198	3,769,180	0.00	-0.05
R13	-2,994	700	441,523	3,769,229	0.00	-0.05
R14	-2,398	746	442,120	3,769,275	0.04	-0.04
R15	-1,989	801	442,529	3,769,330	0.06	-0.04
R16	-599	1,196	443,919	3,769,725	-0.01	-0.04
R17	364	1,557	444,882	3,770,086	-0.01	-0.14
R18	1,506	1,549	446,024	3,770,078	0.00	-0.25
R19	2,792	1,931	447,309	3,770,459	0.01	-0.05
R20	-3,406	221	441,112	3,768,750	0.07	0.08
R21	-2,618	371	441,900	3,768,900	0.08	-0.07
R22	-2,518	471	442,000	3,769,000	0.02	-0.09
R23	-4,318	247	440,200	3,768,776	0.05	0.05
R24	-5,208	37	439,310	3,768,566	0.05	0.08
R25	-4,465	-1,358	440,053	3,767,171	0.01	0.05
R26	-4,494	-2,183	440,024	3,766,346	0.01	0.00
R27	-4,079	-2,715	440,439	3,765,814	0.01	0.00
R28	-2,439	-3,174	442,079	3,765,355	0.04	0.01
R29	-726	-3,969	443,792	3,764,560	0.00	-0.02
R30	917	-4,031	445,435	3,764,498	-0.01	-0.01
R31	2,569	-3,950	447,087	3,764,579	0.00	0.00
R32	3,822	3,039	448,340	3,771,568	0.00	-0.03
R33	313	3,071	444,831	3,771,600	0.00	-0.03
R34	-819	2,823	443,699	3,771,352	0.00	-0.06
R35	-1,475	2,426	443,043	3,770,955	0.00	-0.03
R36	-3,640	2,426	440,878	3,770,955	-0.01	0.01
S1	-4,119	-1,686	440,399	3,766,843	0.01	0.00
S2	-4,255	-1,885	440,262	3,766,643	0.00	0.00
S3	-4,222	-890	440,296	3,767,639	0.03	0.02
S4	-3,905	1,397	440,612	3,769,926	0.03	-0.02
S5	-3,319	1,201	441,199	3,769,730	0.04	-0.03
H1	-700	-2,595	443,818	3,765,934	0.00	-0.04

Health Impacts from Operational Activities Project Compared to Baseline – Onsite Worker - Cancer

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	-1,858	544	442,660	3,769,073	0.10	0.12
2	-1,769	541	442,749	3,769,070	0.12	0.15
3	-1,659	544	442,859	3,769,073	0.14	0.18
4	-1,566	550	442,951	3,769,078	0.16	0.20
5	-1,419	639	443,099	3,769,168	0.13	0.17
6	-1,327	500	443,191	3,769,029	0.28	0.33
7	-1,295	633	443,223	3,769,162	0.15	0.20
8	-1,177	613	443,341	3,769,142	0.19	0.24
9	-1,177	492	443,341	3,769,021	0.33	0.39
10	-992	590	443,526	3,769,119	0.25	0.31
11	-824	339	443,693	3,768,868	0.80	0.91
12	-717	385	443,800	3,768,914	0.65	0.76
13	-654	449	443,864	3,768,977	0.50	0.59
14	-486	607	444,031	3,769,136	0.30	0.36
15	-212	521	444,306	3,769,050	0.40	0.47
16	261	489	444,779	3,769,018	0.37	0.43
17	380	486	444,898	3,769,015	0.37	0.42
18	553	477	445,071	3,769,006	0.37	0.43
19	1,096	463	445,614	3,768,992	0.38	0.41
20	1,194	466	445,712	3,768,995	0.36	0.37
21	1,287	472	445,804	3,769,000	0.34	0.34
22	1,396	466	445,914	3,768,995	0.34	0.30
23	1,211	-597	445,729	3,767,932	0.23	0.42
24	1,220	-738	445,738	3,767,791	0.18	0.33
25	-1,153	-438	443,364	3,768,091	0.06	0.15
26	-1,000	-525	443,517	3,768,004	0.20	0.38
27	-804	-351	443,714	3,768,177	1.30	2.12
28	-608	-386	443,910	3,768,143	1.71	2.74
29	-625	-450	443,893	3,768,079	1.75	2.79
30	-510	-374	444,008	3,768,154	1.76	2.83
31	-484	-525	444,034	3,768,004	1.63	2.60
32	-16	-657	444,502	3,767,871	1.83	2.86
33	-270	-458	444,248	3,768,071	1.98	3.22

Health Impacts from Operational Activities Project Compared to Baseline – Onsite Worker - Chronic

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	-1,858	544	442,660	3,769,073	0.01	0.01
2	-1,769	541	442,749	3,769,070	0.01	0.01
3	-1,659	544	442,859	3,769,073	0.01	0.02
4	-1,566	550	442,951	3,769,078	0.02	0.02
5	-1,419	639	443,099	3,769,168	0.01	0.02
6	-1,327	500	443,191	3,769,029	0.03	0.03
7	-1,295	633	443,223	3,769,162	0.01	0.02
8	-1,177	613	443,341	3,769,142	0.02	0.02
9	-1,177	492	443,341	3,769,021	0.03	0.04
10	-992	590	443,526	3,769,119	0.02	0.03
11	-824	339	443,693	3,768,868	0.08	0.09
12	-717	385	443,800	3,768,914	0.06	0.07
13	-654	449	443,864	3,768,977	0.05	0.06
14	-486	607	444,031	3,769,136	0.03	0.04
15	-212	521	444,306	3,769,050	0.04	0.05
16	261	489	444,779	3,769,018	0.04	0.04
17	380	486	444,898	3,769,015	0.04	0.04
18	553	477	445,071	3,769,006	0.04	0.04
19	1,096	463	445,614	3,768,992	0.04	0.04
20	1,194	466	445,712	3,768,995	0.04	0.04
21	1,287	472	445,804	3,769,000	0.03	0.03
22	1,396	466	445,914	3,768,995	0.03	0.03
23	1,211	-597	445,729	3,767,932	0.02	0.04
24	1,220	-738	445,738	3,767,791	0.02	0.03
25	-1,153	-438	443,364	3,768,091	0.01	0.01
26	-1,000	-525	443,517	3,768,004	0.02	0.04
27	-804	-351	443,714	3,768,177	0.13	0.21
28	-608	-386	443,910	3,768,143	0.17	0.27
29	-625	-450	443,893	3,768,079	0.17	0.27
30	-510	-374	444,008	3,768,154	0.17	0.27
31	-484	-525	444,034	3,768,004	0.16	0.25
32	-16	-657	444,502	3,767,871	0.18	0.28
33	-270	-458	444,248	3,768,071	0.19	0.31

Health Impacts from Operational Activities Project Compared to Baseline – Onsite Worker - Acute

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	-1,858	544	442,660	3,769,073	0.14	0.07
2	-1,769	541	442,749	3,769,070	0.14	0.07
3	-1,659	544	442,859	3,769,073	0.13	0.06
4	-1,566	550	442,951	3,769,078	0.12	0.05
5	-1,419	639	443,099	3,769,168	0.07	0.01
6	-1,327	500	443,191	3,769,029	0.13	0.06
7	-1,295	633	443,223	3,769,162	0.06	0.00
8	-1,177	613	443,341	3,769,142	0.06	0.01
9	-1,177	492	443,341	3,769,021	0.12	0.05
10	-992	590	443,526	3,769,119	0.09	0.03
11	-824	339	443,693	3,768,868	0.24	0.21
12	-717	385	443,800	3,768,914	0.21	0.10
13	-654	449	443,864	3,768,977	0.10	0.04
14	-486	607	444,031	3,769,136	-0.01	0.01
15	-212	521	444,306	3,769,050	-0.01	-0.01
16	261	489	444,779	3,769,018	0.11	0.12
17	380	486	444,898	3,769,015	0.11	0.20
18	553	477	445,071	3,769,006	0.09	0.21
19	1,096	463	445,614	3,768,992	-0.05	0.09
20	1,194	466	445,712	3,768,995	-0.05	0.11
21	1,287	472	445,804	3,769,000	0.03	0.13
22	1,396	466	445,914	3,768,995	0.13	0.15
23	1,211	-597	445,729	3,767,932	-0.08	0.18
24	1,220	-738	445,738	3,767,791	-0.05	0.12
25	-1,153	-438	443,364	3,768,091	-0.05	0.12
26	-1,000	-525	443,517	3,768,004	0.16	0.44
27	-804	-351	443,714	3,768,177	0.05	0.30
28	-608	-386	443,910	3,768,143	0.17	0.49
29	-625	-450	443,893	3,768,079	0.28	0.66
30	-510	-374	444,008	3,768,154	0.16	0.47
31	-484	-525	444,034	3,768,004	0.40	0.59
32	-16	-657	444,502	3,767,871	0.25	0.60
33	-270	-458	444,248	3,768,071	0.30	0.59

Health Impacts from Operational Activities Project Compared to Without Project – Onsite Worker - Cancer

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	-1,858	544	442,660	3,769,073	0.02	0.01
2	-1,769	541	442,749	3,769,070	0.02	0.01
3	-1,659	544	442,859	3,769,073	0.03	0.01
4	-1,566	550	442,951	3,769,078	0.03	0.01
5	-1,419	639	443,099	3,769,168	0.03	0.01
6	-1,327	500	443,191	3,769,029	0.03	0.01
7	-1,295	633	443,223	3,769,162	0.03	0.01
8	-1,177	613	443,341	3,769,142	0.03	0.00
9	-1,177	492	443,341	3,769,021	0.04	0.00
10	-992	590	443,526	3,769,119	0.04	0.00
11	-824	339	443,693	3,768,868	0.07	-0.09
12	-717	385	443,800	3,768,914	0.07	-0.07
13	-654	449	443,864	3,768,977	0.06	-0.04
14	-486	607	444,031	3,769,136	0.05	-0.02
15	-212	521	444,306	3,769,050	0.08	-0.06
16	261	489	444,779	3,769,018	0.12	-0.37
17	380	486	444,898	3,769,015	0.13	-0.59
18	553	477	445,071	3,769,006	0.14	-0.96
19	1,096	463	445,614	3,768,992	0.19	-1.98
20	1,194	466	445,712	3,768,995	0.20	-2.47
21	1,287	472	445,804	3,769,000	0.20	-2.94
22	1,396	466	445,914	3,768,995	0.21	-3.62
23	1,211	-597	445,729	3,767,932	0.24	0.80
24	1,220	-738	445,738	3,767,791	0.17	0.64
25	-1,153	-438	443,364	3,768,091	0.17	0.24
26	-1,000	-525	443,517	3,768,004	0.32	0.46
27	-804	-351	443,714	3,768,177	1.59	2.40
28	-608	-386	443,910	3,768,143	2.00	2.96
29	-625	-450	443,893	3,768,079	1.98	2.93
30	-510	-374	444,008	3,768,154	2.09	3.07
31	-484	-525	444,034	3,768,004	1.85	2.69
32	-16	-657	444,502	3,767,871	1.95	2.92
33	-270	-458	444,248	3,768,071	2.34	3.38

Health Impacts from Operational Activities Project Compared to Without Project – Onsite Worker - Chronic

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	-1,858	544	442,660	3,769,073	0.00	0.00
2	-1,769	541	442,749	3,769,070	0.00	0.00
3	-1,659	544	442,859	3,769,073	0.00	0.00
4	-1,566	550	442,951	3,769,078	0.00	0.00
5	-1,419	639	443,099	3,769,168	0.00	0.00
6	-1,327	500	443,191	3,769,029	0.00	0.00
7	-1,295	633	443,223	3,769,162	0.00	0.00
8	-1,177	613	443,341	3,769,142	0.00	0.00
9	-1,177	492	443,341	3,769,021	0.00	0.00
10	-992	590	443,526	3,769,119	0.00	0.00
11	-824	339	443,693	3,768,868	0.01	-0.01
12	-717	385	443,800	3,768,914	0.01	-0.01
13	-654	449	443,864	3,768,977	0.01	0.00
14	-486	607	444,031	3,769,136	0.00	0.00
15	-212	521	444,306	3,769,050	0.01	-0.01
16	261	489	444,779	3,769,018	0.01	-0.04
17	380	486	444,898	3,769,015	0.01	-0.06
18	553	477	445,071	3,769,006	0.01	-0.09
19	1,096	463	445,614	3,768,992	0.02	-0.19
20	1,194	466	445,712	3,768,995	0.02	-0.24
21	1,287	472	445,804	3,769,000	0.02	-0.29
22	1,396	466	445,914	3,768,995	0.02	-0.35
23	1,211	-597	445,729	3,767,932	0.02	0.08
24	1,220	-738	445,738	3,767,791	0.02	0.06
25	-1,153	-438	443,364	3,768,091	0.02	0.02
26	-1,000	-525	443,517	3,768,004	0.03	0.04
27	-804	-351	443,714	3,768,177	0.15	0.23
28	-608	-386	443,910	3,768,143	0.19	0.29
29	-625	-450	443,893	3,768,079	0.19	0.28
30	-510	-374	444,008	3,768,154	0.20	0.30
31	-484	-525	444,034	3,768,004	0.18	0.26
32	-16	-657	444,502	3,767,871	0.19	0.28
33	-270	-458	444,248	3,768,071	0.23	0.33

Health Impacts from Operational Activities Project Compared to Without Project – Onsite Worker - Acute

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	-1,858	544	442,660	3,769,073	0.00	-0.08
2	-1,769	541	442,749	3,769,070	0.01	-0.09
3	-1,659	544	442,859	3,769,073	0.03	-0.08
4	-1,566	550	442,951	3,769,078	0.04	-0.08
5	-1,419	639	443,099	3,769,168	0.07	-0.10
6	-1,327	500	443,191	3,769,029	0.05	-0.10
7	-1,295	633	443,223	3,769,162	0.07	-0.12
8	-1,177	613	443,341	3,769,142	0.06	-0.13
9	-1,177	492	443,341	3,769,021	0.07	-0.11
10	-992	590	443,526	3,769,119	0.06	-0.13
11	-824	339	443,693	3,768,868	0.09	-0.19
12	-717	385	443,800	3,768,914	0.09	-0.17
13	-654	449	443,864	3,768,977	0.08	-0.24
14	-486	607	444,031	3,769,136	0.00	-0.18
15	-212	521	444,306	3,769,050	-0.06	-0.27
16	261	489	444,779	3,769,018	0.01	-0.34
17	380	486	444,898	3,769,015	0.01	-0.29
18	553	477	445,071	3,769,006	0.01	-0.40
19	1,096	463	445,614	3,768,992	0.02	-0.84
20	1,194	466	445,712	3,768,995	0.02	-0.96
21	1,287	472	445,804	3,769,000	0.08	-0.90
22	1,396	466	445,914	3,768,995	0.09	-0.90
23	1,211	-597	445,729	3,767,932	0.01	0.25
24	1,220	-738	445,738	3,767,791	0.03	0.16
25	-1,153	-438	443,364	3,768,091	0.21	0.36
26	-1,000	-525	443,517	3,768,004	0.30	0.50
27	-804	-351	443,714	3,768,177	0.50	0.70
28	-608	-386	443,910	3,768,143	0.54	0.73
29	-625	-450	443,893	3,768,079	0.51	0.70
30	-510	-374	444,008	3,768,154	0.54	0.65
31	-484	-525	444,034	3,768,004	0.56	0.41
32	-16	-657	444,502	3,767,871	0.30	0.49
33	-270	-458	444,248	3,768,071	0.48	0.32

Health Impacts from Operational Activities Project Compared to Baseline – Offsite Worker - Cancer

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	7	-1,125	444,525	3,767,404	0.17	0.29
2	-214	-1,028	444,304	3,767,501	0.22	0.40
3	-320	-985	444,198	3,767,544	0.23	0.42
4	-402	-968	444,116	3,767,561	0.23	0.41
5	-458	-943	444,059	3,767,586	0.22	0.41
6	-540	-871	443,978	3,767,658	0.24	0.43
7	-614	-843	443,904	3,767,686	0.23	0.43
8	-684	-841	443,834	3,767,688	0.22	0.40
9	-742	-799	443,775	3,767,730	0.22	0.41
10	-841	-773	443,677	3,767,756	0.21	0.38
11	-1,172	-733	443,346	3,767,796	0.12	0.22
12	-966	-1,002	443,552	3,767,527	0.14	0.25
13	-1,447	-746	443,071	3,767,783	0.10	0.16
14	-1,598	-534	442,920	3,767,995	0.13	0.17
15	-1,600	-716	442,918	3,767,813	0.10	0.15
16	-1,810	-597	442,707	3,767,932	0.11	0.15
17	-2,090	-578	442,427	3,767,951	0.10	0.13
18	-2,089	-714	442,429	3,767,815	0.09	0.12
19	-1,812	-716	442,706	3,767,813	0.10	0.14
20	-1,856	-388	442,662	3,768,140	0.14	0.17
21	-2,104	-421	442,414	3,768,108	0.11	0.14
22	-2,240	-345	442,278	3,768,184	0.11	0.13
23	-2,391	-248	442,126	3,768,281	0.10	0.12
24	-2,609	-48	441,909	3,768,481	0.07	0.09
25	-2,473	-265	442,045	3,768,264	0.08	0.11
26	-2,579	-161	441,939	3,768,368	0.07	0.09
27	827	-940	445,345	3,767,588	0.14	0.24
28	1,016	-940	445,534	3,767,588	0.14	0.24
29	785	-1,121	445,303	3,767,408	0.12	0.20
30	961	-1,074	445,478	3,767,455	0.12	0.20
31	987	-1,275	445,505	3,767,254	0.09	0.16
32	252	-1,254	444,770	3,767,274	0.13	0.21
33	455	-1,330	444,973	3,767,199	0.11	0.18
34	613	-1,435	445,131	3,767,094	0.10	0.15
35	1,248	-969	445,766	3,767,559	0.12	0.22
36	1,239	-1,188	445,757	3,767,341	0.09	0.16
37	1,244	-1,381	445,761	3,767,147	0.07	0.13
38	1,382	-972	445,899	3,767,557	0.12	0.22
39	1,382	-1,174	445,899	3,767,355	0.09	0.16
40	1,391	-1,390	445,908	3,767,138	0.07	0.12
41	1,682	-1,009	446,200	3,767,519	0.11	0.18

42	1,736	-1,263	446,254	3,767,265	0.07	0.12
43	2,602	-579	447,119	3,767,950	0.12	0.16
44	2,599	-760	447,117	3,767,769	0.07	0.11
45	2,782	-579	447,300	3,767,950	0.10	0.13
46	2,785	-749	447,303	3,767,780	0.06	0.09
47	3,005	-705	447,523	3,767,824	0.06	0.08
48	2,442	-946	446,959	3,767,583	0.07	0.11
49	2,586	-954	447,104	3,767,575	0.06	0.09
50	2,769	-951	447,287	3,767,578	0.05	0.08
51	2,982	-951	447,499	3,767,578	0.04	0.07
52	2,463	-1,087	446,980	3,767,442	0.06	0.09
53	2,623	-1,090	447,140	3,767,439	0.05	0.08
54	2,811	-1,087	447,329	3,767,442	0.04	0.07
55	2,434	-1,252	446,952	3,767,276	0.05	0.08
56	2,628	-1,266	447,145	3,767,263	0.04	0.07
57	2,795	-1,252	447,313	3,767,276	0.03	0.06
58	2,035	-1,507	446,553	3,767,022	0.05	0.08
59	2,114	-1,653	446,632	3,766,875	0.05	0.06
60	2,083	-985	446,600	3,767,544	0.10	0.15
61	2,415	-1,425	446,933	3,767,103	0.05	0.07
62	3,404	-181	447,922	3,768,348	0.12	0.16
63	3,396	-361	447,914	3,768,167	0.10	0.12
64	3,525	-422	448,042	3,768,107	0.08	0.10
65	3,530	-209	448,048	3,768,319	0.11	0.14
66	3,420	-561	447,938	3,767,968	0.07	0.08
67	3,386	13	447,903	3,768,542	0.15	0.20
68	3,556	5	448,074	3,768,534	0.13	0.17
69	3,525	244	448,042	3,768,773	0.14	0.19
70	3,210	265	447,728	3,768,794	0.17	0.24
71	3,210	448	447,728	3,768,977	0.16	0.23
72	3,409	380	447,927	3,768,909	0.15	0.21
73	3,179	716	447,696	3,769,244	0.15	0.20
74	3,370	721	447,888	3,769,250	0.14	0.19
75	3,024	687	447,542	3,769,216	0.16	0.22
76	2,791	708	447,309	3,769,237	0.17	0.22
77	-2,356	533	442,161	3,769,062	0.05	0.07
78	-2,353	617	442,165	3,769,146	0.04	0.06
79	-2,453	616	442,065	3,769,145	0.04	0.05
80	-2,454	524	442,064	3,769,053	0.05	0.06
81	-2,076	786	442,442	3,769,314	0.04	0.06
82	-2,019	788	442,499	3,769,317	0.04	0.06
83	-1,595	781	442,923	3,769,310	0.07	0.09
84	-1,505	786	443,013	3,769,314	0.07	0.10
85	-1,678	742	442,839	3,769,271	0.07	0.09

86	-1,854	776	442,664	3,769,304	0.05	0.07
87	-1,965	776	442,553	3,769,305	0.05	0.06
88	-1,911	775	442,606	3,769,304	0.05	0.07
89	-1,394	986	443,124	3,769,515	0.05	0.07
90	-1,282	993	443,236	3,769,522	0.06	0.08
91	-1,186	1,005	443,332	3,769,534	0.06	0.09
92	-1,181	959	443,337	3,769,488	0.07	0.09
93	-1,186	914	443,331	3,769,442	0.07	0.10
94	-1,189	871	443,329	3,769,400	0.08	0.11
95	-1,292	880	443,226	3,769,409	0.07	0.10
96	-1,286	918	443,232	3,769,447	0.06	0.09
97	-1,401	898	443,117	3,769,427	0.06	0.09
98	-1,066	901	443,451	3,769,429	0.09	0.12
99	-1,060	991	443,458	3,769,520	0.07	0.10
100	-1,068	1,059	443,450	3,769,588	0.06	0.09
101	-966	1,080	443,552	3,769,609	0.07	0.09
102	-948	976	443,570	3,769,505	0.08	0.11
103	-1,011	926	443,507	3,769,454	0.09	0.12
104	-999	874	443,519	3,769,402	0.10	0.13
105	-934	915	443,584	3,769,444	0.10	0.13
106	-736	929	443,781	3,769,458	0.11	0.14
107	-789	911	443,729	3,769,439	0.11	0.15
108	-831	1,001	443,687	3,769,530	0.09	0.12
109	-797	1,056	443,721	3,769,585	0.08	0.11
110	-725	1,051	443,793	3,769,579	0.09	0.11
111	-724	1,131	443,794	3,769,660	0.07	0.10
112	-796	1,116	443,721	3,769,644	0.07	0.10
113	-799	1,176	443,719	3,769,704	0.06	0.09
114	-671	1,113	443,847	3,769,642	0.08	0.10
115	-303	1,090	444,215	3,769,619	0.11	0.13
116	-284	1,041	444,234	3,769,570	0.12	0.14
117	-233	1,064	444,285	3,769,592	0.12	0.14
118	-149	1,112	444,368	3,769,641	0.11	0.13
119	-76	1,151	444,442	3,769,680	0.11	0.13
120	-176	1,178	444,341	3,769,707	0.10	0.12
121	-231	1,163	444,286	3,769,692	0.10	0.12
122	-285	1,237	444,233	3,769,766	0.08	0.10
123	-380	1,200	444,138	3,769,729	0.08	0.10
124	-390	828	444,128	3,769,357	0.18	0.21
125	-516	1,087	444,001	3,769,616	0.09	0.12
126	279	1,124	444,797	3,769,653	0.13	0.15
127	440	1,149	444,957	3,769,677	0.13	0.15
128	1,137	966	445,654	3,769,495	0.15	0.19
129	1,116	869	445,634	3,769,398	0.17	0.21

130	1,051	1,171	445,569	3,769,699	0.12	0.15
131	1,606	847	446,124	3,769,376	0.17	0.20
132	1,593	975	446,111	3,769,504	0.14	0.18
133	1,607	1,072	446,125	3,769,601	0.13	0.16
134	1,611	1,152	446,129	3,769,681	0.12	0.15
135	1,774	990	446,291	3,769,519	0.14	0.17
136	1,876	1,070	446,394	3,769,599	0.12	0.16
137	1,938	1,068	446,456	3,769,597	0.12	0.16
138	1,966	999	446,484	3,769,528	0.13	0.17
139	1,790	916	446,308	3,769,445	0.15	0.19
140	2,127	907	446,645	3,769,436	0.15	0.18
141	2,015	838	446,533	3,769,367	0.16	0.20
142	2,091	844	446,609	3,769,373	0.16	0.19
143	2,252	931	446,770	3,769,460	0.14	0.18
144	2,686	885	447,204	3,769,414	0.15	0.19
145	2,628	1,042	447,146	3,769,570	0.13	0.16
146	2,473	1,050	446,991	3,769,578	0.12	0.16
147	2,739	1,096	447,257	3,769,625	0.12	0.16

Health Impacts from Operational Activities Project Compared to Baseline – Offsite Worker - Chronic

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	7	-1,125	444,525	3,767,404	0.02	0.03
2	-214	-1,028	444,304	3,767,501	0.02	0.04
3	-320	-985	444,198	3,767,544	0.02	0.04
4	-402	-968	444,116	3,767,561	0.02	0.04
5	-458	-943	444,059	3,767,586	0.02	0.04
6	-540	-871	443,978	3,767,658	0.02	0.04
7	-614	-843	443,904	3,767,686	0.02	0.04
8	-684	-841	443,834	3,767,688	0.02	0.04
9	-742	-799	443,775	3,767,730	0.02	0.04
10	-841	-773	443,677	3,767,756	0.02	0.04
11	-1,172	-733	443,346	3,767,796	0.01	0.02
12	-966	-1,002	443,552	3,767,527	0.01	0.02
13	-1,447	-746	443,071	3,767,783	0.01	0.02
14	-1,598	-534	442,920	3,767,995	0.01	0.02
15	-1,600	-716	442,918	3,767,813	0.01	0.01
16	-1,810	-597	442,707	3,767,932	0.01	0.01
17	-2,090	-578	442,427	3,767,951	0.01	0.01
18	-2,089	-714	442,429	3,767,815	0.01	0.01
19	-1,812	-716	442,706	3,767,813	0.01	0.01
20	-1,856	-388	442,662	3,768,140	0.01	0.02
21	-2,104	-421	442,414	3,768,108	0.01	0.01
22	-2,240	-345	442,278	3,768,184	0.01	0.01
23	-2,391	-248	442,126	3,768,281	0.01	0.01
24	-2,609	-48	441,909	3,768,481	0.01	0.01
25	-2,473	-265	442,045	3,768,264	0.01	0.01
26	-2,579	-161	441,939	3,768,368	0.01	0.01
27	827	-940	445,345	3,767,588	0.01	0.02
28	1,016	-940	445,534	3,767,588	0.01	0.02
29	785	-1,121	445,303	3,767,408	0.01	0.02
30	961	-1,074	445,478	3,767,455	0.01	0.02
31	987	-1,275	445,505	3,767,254	0.01	0.02
32	252	-1,254	444,770	3,767,274	0.01	0.02
33	455	-1,330	444,973	3,767,199	0.01	0.02
34	613	-1,435	445,131	3,767,094	0.01	0.02
35	1,248	-969	445,766	3,767,559	0.01	0.02
36	1,239	-1,188	445,757	3,767,341	0.01	0.02
37	1,244	-1,381	445,761	3,767,147	0.01	0.01
38	1,382	-972	445,899	3,767,557	0.01	0.02
39	1,382	-1,174	445,899	3,767,355	0.01	0.02
40	1,391	-1,390	445,908	3,767,138	0.01	0.01
41	1,682	-1,009	446,200	3,767,519	0.01	0.02
42	1,736	-1,263	446,254	3,767,265	0.01	0.01

43	2,602	-579	447,119	3,767,950	0.01	0.02
44	2,599	-760	447,117	3,767,769	0.01	0.01
45	2,782	-579	447,300	3,767,950	0.01	0.01
46	2,785	-749	447,303	3,767,780	0.01	0.01
47	3,005	-705	447,523	3,767,824	0.01	0.01
48	2,442	-946	446,959	3,767,583	0.01	0.01
49	2,586	-954	447,104	3,767,575	0.01	0.01
50	2,769	-951	447,287	3,767,578	0.00	0.01
51	2,982	-951	447,499	3,767,578	0.00	0.01
52	2,463	-1,087	446,980	3,767,442	0.01	0.01
53	2,623	-1,090	447,140	3,767,439	0.00	0.01
54	2,811	-1,087	447,329	3,767,442	0.00	0.01
55	2,434	-1,252	446,952	3,767,276	0.00	0.01
56	2,628	-1,266	447,145	3,767,263	0.00	0.01
57	2,795	-1,252	447,313	3,767,276	0.00	0.01
58	2,035	-1,507	446,553	3,767,022	0.01	0.01
59	2,114	-1,653	446,632	3,766,875	0.00	0.01
60	2,083	-985	446,600	3,767,544	0.01	0.01
61	2,415	-1,425	446,933	3,767,103	0.00	0.01
62	3,404	-181	447,922	3,768,348	0.01	0.02
63	3,396	-361	447,914	3,768,167	0.01	0.01
64	3,525	-422	448,042	3,768,107	0.01	0.01
65	3,530	-209	448,048	3,768,319	0.01	0.01
66	3,420	-561	447,938	3,767,968	0.01	0.01
67	3,386	13	447,903	3,768,542	0.01	0.02
68	3,556	5	448,074	3,768,534	0.01	0.02
69	3,525	244	448,042	3,768,773	0.01	0.02
70	3,210	265	447,728	3,768,794	0.02	0.02
71	3,210	448	447,728	3,768,977	0.02	0.02
72	3,409	380	447,927	3,768,909	0.01	0.02
73	3,179	716	447,696	3,769,244	0.01	0.02
74	3,370	721	447,888	3,769,250	0.01	0.02
75	3,024	687	447,542	3,769,216	0.02	0.02
76	2,791	708	447,309	3,769,237	0.02	0.02
77	-2,356	533	442,161	3,769,062	0.01	0.01
78	-2,353	617	442,165	3,769,146	0.00	0.01
79	-2,453	616	442,065	3,769,145	0.00	0.01
80	-2,454	524	442,064	3,769,053	0.00	0.01
81	-2,076	786	442,442	3,769,314	0.00	0.01
82	-2,019	788	442,499	3,769,317	0.00	0.01
83	-1,595	781	442,923	3,769,310	0.01	0.01
84	-1,505	786	443,013	3,769,314	0.01	0.01
85	-1,678	742	442,839	3,769,271	0.01	0.01
86	-1,854	776	442,664	3,769,304	0.01	0.01

87	-1,965	776	442,553	3,769,305	0.00	0.01
88	-1,911	775	442,606	3,769,304	0.00	0.01
89	-1,394	986	443,124	3,769,515	0.00	0.01
90	-1,282	993	443,236	3,769,522	0.01	0.01
91	-1,186	1,005	443,332	3,769,534	0.01	0.01
92	-1,181	959	443,337	3,769,488	0.01	0.01
93	-1,186	914	443,331	3,769,442	0.01	0.01
94	-1,189	871	443,329	3,769,400	0.01	0.01
95	-1,292	880	443,226	3,769,409	0.01	0.01
96	-1,286	918	443,232	3,769,447	0.01	0.01
97	-1,401	898	443,117	3,769,427	0.01	0.01
98	-1,066	901	443,451	3,769,429	0.01	0.01
99	-1,060	991	443,458	3,769,520	0.01	0.01
100	-1,068	1,059	443,450	3,769,588	0.01	0.01
101	-966	1,080	443,552	3,769,609	0.01	0.01
102	-948	976	443,570	3,769,505	0.01	0.01
103	-1,011	926	443,507	3,769,454	0.01	0.01
104	-999	874	443,519	3,769,402	0.01	0.01
105	-934	915	443,584	3,769,444	0.01	0.01
106	-736	929	443,781	3,769,458	0.01	0.01
107	-789	911	443,729	3,769,439	0.01	0.01
108	-831	1,001	443,687	3,769,530	0.01	0.01
109	-797	1,056	443,721	3,769,585	0.01	0.01
110	-725	1,051	443,793	3,769,579	0.01	0.01
111	-724	1,131	443,794	3,769,660	0.01	0.01
112	-796	1,116	443,721	3,769,644	0.01	0.01
113	-799	1,176	443,719	3,769,704	0.01	0.01
114	-671	1,113	443,847	3,769,642	0.01	0.01
115	-303	1,090	444,215	3,769,619	0.01	0.01
116	-284	1,041	444,234	3,769,570	0.01	0.01
117	-233	1,064	444,285	3,769,592	0.01	0.01
118	-149	1,112	444,368	3,769,641	0.01	0.01
119	-76	1,151	444,442	3,769,680	0.01	0.01
120	-176	1,178	444,341	3,769,707	0.01	0.01
121	-231	1,163	444,286	3,769,692	0.01	0.01
122	-285	1,237	444,233	3,769,766	0.01	0.01
123	-380	1,200	444,138	3,769,729	0.01	0.01
124	-390	828	444,128	3,769,357	0.02	0.02
125	-516	1,087	444,001	3,769,616	0.01	0.01
126	279	1,124	444,797	3,769,653	0.01	0.01
127	440	1,149	444,957	3,769,677	0.01	0.01
128	1,137	966	445,654	3,769,495	0.01	0.02
129	1,116	869	445,634	3,769,398	0.02	0.02
130	1,051	1,171	445,569	3,769,699	0.01	0.01

131	1,606	847	446,124	3,769,376	0.02	0.02
132	1,593	975	446,111	3,769,504	0.01	0.02
133	1,607	1,072	446,125	3,769,601	0.01	0.02
134	1,611	1,152	446,129	3,769,681	0.01	0.01
135	1,774	990	446,291	3,769,519	0.01	0.02
136	1,876	1,070	446,394	3,769,599	0.01	0.02
137	1,938	1,068	446,456	3,769,597	0.01	0.02
138	1,966	999	446,484	3,769,528	0.01	0.02
139	1,790	916	446,308	3,769,445	0.01	0.02
140	2,127	907	446,645	3,769,436	0.01	0.02
141	2,015	838	446,533	3,769,367	0.02	0.02
142	2,091	844	446,609	3,769,373	0.02	0.02
143	2,252	931	446,770	3,769,460	0.01	0.02
144	2,686	885	447,204	3,769,414	0.01	0.02
145	2,628	1,042	447,146	3,769,570	0.01	0.02
146	2,473	1,050	446,991	3,769,578	0.01	0.02
147	2,739	1,096	447,257	3,769,625	0.01	0.02

Health Impacts from Operational Activities Project Compared to Baseline – Offsite Worker - Acute

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	7	-1,125	444,525	3,767,404	0.05	0.12
2	-214	-1,028	444,304	3,767,501	-0.02	0.19
3	-320	-985	444,198	3,767,544	0.03	0.25
4	-402	-968	444,116	3,767,561	0.05	0.27
5	-458	-943	444,059	3,767,586	0.06	0.27
6	-540	-871	443,978	3,767,658	0.07	0.26
7	-614	-843	443,904	3,767,686	0.09	0.24
8	-684	-841	443,834	3,767,688	0.10	0.23
9	-742	-799	443,775	3,767,730	0.11	0.21
10	-841	-773	443,677	3,767,756	0.12	0.18
11	-1,172	-733	443,346	3,767,796	0.08	0.09
12	-966	-1,002	443,552	3,767,527	0.07	0.16
13	-1,447	-746	443,071	3,767,783	0.00	0.11
14	-1,598	-534	442,920	3,767,995	-0.09	0.01
15	-1,600	-716	442,918	3,767,813	-0.03	0.13
16	-1,810	-597	442,707	3,767,932	-0.07	0.02
17	-2,090	-578	442,427	3,767,951	-0.09	0.00
18	-2,089	-714	442,429	3,767,815	-0.05	0.06
19	-1,812	-716	442,706	3,767,813	-0.04	0.11
20	-1,856	-388	442,662	3,768,140	-0.13	0.04
21	-2,104	-421	442,414	3,768,108	-0.10	0.04
22	-2,240	-345	442,278	3,768,184	-0.03	0.09
23	-2,391	-248	442,126	3,768,281	0.06	0.15
24	-2,609	-48	441,909	3,768,481	0.19	0.27
25	-2,473	-265	442,045	3,768,264	0.05	0.14
26	-2,579	-161	441,939	3,768,368	0.13	0.21
27	827	-940	445,345	3,767,588	-0.03	0.11
28	1,016	-940	445,534	3,767,588	-0.04	0.07
29	785	-1,121	445,303	3,767,408	0.01	0.09
30	961	-1,074	445,478	3,767,455	-0.02	0.05
31	987	-1,275	445,505	3,767,254	-0.04	-0.04
32	252	-1,254	444,770	3,767,274	0.02	0.10
33	455	-1,330	444,973	3,767,199	0.07	0.10
34	613	-1,435	445,131	3,767,094	0.03	0.02
35	1,248	-969	445,766	3,767,559	-0.07	-0.02
36	1,239	-1,188	445,757	3,767,341	-0.03	-0.04
37	1,244	-1,381	445,761	3,767,147	0.00	0.00
38	1,382	-972	445,899	3,767,557	-0.04	-0.03
39	1,382	-1,174	445,899	3,767,355	0.00	0.01
40	1,391	-1,390	445,908	3,767,138	0.03	0.04
41	1,682	-1,009	446,200	3,767,519	0.07	0.15
42	1,736	-1,263	446,254	3,767,265	0.02	0.08

43	2,602	-579	447,119	3,767,950	0.25	0.25
44	2,599	-760	447,117	3,767,769	0.02	0.03
45	2,782	-579	447,300	3,767,950	0.21	0.17
46	2,785	-749	447,303	3,767,780	0.11	0.17
47	3,005	-705	447,523	3,767,824	0.16	0.17
48	2,442	-946	446,959	3,767,583	-0.22	-0.20
49	2,586	-954	447,104	3,767,575	-0.15	-0.15
50	2,769	-951	447,287	3,767,578	0.00	0.00
51	2,982	-951	447,499	3,767,578	0.05	0.04
52	2,463	-1,087	446,980	3,767,442	-0.13	-0.14
53	2,623	-1,090	447,140	3,767,439	-0.17	-0.17
54	2,811	-1,087	447,329	3,767,442	-0.06	-0.06
55	2,434	-1,252	446,952	3,767,276	-0.03	-0.08
56	2,628	-1,266	447,145	3,767,263	-0.11	-0.11
57	2,795	-1,252	447,313	3,767,276	-0.13	-0.13
58	2,035	-1,507	446,553	3,767,022	-0.06	-0.05
59	2,114	-1,653	446,632	3,766,875	-0.04	-0.04
60	2,083	-985	446,600	3,767,544	0.03	-0.03
61	2,415	-1,425	446,933	3,767,103	0.03	-0.01
62	3,404	-181	447,922	3,768,348	0.00	-0.09
63	3,396	-361	447,914	3,768,167	0.06	-0.04
64	3,525	-422	448,042	3,768,107	0.09	-0.01
65	3,530	-209	448,048	3,768,319	0.02	-0.07
66	3,420	-561	447,938	3,767,968	0.12	0.03
67	3,386	13	447,903	3,768,542	-0.01	-0.09
68	3,556	5	448,074	3,768,534	-0.01	-0.09
69	3,525	244	448,042	3,768,773	-0.01	-0.03
70	3,210	265	447,728	3,768,794	-0.03	-0.03
71	3,210	448	447,728	3,768,977	-0.02	0.02
72	3,409	380	447,927	3,768,909	-0.04	-0.01
73	3,179	716	447,696	3,769,244	0.02	0.08
74	3,370	721	447,888	3,769,250	0.01	0.07
75	3,024	687	447,542	3,769,216	0.02	0.09
76	2,791	708	447,309	3,769,237	0.05	0.10
77	-2,356	533	442,161	3,769,062	0.15	0.07
78	-2,353	617	442,165	3,769,146	0.13	0.05
79	-2,453	616	442,065	3,769,145	0.13	0.06
80	-2,454	524	442,064	3,769,053	0.16	0.09
81	-2,076	786	442,442	3,769,314	0.07	0.01
82	-2,019	788	442,499	3,769,317	0.06	0.01
83	-1,595	781	442,923	3,769,310	0.04	0.00
84	-1,505	786	443,013	3,769,314	0.04	0.00
85	-1,678	742	442,839	3,769,271	0.06	0.00
86	-1,854	776	442,664	3,769,304	0.06	0.01

87	-1,965	776	442,553	3,769,305	0.06	0.01
88	-1,911	775	442,606	3,769,304	0.06	0.01
89	-1,394	986	443,124	3,769,515	0.07	0.04
90	-1,282	993	443,236	3,769,522	0.09	0.05
91	-1,186	1,005	443,332	3,769,534	0.08	0.04
92	-1,181	959	443,337	3,769,488	0.09	0.05
93	-1,186	914	443,331	3,769,442	0.09	0.05
94	-1,189	871	443,329	3,769,400	0.09	0.04
95	-1,292	880	443,226	3,769,409	0.07	0.03
96	-1,286	918	443,232	3,769,447	0.08	0.04
97	-1,401	898	443,117	3,769,427	0.05	0.03
98	-1,066	901	443,451	3,769,429	0.09	0.05
99	-1,060	991	443,458	3,769,520	0.06	0.03
100	-1,068	1,059	443,450	3,769,588	0.05	0.02
101	-966	1,080	443,552	3,769,609	0.01	0.01
102	-948	976	443,570	3,769,505	0.03	0.02
103	-1,011	926	443,507	3,769,454	0.07	0.04
104	-999	874	443,519	3,769,402	0.08	0.04
105	-934	915	443,584	3,769,444	0.05	0.03
106	-736	929	443,781	3,769,458	-0.02	0.01
107	-789	911	443,729	3,769,439	0.00	0.01
108	-831	1,001	443,687	3,769,530	-0.01	0.01
109	-797	1,056	443,721	3,769,585	-0.02	0.00
110	-725	1,051	443,793	3,769,579	-0.02	-0.01
111	-724	1,131	443,794	3,769,660	-0.01	-0.02
112	-796	1,116	443,721	3,769,644	-0.02	-0.01
113	-799	1,176	443,719	3,769,704	-0.01	-0.02
114	-671	1,113	443,847	3,769,642	-0.01	-0.02
115	-303	1,090	444,215	3,769,619	0.02	-0.02
116	-284	1,041	444,234	3,769,570	0.02	-0.02
117	-233	1,064	444,285	3,769,592	0.02	-0.02
118	-149	1,112	444,368	3,769,641	0.02	-0.01
119	-76	1,151	444,442	3,769,680	0.02	-0.01
120	-176	1,178	444,341	3,769,707	0.02	-0.01
121	-231	1,163	444,286	3,769,692	0.02	-0.02
122	-285	1,237	444,233	3,769,766	0.02	-0.02
123	-380	1,200	444,138	3,769,729	0.02	-0.02
124	-390	828	444,128	3,769,357	0.00	-0.02
125	-516	1,087	444,001	3,769,616	0.01	-0.02
126	279	1,124	444,797	3,769,653	0.00	0.01
127	440	1,149	444,957	3,769,677	0.00	0.01
128	1,137	966	445,654	3,769,495	0.00	0.07
129	1,116	869	445,634	3,769,398	0.00	0.07
130	1,051	1,171	445,569	3,769,699	0.00	0.06

131	1,606	847	446,124	3,769,376	0.02	0.04
132	1,593	975	446,111	3,769,504	0.02	0.03
133	1,607	1,072	446,125	3,769,601	0.01	0.02
134	1,611	1,152	446,129	3,769,681	0.01	0.02
135	1,774	990	446,291	3,769,519	-0.07	-0.01
136	1,876	1,070	446,394	3,769,599	-0.07	0.00
137	1,938	1,068	446,456	3,769,597	-0.06	0.01
138	1,966	999	446,484	3,769,528	-0.02	0.03
139	1,790	916	446,308	3,769,445	-0.08	-0.02
140	2,127	907	446,645	3,769,436	0.07	0.07
141	2,015	838	446,533	3,769,367	0.07	0.07
142	2,091	844	446,609	3,769,373	0.09	0.07
143	2,252	931	446,770	3,769,460	0.08	0.06
144	2,686	885	447,204	3,769,414	0.08	0.03
145	2,628	1,042	447,146	3,769,570	0.09	0.05
146	2,473	1,050	446,991	3,769,578	0.08	0.06
147	2,739	1,096	447,257	3,769,625	0.08	0.05

Health Impacts from Operational Activities Project Compared to Without Project – Offsite Worker - Cancer

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	7	-1,125	444,525	3,767,404	0.20	0.29
2	-214	-1,028	444,304	3,767,501	0.27	0.40
3	-320	-985	444,198	3,767,544	0.29	0.42
4	-402	-968	444,116	3,767,561	0.29	0.41
5	-458	-943	444,059	3,767,586	0.29	0.41
6	-540	-871	443,978	3,767,658	0.32	0.43
7	-614	-843	443,904	3,767,686	0.32	0.43
8	-684	-841	443,834	3,767,688	0.30	0.40
9	-742	-799	443,775	3,767,730	0.31	0.41
10	-841	-773	443,677	3,767,756	0.29	0.39
11	-1,172	-733	443,346	3,767,796	0.17	0.21
12	-966	-1,002	443,552	3,767,527	0.18	0.23
13	-1,447	-746	443,071	3,767,783	0.10	0.12
14	-1,598	-534	442,920	3,767,995	0.08	0.08
15	-1,600	-716	442,918	3,767,813	0.08	0.09
16	-1,810	-597	442,707	3,767,932	0.06	0.05
17	-2,090	-578	442,427	3,767,951	0.04	0.03
18	-2,089	-714	442,429	3,767,815	0.04	0.04
19	-1,812	-716	442,706	3,767,813	0.06	0.06
20	-1,856	-388	442,662	3,768,140	0.05	0.04
21	-2,104	-421	442,414	3,768,108	0.04	0.03
22	-2,240	-345	442,278	3,768,184	0.04	0.02
23	-2,391	-248	442,126	3,768,281	0.03	0.02
24	-2,609	-48	441,909	3,768,481	0.03	0.02
25	-2,473	-265	442,045	3,768,264	0.03	0.02
26	-2,579	-161	441,939	3,768,368	0.03	0.02
27	827	-940	445,345	3,767,588	0.15	0.36
28	1,016	-940	445,534	3,767,588	0.13	0.41
29	785	-1,121	445,303	3,767,408	0.12	0.29
30	961	-1,074	445,478	3,767,455	0.11	0.33
31	987	-1,275	445,505	3,767,254	0.09	0.27
32	252	-1,254	444,770	3,767,274	0.14	0.22
33	455	-1,330	444,973	3,767,199	0.12	0.21
34	613	-1,435	445,131	3,767,094	0.10	0.21
35	1,248	-969	445,766	3,767,559	0.11	0.45
36	1,239	-1,188	445,757	3,767,341	0.08	0.32
37	1,244	-1,381	445,761	3,767,147	0.07	0.24
38	1,382	-972	445,899	3,767,557	0.10	0.48
39	1,382	-1,174	445,899	3,767,355	0.07	0.33
40	1,391	-1,390	445,908	3,767,138	0.06	0.23
41	1,682	-1,009	446,200	3,767,519	0.07	0.46
42	1,736	-1,263	446,254	3,767,265	0.05	0.27

43	2,602	-579	447,119	3,767,950	0.06	0.48
44	2,599	-760	447,117	3,767,769	0.05	0.26
45	2,782	-579	447,300	3,767,950	0.06	0.38
46	2,785	-749	447,303	3,767,780	0.04	0.21
47	3,005	-705	447,523	3,767,824	0.04	0.20
48	2,442	-946	446,959	3,767,583	0.04	0.24
49	2,586	-954	447,104	3,767,575	0.04	0.19
50	2,769	-951	447,287	3,767,578	0.03	0.14
51	2,982	-951	447,499	3,767,578	0.03	0.12
52	2,463	-1,087	446,980	3,767,442	0.04	0.18
53	2,623	-1,090	447,140	3,767,439	0.03	0.15
54	2,811	-1,087	447,329	3,767,442	0.03	0.12
55	2,434	-1,252	446,952	3,767,276	0.03	0.15
56	2,628	-1,266	447,145	3,767,263	0.03	0.12
57	2,795	-1,252	447,313	3,767,276	0.03	0.10
58	2,035	-1,507	446,553	3,767,022	0.03	0.15
59	2,114	-1,653	446,632	3,766,875	0.03	0.12
60	2,083	-985	446,600	3,767,544	0.05	0.37
61	2,415	-1,425	446,933	3,767,103	0.03	0.12
62	3,404	-181	447,922	3,768,348	0.07	0.46
63	3,396	-361	447,914	3,768,167	0.05	0.34
64	3,525	-422	448,042	3,768,107	0.04	0.26
65	3,530	-209	448,048	3,768,319	0.06	0.38
66	3,420	-561	447,938	3,767,968	0.04	0.20
67	3,386	13	447,903	3,768,542	0.08	0.52
68	3,556	5	448,074	3,768,534	0.07	0.43
69	3,525	244	448,042	3,768,773	0.09	0.39
70	3,210	265	447,728	3,768,794	0.11	0.44
71	3,210	448	447,728	3,768,977	0.12	0.21
72	3,409	380	447,927	3,768,909	0.10	0.31
73	3,179	716	447,696	3,769,244	0.11	-0.11
74	3,370	721	447,888	3,769,250	0.10	-0.03
75	3,024	687	447,542	3,769,216	0.12	-0.18
76	2,791	708	447,309	3,769,237	0.12	-0.40
77	-2,356	533	442,161	3,769,062	0.02	0.01
78	-2,353	617	442,165	3,769,146	0.02	0.01
79	-2,453	616	442,065	3,769,145	0.02	0.01
80	-2,454	524	442,064	3,769,053	0.02	0.02
81	-2,076	786	442,442	3,769,314	0.02	0.01
82	-2,019	788	442,499	3,769,317	0.02	0.01
83	-1,595	781	442,923	3,769,310	0.02	0.01
84	-1,505	786	443,013	3,769,314	0.02	0.01
85	-1,678	742	442,839	3,769,271	0.02	0.01
86	-1,854	776	442,664	3,769,304	0.02	0.01

87	-1,965	776	442,553	3,769,305	0.02	0.01
88	-1,911	775	442,606	3,769,304	0.02	0.01
89	-1,394	986	443,124	3,769,515	0.02	0.01
90	-1,282	993	443,236	3,769,522	0.02	0.01
91	-1,186	1,005	443,332	3,769,534	0.02	0.01
92	-1,181	959	443,337	3,769,488	0.02	0.01
93	-1,186	914	443,331	3,769,442	0.02	0.01
94	-1,189	871	443,329	3,769,400	0.02	0.01
95	-1,292	880	443,226	3,769,409	0.02	0.01
96	-1,286	918	443,232	3,769,447	0.02	0.01
97	-1,401	898	443,117	3,769,427	0.02	0.01
98	-1,066	901	443,451	3,769,429	0.02	0.01
99	-1,060	991	443,458	3,769,520	0.02	0.01
100	-1,068	1,059	443,450	3,769,588	0.02	0.01
101	-966	1,080	443,552	3,769,609	0.02	0.01
102	-948	976	443,570	3,769,505	0.02	0.01
103	-1,011	926	443,507	3,769,454	0.02	0.01
104	-999	874	443,519	3,769,402	0.02	0.01
105	-934	915	443,584	3,769,444	0.02	0.01
106	-736	929	443,781	3,769,458	0.03	0.00
107	-789	911	443,729	3,769,439	0.03	0.00
108	-831	1,001	443,687	3,769,530	0.02	0.01
109	-797	1,056	443,721	3,769,585	0.02	0.01
110	-725	1,051	443,793	3,769,579	0.02	0.01
111	-724	1,131	443,794	3,769,660	0.02	0.01
112	-796	1,116	443,721	3,769,644	0.02	0.01
113	-799	1,176	443,719	3,769,704	0.02	0.01
114	-671	1,113	443,847	3,769,642	0.02	0.01
115	-303	1,090	444,215	3,769,619	0.03	0.00
116	-284	1,041	444,234	3,769,570	0.03	0.00
117	-233	1,064	444,285	3,769,592	0.03	0.00
118	-149	1,112	444,368	3,769,641	0.03	0.00
119	-76	1,151	444,442	3,769,680	0.03	0.00
120	-176	1,178	444,341	3,769,707	0.03	0.00
121	-231	1,163	444,286	3,769,692	0.03	0.00
122	-285	1,237	444,233	3,769,766	0.03	0.00
123	-380	1,200	444,138	3,769,729	0.03	0.00
124	-390	828	444,128	3,769,357	0.04	-0.01
125	-516	1,087	444,001	3,769,616	0.03	0.00
126	279	1,124	444,797	3,769,653	0.04	-0.01
127	440	1,149	444,957	3,769,677	0.04	-0.01
128	1,137	966	445,654	3,769,495	0.07	-0.20
129	1,116	869	445,634	3,769,398	0.08	-0.29
130	1,051	1,171	445,569	3,769,699	0.05	-0.07

131	1,606	847	446,124	3,769,376	0.10	-0.61
132	1,593	975	446,111	3,769,504	0.08	-0.38
133	1,607	1,072	446,125	3,769,601	0.07	-0.27
134	1,611	1,152	446,129	3,769,681	0.06	-0.21
135	1,774	990	446,291	3,769,519	0.09	-0.43
136	1,876	1,070	446,394	3,769,599	0.08	-0.37
137	1,938	1,068	446,456	3,769,597	0.08	-0.39
138	1,966	999	446,484	3,769,528	0.09	-0.50
139	1,790	916	446,308	3,769,445	0.10	-0.57
140	2,127	907	446,645	3,769,436	0.11	-0.71
141	2,015	838	446,533	3,769,367	0.12	-0.87
142	2,091	844	446,609	3,769,373	0.12	-0.86
143	2,252	931	446,770	3,769,460	0.10	-0.67
144	2,686	885	447,204	3,769,414	0.11	-0.53
145	2,628	1,042	447,146	3,769,570	0.09	-0.46
146	2,473	1,050	446,991	3,769,578	0.09	-0.49
147	2,739	1,096	447,257	3,769,625	0.09	-0.40

Health Impacts from Operational Activities Project Compared to Without Project – Offsite Worker - Chronic

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	7	-1,125	444,525	3,767,404	0.02	0.03
2	-214	-1,028	444,304	3,767,501	0.03	0.04
3	-320	-985	444,198	3,767,544	0.03	0.04
4	-402	-968	444,116	3,767,561	0.03	0.04
5	-458	-943	444,059	3,767,586	0.03	0.04
6	-540	-871	443,978	3,767,658	0.03	0.04
7	-614	-843	443,904	3,767,686	0.03	0.04
8	-684	-841	443,834	3,767,688	0.03	0.04
9	-742	-799	443,775	3,767,730	0.03	0.04
10	-841	-773	443,677	3,767,756	0.03	0.04
11	-1,172	-733	443,346	3,767,796	0.02	0.02
12	-966	-1,002	443,552	3,767,527	0.02	0.02
13	-1,447	-746	443,071	3,767,783	0.01	0.01
14	-1,598	-534	442,920	3,767,995	0.01	0.01
15	-1,600	-716	442,918	3,767,813	0.01	0.01
16	-1,810	-597	442,707	3,767,932	0.01	0.01
17	-2,090	-578	442,427	3,767,951	0.00	0.00
18	-2,089	-714	442,429	3,767,815	0.00	0.00
19	-1,812	-716	442,706	3,767,813	0.01	0.01
20	-1,856	-388	442,662	3,768,140	0.00	0.00
21	-2,104	-421	442,414	3,768,108	0.00	0.00
22	-2,240	-345	442,278	3,768,184	0.00	0.00
23	-2,391	-248	442,126	3,768,281	0.00	0.00
24	-2,609	-48	441,909	3,768,481	0.00	0.00
25	-2,473	-265	442,045	3,768,264	0.00	0.00
26	-2,579	-161	441,939	3,768,368	0.00	0.00
27	827	-940	445,345	3,767,588	0.01	0.04
28	1,016	-940	445,534	3,767,588	0.01	0.04
29	785	-1,121	445,303	3,767,408	0.01	0.03
30	961	-1,074	445,478	3,767,455	0.01	0.03
31	987	-1,275	445,505	3,767,254	0.01	0.03
32	252	-1,254	444,770	3,767,274	0.01	0.02
33	455	-1,330	444,973	3,767,199	0.01	0.02
34	613	-1,435	445,131	3,767,094	0.01	0.02
35	1,248	-969	445,766	3,767,559	0.01	0.04
36	1,239	-1,188	445,757	3,767,341	0.01	0.03
37	1,244	-1,381	445,761	3,767,147	0.01	0.02
38	1,382	-972	445,899	3,767,557	0.01	0.05
39	1,382	-1,174	445,899	3,767,355	0.01	0.03
40	1,391	-1,390	445,908	3,767,138	0.01	0.02
41	1,682	-1,009	446,200	3,767,519	0.01	0.04
42	1,736	-1,263	446,254	3,767,265	0.00	0.03

43	2,602	-579	447,119	3,767,950	0.01	0.05
44	2,599	-760	447,117	3,767,769	0.00	0.03
45	2,782	-579	447,300	3,767,950	0.01	0.04
46	2,785	-749	447,303	3,767,780	0.00	0.02
47	3,005	-705	447,523	3,767,824	0.00	0.02
48	2,442	-946	446,959	3,767,583	0.00	0.02
49	2,586	-954	447,104	3,767,575	0.00	0.02
50	2,769	-951	447,287	3,767,578	0.00	0.01
51	2,982	-951	447,499	3,767,578	0.00	0.01
52	2,463	-1,087	446,980	3,767,442	0.00	0.02
53	2,623	-1,090	447,140	3,767,439	0.00	0.01
54	2,811	-1,087	447,329	3,767,442	0.00	0.01
55	2,434	-1,252	446,952	3,767,276	0.00	0.01
56	2,628	-1,266	447,145	3,767,263	0.00	0.01
57	2,795	-1,252	447,313	3,767,276	0.00	0.01
58	2,035	-1,507	446,553	3,767,022	0.00	0.01
59	2,114	-1,653	446,632	3,766,875	0.00	0.01
60	2,083	-985	446,600	3,767,544	0.00	0.04
61	2,415	-1,425	446,933	3,767,103	0.00	0.01
62	3,404	-181	447,922	3,768,348	0.01	0.04
63	3,396	-361	447,914	3,768,167	0.01	0.03
64	3,525	-422	448,042	3,768,107	0.00	0.02
65	3,530	-209	448,048	3,768,319	0.01	0.04
66	3,420	-561	447,938	3,767,968	0.00	0.02
67	3,386	13	447,903	3,768,542	0.01	0.05
68	3,556	5	448,074	3,768,534	0.01	0.04
69	3,525	244	448,042	3,768,773	0.01	0.04
70	3,210	265	447,728	3,768,794	0.01	0.04
71	3,210	448	447,728	3,768,977	0.01	0.02
72	3,409	380	447,927	3,768,909	0.01	0.03
73	3,179	716	447,696	3,769,244	0.01	-0.01
74	3,370	721	447,888	3,769,250	0.01	0.00
75	3,024	687	447,542	3,769,216	0.01	-0.02
76	2,791	708	447,309	3,769,237	0.01	-0.04
77	-2,356	533	442,161	3,769,062	0.00	0.00
78	-2,353	617	442,165	3,769,146	0.00	0.00
79	-2,453	616	442,065	3,769,145	0.00	0.00
80	-2,454	524	442,064	3,769,053	0.00	0.00
81	-2,076	786	442,442	3,769,314	0.00	0.00
82	-2,019	788	442,499	3,769,317	0.00	0.00
83	-1,595	781	442,923	3,769,310	0.00	0.00
84	-1,505	786	443,013	3,769,314	0.00	0.00
85	-1,678	742	442,839	3,769,271	0.00	0.00
86	-1,854	776	442,664	3,769,304	0.00	0.00

87	-1,965	776	442,553	3,769,305	0.00	0.00
88	-1,911	775	442,606	3,769,304	0.00	0.00
89	-1,394	986	443,124	3,769,515	0.00	0.00
90	-1,282	993	443,236	3,769,522	0.00	0.00
91	-1,186	1,005	443,332	3,769,534	0.00	0.00
92	-1,181	959	443,337	3,769,488	0.00	0.00
93	-1,186	914	443,331	3,769,442	0.00	0.00
94	-1,189	871	443,329	3,769,400	0.00	0.00
95	-1,292	880	443,226	3,769,409	0.00	0.00
96	-1,286	918	443,232	3,769,447	0.00	0.00
97	-1,401	898	443,117	3,769,427	0.00	0.00
98	-1,066	901	443,451	3,769,429	0.00	0.00
99	-1,060	991	443,458	3,769,520	0.00	0.00
100	-1,068	1,059	443,450	3,769,588	0.00	0.00
101	-966	1,080	443,552	3,769,609	0.00	0.00
102	-948	976	443,570	3,769,505	0.00	0.00
103	-1,011	926	443,507	3,769,454	0.00	0.00
104	-999	874	443,519	3,769,402	0.00	0.00
105	-934	915	443,584	3,769,444	0.00	0.00
106	-736	929	443,781	3,769,458	0.00	0.00
107	-789	911	443,729	3,769,439	0.00	0.00
108	-831	1,001	443,687	3,769,530	0.00	0.00
109	-797	1,056	443,721	3,769,585	0.00	0.00
110	-725	1,051	443,793	3,769,579	0.00	0.00
111	-724	1,131	443,794	3,769,660	0.00	0.00
112	-796	1,116	443,721	3,769,644	0.00	0.00
113	-799	1,176	443,719	3,769,704	0.00	0.00
114	-671	1,113	443,847	3,769,642	0.00	0.00
115	-303	1,090	444,215	3,769,619	0.00	0.00
116	-284	1,041	444,234	3,769,570	0.00	0.00
117	-233	1,064	444,285	3,769,592	0.00	0.00
118	-149	1,112	444,368	3,769,641	0.00	0.00
119	-76	1,151	444,442	3,769,680	0.00	0.00
120	-176	1,178	444,341	3,769,707	0.00	0.00
121	-231	1,163	444,286	3,769,692	0.00	0.00
122	-285	1,237	444,233	3,769,766	0.00	0.00
123	-380	1,200	444,138	3,769,729	0.00	0.00
124	-390	828	444,128	3,769,357	0.00	0.00
125	-516	1,087	444,001	3,769,616	0.00	0.00
126	279	1,124	444,797	3,769,653	0.00	0.00
127	440	1,149	444,957	3,769,677	0.00	0.00
128	1,137	966	445,654	3,769,495	0.01	-0.02
129	1,116	869	445,634	3,769,398	0.01	-0.03
130	1,051	1,171	445,569	3,769,699	0.01	-0.01

131	1,606	847	446,124	3,769,376	0.01	-0.06
132	1,593	975	446,111	3,769,504	0.01	-0.04
133	1,607	1,072	446,125	3,769,601	0.01	-0.03
134	1,611	1,152	446,129	3,769,681	0.01	-0.02
135	1,774	990	446,291	3,769,519	0.01	-0.04
136	1,876	1,070	446,394	3,769,599	0.01	-0.04
137	1,938	1,068	446,456	3,769,597	0.01	-0.04
138	1,966	999	446,484	3,769,528	0.01	-0.05
139	1,790	916	446,308	3,769,445	0.01	-0.06
140	2,127	907	446,645	3,769,436	0.01	-0.07
141	2,015	838	446,533	3,769,367	0.01	-0.08
142	2,091	844	446,609	3,769,373	0.01	-0.08
143	2,252	931	446,770	3,769,460	0.01	-0.06
144	2,686	885	447,204	3,769,414	0.01	-0.05
145	2,628	1,042	447,146	3,769,570	0.01	-0.05
146	2,473	1,050	446,991	3,769,578	0.01	-0.05
147	2,739	1,096	447,257	3,769,625	0.01	-0.04

Health Impacts from Operational Activities Project Compared to Without Project – Offsite Worker - Acute

ID	X (m)	Y (m)	UTM X (m)	UTM Y (m)	Phase 1	Phase 2
1	7	-1,125	444,525	3,767,404	0.08	0.09
2	-214	-1,028	444,304	3,767,501	0.05	0.15
3	-320	-985	444,198	3,767,544	0.09	0.18
4	-402	-968	444,116	3,767,561	0.11	0.17
5	-458	-943	444,059	3,767,586	0.11	0.16
6	-540	-871	443,978	3,767,658	0.14	0.11
7	-614	-843	443,904	3,767,686	0.16	0.09
8	-684	-841	443,834	3,767,688	0.17	0.07
9	-742	-799	443,775	3,767,730	0.19	0.06
10	-841	-773	443,677	3,767,756	0.21	0.06
11	-1,172	-733	443,346	3,767,796	0.19	0.10
12	-966	-1,002	443,552	3,767,527	0.14	0.04
13	-1,447	-746	443,071	3,767,783	0.08	0.13
14	-1,598	-534	442,920	3,767,995	0.11	0.18
15	-1,600	-716	442,918	3,767,813	0.03	0.15
16	-1,810	-597	442,707	3,767,932	0.08	0.14
17	-2,090	-578	442,427	3,767,951	0.07	0.10
18	-2,089	-714	442,429	3,767,815	0.04	0.13
19	-1,812	-716	442,706	3,767,813	0.03	0.14
20	-1,856	-388	442,662	3,768,140	0.11	0.20
21	-2,104	-421	442,414	3,768,108	0.09	0.15
22	-2,240	-345	442,278	3,768,184	0.13	0.14
23	-2,391	-248	442,126	3,768,281	0.14	0.12
24	-2,609	-48	441,909	3,768,481	0.12	0.13
25	-2,473	-265	442,045	3,768,264	0.13	0.12
26	-2,579	-161	441,939	3,768,368	0.13	0.12
27	827	-940	445,345	3,767,588	-0.02	0.14
28	1,016	-940	445,534	3,767,588	0.00	0.08
29	785	-1,121	445,303	3,767,408	-0.02	0.08
30	961	-1,074	445,478	3,767,455	-0.02	0.03
31	987	-1,275	445,505	3,767,254	-0.04	-0.07
32	252	-1,254	444,770	3,767,274	-0.02	0.05
33	455	-1,330	444,973	3,767,199	-0.01	0.04
34	613	-1,435	445,131	3,767,094	-0.03	0.00
35	1,248	-969	445,766	3,767,559	-0.03	-0.02
36	1,239	-1,188	445,757	3,767,341	-0.04	-0.07
37	1,244	-1,381	445,761	3,767,147	-0.03	-0.05
38	1,382	-972	445,899	3,767,557	-0.04	-0.03
39	1,382	-1,174	445,899	3,767,355	-0.02	-0.01
40	1,391	-1,390	445,908	3,767,138	-0.01	0.01
41	1,682	-1,009	446,200	3,767,519	0.03	0.18
42	1,736	-1,263	446,254	3,767,265	0.02	0.10

43	2,602	-579	447,119	3,767,950	0.17	0.46
44	2,599	-760	447,117	3,767,769	0.02	0.19
45	2,782	-579	447,300	3,767,950	0.15	0.37
46	2,785	-749	447,303	3,767,780	0.09	0.22
47	3,005	-705	447,523	3,767,824	0.13	0.28
48	2,442	-946	446,959	3,767,583	0.01	0.09
49	2,586	-954	447,104	3,767,575	0.01	0.10
50	2,769	-951	447,287	3,767,578	0.02	0.11
51	2,982	-951	447,499	3,767,578	0.01	0.08
52	2,463	-1,087	446,980	3,767,442	0.03	0.07
53	2,623	-1,090	447,140	3,767,439	0.01	0.04
54	2,811	-1,087	447,329	3,767,442	0.02	0.07
55	2,434	-1,252	446,952	3,767,276	0.04	0.06
56	2,628	-1,266	447,145	3,767,263	0.02	0.04
57	2,795	-1,252	447,313	3,767,276	0.02	0.02
58	2,035	-1,507	446,553	3,767,022	0.01	0.03
59	2,114	-1,653	446,632	3,766,875	0.02	0.03
60	2,083	-985	446,600	3,767,544	0.06	0.13
61	2,415	-1,425	446,933	3,767,103	0.04	0.07
62	3,404	-181	447,922	3,768,348	0.09	-0.08
63	3,396	-361	447,914	3,768,167	0.04	-0.10
64	3,525	-422	448,042	3,768,107	0.03	-0.10
65	3,530	-209	448,048	3,768,319	0.08	-0.07
66	3,420	-561	447,938	3,767,968	0.04	-0.04
67	3,386	13	447,903	3,768,542	0.05	-0.02
68	3,556	5	448,074	3,768,534	0.06	0.00
69	3,525	244	448,042	3,768,773	0.03	-0.05
70	3,210	265	447,728	3,768,794	0.03	-0.08
71	3,210	448	447,728	3,768,977	0.01	-0.09
72	3,409	380	447,927	3,768,909	0.01	-0.08
73	3,179	716	447,696	3,769,244	0.01	-0.05
74	3,370	721	447,888	3,769,250	0.01	-0.03
75	3,024	687	447,542	3,769,216	0.01	-0.07
76	2,791	708	447,309	3,769,237	0.04	-0.12
77	-2,356	533	442,161	3,769,062	0.01	-0.09
78	-2,353	617	442,165	3,769,146	0.02	-0.06
79	-2,453	616	442,065	3,769,145	0.02	-0.06
80	-2,454	524	442,064	3,769,053	0.00	-0.09
81	-2,076	786	442,442	3,769,314	0.06	-0.04
82	-2,019	788	442,499	3,769,317	0.06	-0.04
83	-1,595	781	442,923	3,769,310	0.05	-0.07
84	-1,505	786	443,013	3,769,314	0.05	-0.07
85	-1,678	742	442,839	3,769,271	0.06	-0.08
86	-1,854	776	442,664	3,769,304	0.06	-0.05

87	-1,965	776	442,553	3,769,305	0.06	-0.04
88	-1,911	775	442,606	3,769,304	0.06	-0.04
89	-1,394	986	443,124	3,769,515	0.03	0.01
90	-1,282	993	443,236	3,769,522	0.04	0.01
91	-1,186	1,005	443,332	3,769,534	0.04	0.01
92	-1,181	959	443,337	3,769,488	0.04	0.01
93	-1,186	914	443,331	3,769,442	0.04	-0.01
94	-1,189	871	443,329	3,769,400	0.04	-0.03
95	-1,292	880	443,226	3,769,409	0.04	-0.03
96	-1,286	918	443,232	3,769,447	0.04	-0.01
97	-1,401	898	443,117	3,769,427	0.03	-0.03
98	-1,066	901	443,451	3,769,429	0.04	-0.01
99	-1,060	991	443,458	3,769,520	0.04	0.01
100	-1,068	1,059	443,450	3,769,588	0.03	0.01
101	-966	1,080	443,552	3,769,609	0.02	0.01
102	-948	976	443,570	3,769,505	0.03	0.01
103	-1,011	926	443,507	3,769,454	0.04	0.01
104	-999	874	443,519	3,769,402	0.04	-0.02
105	-934	915	443,584	3,769,444	0.03	0.01
106	-736	929	443,781	3,769,458	-0.01	0.01
107	-789	911	443,729	3,769,439	0.02	0.01
108	-831	1,001	443,687	3,769,530	0.01	0.01
109	-797	1,056	443,721	3,769,585	-0.02	0.00
110	-725	1,051	443,793	3,769,579	-0.02	-0.01
111	-724	1,131	443,794	3,769,660	-0.02	-0.02
112	-796	1,116	443,721	3,769,644	-0.02	-0.01
113	-799	1,176	443,719	3,769,704	-0.02	-0.02
114	-671	1,113	443,847	3,769,642	-0.02	-0.03
115	-303	1,090	444,215	3,769,619	0.00	-0.06
116	-284	1,041	444,234	3,769,570	0.00	-0.06
117	-233	1,064	444,285	3,769,592	0.00	-0.06
118	-149	1,112	444,368	3,769,641	0.01	-0.06
119	-76	1,151	444,442	3,769,680	0.01	-0.07
120	-176	1,178	444,341	3,769,707	0.01	-0.06
121	-231	1,163	444,286	3,769,692	0.00	-0.06
122	-285	1,237	444,233	3,769,766	0.00	-0.06
123	-380	1,200	444,138	3,769,729	0.00	-0.05
124	-390	828	444,128	3,769,357	-0.03	-0.04
125	-516	1,087	444,001	3,769,616	-0.01	-0.04
126	279	1,124	444,797	3,769,653	0.01	-0.15
127	440	1,149	444,957	3,769,677	0.00	-0.20
128	1,137	966	445,654	3,769,495	0.01	-0.19
129	1,116	869	445,634	3,769,398	0.01	-0.22
130	1,051	1,171	445,569	3,769,699	0.01	-0.08

131	1,606	847	446,124	3,769,376	0.00	-0.60
132	1,593	975	446,111	3,769,504	0.00	-0.53
133	1,607	1,072	446,125	3,769,601	0.00	-0.49
134	1,611	1,152	446,129	3,769,681	0.00	-0.45
135	1,774	990	446,291	3,769,519	0.01	-0.41
136	1,876	1,070	446,394	3,769,599	0.01	-0.26
137	1,938	1,068	446,456	3,769,597	0.01	-0.16
138	1,966	999	446,484	3,769,528	0.03	-0.20
139	1,790	916	446,308	3,769,445	0.03	-0.40
140	2,127	907	446,645	3,769,436	0.06	-0.24
141	2,015	838	446,533	3,769,367	0.06	-0.29
142	2,091	844	446,609	3,769,373	0.06	-0.28
143	2,252	931	446,770	3,769,460	0.06	-0.24
144	2,686	885	447,204	3,769,414	0.06	-0.16
145	2,628	1,042	447,146	3,769,570	0.05	-0.19
146	2,473	1,050	446,991	3,769,578	0.05	-0.19
147	2,739	1,096	447,257	3,769,625	0.05	-0.17

Attachment D

Electronic Modeling Files (upon request)

Two types of air quality analysis were performed in support of the SACC Project – emission inventories and dispersion analysis. The emission inventories provide an indication of total air pollutant emissions (carbon monoxide, nitrogen oxides, sulfur oxides, volatile organic compounds, particulate matter less than or equal to 10 micrometers, and particulate matter less than or equal to 2.5 micrometers) with the Baseline Condition, 2025 (Phase 1), and 2029 (Phase 2) for construction and aircraft operations.

The dispersion modeling analysis evaluates local criteria pollutant concentrations due to aircraft-related emission sources for direct comparison to the Ambient Air Quality Standards for carbon monoxide, nitrogen dioxide, sulfur oxides, particulate matter less than or equal to 10 micrometers, and particulate matter less than or equal to 2.5 micrometers on and in the vicinity of the Airport.

Construction

CALEEMOD Emissions Inventory
Phase 1 – Annual, Summer, Winter
Phase 2 – Annual, Summer, Winter
Recycling Plant Onsite Emission Sources

AERMOD AAQS Dispersion Modeling Input/Output
- Input/Output (at unit emission rate of 1 g/s)

AERMOD HRA Dispersion Modeling Input/Output
- Input/Output (at unit emission rate of 1 g/s)

Operations

AEDT Emission inventory
- 2021 Baseline Condition
- 2025 No Action
- 2029 No Action
- Phase 1 SACC
- Phase 2 SACC

AEDT Dispersion Modeling Input/Output
- ONT 2021 Baseline
- ONT 2025 No Action
- ONT 2025 No Action with SACC
- ONT 2029 No Action
- ONT 2029 No Action with SACC

AERMOD AAQS Dispersion Modeling Input/Output

Input/Output including plot files for CO, NO2, SO2, PM10, and PM2.5 (at modeled emission rates)

AERMOD HRA Dispersion Modeling Input/Output
Input/Output including plot files for VOC (at modeled emission rates)
ONT 2021 Baseline
ONT 2025 No Action
ONT 2025 No Action with SACC
ONT 2029 No Action
ONT 2029 No Action with SACC

HARP Input/Output
ONT 2021 Baseline
ONT 2025 No Action
ONT 2025 No Action with SACC
ONT 2029 No Action
ONT 2029 No Action with SACC