2150 GENEVA AVENUE BATTERY STORAGE CONSTRUCTION HEALTH RISK ASSESSMENT

Daly City, California

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Introduction

The purpose of this report is to address the potential health risk impacts associated with the construction of battery storage located at 2150 Geneva Avenue in Daly City, California. The air quality impacts from this project would be associated with construction of a 250-megawatt (MW) BESS, substation, and 0.9-mile transmission line. Air pollutant emissions associated with construction of the project were predicted using appropriate computer models. In addition, the potential project construction health risk impacts and the impact of existing toxic air contaminant (TAC) sources affecting the nearby sensitive receptors were evaluated. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The existing 11.5-acre project site is unoccupied. The project proposes construction of a 250-megawatt (MW) Battery Energy Storage System (BESS), substation, and transmission line, which will provide a service to the regional electric grid by receiving energy (charging) from the PG&E electric transmission system, storing energy on site, and then later delivering energy (discharging) back to the point of interconnection. There are three alternative routes proposed for the transmissions line ranging in length from 0.7 miles to 1.2 miles. All three alignments would connect to a Point of Change of Ownership (POCO) pole prior to entering the Martin Substation, where PG&E would construct a 115 kV transmission line (0.25-mile above ground and 0.05-mile underground) from the POCO pole to the termination point within the substation. Construction is proposed to begin in March 2025 and take approximately 20 months.

Setting

The project is located in San Mateo County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

Air Pollutants of Concern

High ozone concentrations in the air basin are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_X). These precursor pollutants react under certain meteorological conditions to form ozone. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ambient ozone concentrations. The highest ozone levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone concentrations aggravate respiratory and cardiovascular diseases, reduce lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant in the air basin. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5

[1] Bay Area Air Quality Management District, 2022 *CEQA Air Quality Guidelines*, April 2023.

micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter concentrations aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

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

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This makes the evaluation of health effects from diesel exhaust exposure a complicated scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. The most recent Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines were published in February of 2015 and incorporated into BAAQMD's current CEQA guidance.[2]

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors to the project site are in the single-family and multi-family residences to the west, and southwest. This project would not introduce new sensitive receptors (i.e., residents) to the area.

Bay Area Air Quality Management District (BAAQMD)

BAAQMD has jurisdiction over an approximately 5,600-square mile area, commonly referred to as the San Francisco Bay Area (Bay Area). The District's boundary encompasses the nine San Francisco Bay Area counties, including Alameda County, Contra Costa County, Marin County,

[2] OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.

San Francisco County, San Mateo County, Santa Clara County, Napa County, southwestern Solano County, and southern Sonoma County.

BAAQMD is the lead agency in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). The District also has permit authority over most types of stationary equipment utilized for the proposed project. The BAAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized.

BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area.[3] The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages community involvement and input. The technical analysis portion of the CARE program has been implemented in three phases that includes an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TAC, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses has been used to focus emission reduction activities in areas with high TAC exposures and high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area. Seven areas have been identified by BAAQMD as impacted communities. They include Eastern San Francisco, Richmond/San Pablo, Western Alameda County, San José, Vallejo, Concord, and Pittsburg/Antioch. The project site is not located within any of the BAAQMD CARE areas.

Overburdened communities are areas located (i) within a census tract identified by the California Communities Environmental Health Screening Tool (CalEnviroScreen), Version 4.0 implemented by OEHHA, as having an overall score at or above the 70th percentile, or (ii) within 1,000 feet of any such census tract.[4] The BAAQMD has identified several overburdened areas within the air district's boundaries. However, the project site is not within or near an overburdened area as identified by BAAQMD as the Project site is scored at the 25th percentile on CalEnviroScreen.[5]

BAAQMD CEQA Air Quality Guidelines

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA. In 2023, the BAAQMD revised the *California Environmental Quality Act* (*CEQA) Air Quality Guidelines* that included the original significance thresholds to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The thresholds contained

[3] See BAAQMD: https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program , accessed 2/18/2021.
[4] See BAAQMD: https://www.baaqmd.gov/~/media/dotgov/files/rules/reg-2-permits/2021-amendments/documents/20210722_01_appendixd_mapsofoverburdenedcommunities-pdf.pdf?la=en.
[5] OEHAA, CalEnviroScreen 4.0 Maps https://experience.arcgis.com/experience/11d2f52282a54ceebcac7428e6184203/page/CalEnviroScreen-4_0/

in this CEQA guidance are designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA.

The updated guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They include assessment methodologies for air toxics, odors, and GHG emissions. The current BAAQMD guidelines and thresholds were used in this analysis and are summarized in Table 1.[6] Air quality impacts and health risks are considered potentially significant if they exceed these thresholds.

Table 1. BAAQMD CEQA Significance Thresholds

Criteria Air Pollutant	**Construction Thresholds**			
	Average Daily Emissions (lbs./day)			
ROG	54			
NO_x	54			
PM_{10}	82 (Exhaust)			
$PM_{2.5}$	54 (Exhaust)			
CO	Not Applicable			
Fugitive Dust (PM_{10}/$PM_{2.5}$)	Best Management Practices (BMPs)*			
Health Risks and Hazards	**Single Sources / Individual Projects**		**Combined Sources (Cumulative from all sources within 1000-foot zone of influence)**	
Excess Cancer Risk	>10 in a million	OR Compliance with Qualified Health Risk Reduction Plan	>100 in a million	OR Compliance with Qualified Health Risk Reduction Plan
Hazard Index	>1.0		>10.0	
Incremental annual $PM_{2.5}$	>0.3 µg/m^3		>0.8 µg/m^3	

Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less.

* BAAQMD strongly recommends implementing all feasible fugitive dust management practices especially when construction projects are located near sensitive communities, including schools, residential areas, or other sensitive land uses.

Source: Bay Area Air Quality Management District, 2022

[6] Bay Area Air Quality Management District, 2023. *2022 CEQA Guidelines*. April.

Daly City 2030 General Plan

The following air resources policies and implementing tasks contained in the Resource Management Element of the Daly City 2030 General Plan[7] are applicable to the proposed project:

Policy RME-5: Assess projected air emissions from new development and associated construction and demolition activities in conformance with the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines, and relative to state and federal standards.

- Task RME-5.1: Amend the Planning Division's development review procedures to include a formal step that would help identify how a development project can incorporate design or functional changes that will minimize air quality impacts.

- Task RME-5.2: Incorporate air quality significance thresholds into the Local Thresholds of Significance document identified in Program RME-1.

- Task RME-5.3: Consider cumulative air quality impacts consistent with the region's Clean Air Plan and State law.

- Task RME-5.4: Require the preparation of a Transportation Systems Management plan for new development that has been determined to contribute to a reduction in location air quality. Daly City 2030 General Plan | Resource Management Element 193

- Task RME-5.5: Consult with BAAQMD to identify stationary and mobile TAC sources and determine the need for and requirements of a health risk assessment for proposed developments. type, size and operations of the facility.

Policy RME-6: Assess projected air emissions from new development and associated construction and demolition activities in conformance with the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines, and relative to state and federal standards.

- Task RME-6.1: For new, expanded, or modified development proposals (including tenant improvements) that are potential sources of objectionable smoke and odor, require an analysis of possible smoke and odor impacts and the provision of smoke and odor minimization and control measures as mitigation. The requirements for such shall be codified within the Daly City Municipal Code.

Task RME-6.2: Require new residential development projects and projects categorized as sensitive receptors to be located an adequate distance from facilities that are existing and potential sources of odor. An adequate separate distance will be determined based upon the type, size and operations of the facility.

[7] Daly City, 2013. *Daly City 2030 General Plan*. Adopted March 25, 2013.

Construction Health Risk Impacts and Mitigation Measures

Project impacts related to increased health risk can occur either by generating emissions of TACs and air pollutants or by introducing a new sensitive receptor in proximity to an existing source of TACs. Temporary project construction activity would generate emissions of DPM from equipment and trucks and also generate dust on a temporary basis that could affect nearby sensitive receptors. A construction health risk assessment was prepared to address project construction impacts on the surrounding off-site sensitive receptors.

Health risk impacts are addressed by predicting increased lifetime cancer risk, the increase in annual $PM_{2.5}$ concentrations, and computing the Hazard Index (HI) for non-cancer health risks. Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust emissions pose health risks for sensitive receptors such as surrounding residents. The primary health risk impact issues associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[8] This assessment included dispersion modeling to predict the offsite and onsite concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2022.1.1.13 was used to estimate emissions from on-site construction activity, construction vehicle trips, and evaporative emissions. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The CalEEMod model output along with construction inputs are included in *Attachment 1*.

CalEEMod Modeling

Land Use Inputs

The proposed project land uses were entered into CalEEMod as described in Table 2.

Table 2. Summary of Project Land Use Inputs

Project Land Uses	Size	Units	Square Feet (sf)	Acreage
General Heavy Industry	436*	1,000-sf	435,600	10

* Project acreage converted to square feet and used as land use size. Project site will not include any interior structures, just battery storage facilities and a substation.

[8] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

Construction Inputs

CalEEMod computes annual emissions for construction that are based on the project type, size, and acreage. The model provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The construction build-out scenario, including equipment list and schedule, were provided by the applicant for this project.

Within each of the CalEEMod construction phases, the quantity of equipment to be used along with the average hours per day and total number of workdays were provided by the applicant. The construction schedule assumed that the earliest possible start date would be March 2025 and most construction that requires use of construction equipment would be completed over a period of approximately 10 months, or 220 workdays. The decommissioning phase of the project was also included, which occurs in year 2051 and will take one month, or 23 construction workdays.

Construction Truck Traffic Emissions

Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip counts provided by the applicant for each phase of construction. Haul trips for demolition and soil import/export were also provided by the project applicant. These values are shown in the project construction equipment worksheet included in *Attachment 1*.

Transmission Line Alternative Routes

The project's Battery Energy Storage System (BESS) would connect to the nearby PG&E Martin Substation via a 115 kilovolts (kV) transmission line. The transmission line would follow one of three potential alignments to the PG&E Martin Substation. All three alignments would be entirely underground and are shown in Figure 1. The applicant intends to use the same construction equipment regardless of the alignment chosen. As a result, the emissions would not vary from alignment to alignment.

Alignment 1 is approximately 0.7-mile long and would leave the project site traveling northwest towards the Cow Palace. The transmission line would run along the northern border of the Cow Palace and then turn south once it reaches the eastern border of the Cow Palace property. The transmission line would then travel south for approximately 600 feet until it turns east and transitions along Ottilia Street to ultimately connect into the PG&E Martin Substation.

Alignment 2 is approximately 1.1 miles long and would leave the project site via the existing driveway along Carter Street. The transmission line would then travel south along Carter Street until it turns east along Martin Street. The transmission line would then travel east along Martin Street until it turns north along Schwerin Street to ultimately connect into the PG&E Martin Substation at the same location as Alignment 1.

Alignment 3 is approximately 1.2 miles long and would follow the same initial route as Alignment 2, except Alignment 3 would turn north along Oriente Street instead of Schwerin Street. The

transmission line would run north along Oriente Street until it turns east onto Ottilia Street and ultimately connects into the PG&E Martin Substation at the same location as Alignment 1.

Summary of Computed Construction Period Emissions

Average daily emissions were annualized for each year of construction by dividing the annual construction emissions by the number of active construction workdays that year. Table 3 shows the annualized average daily construction emissions and average daily project emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust during construction. As indicated in Table 3, predicted daily project construction emissions would not exceed the BAAQMD significance thresholds during any year of construction except for NOx in 2025.

Table 3. Construction Period Emissions

Year	ROG	NOx		PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Construction Emissions (Tons)					
	Unmit	*Unmit*	*Mit*	*Unmit*	*Unmit*
2025	0.67	6.14	5.40	0.25	0.23
2026	0.10	0.96	0.87	0.04	0.03
Decommissioning of the Site (Tons)					
2051	0.04	0.35		0.01	0.01
Average Daily Construction Emissions (pounds/day)					
2025 (220 construction workdays)	6.14	**55.83**	49.07	2.26	2.08
2026 (184 construction workdays)	1.12	10.39	9.42	0.38	0.35
Average Daily Site Decommissioning Emissions (pounds/day)					
2051 (23 construction workdays)	3.26	30.77		1.26	1.17
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day		*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	**Yes**	No	No	No

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD recommends all projects include a "basic" set of best management practices (BMPs) to manage fugitive dust and consider impacts from dust (i.e. fugitive PM_{10} and $PM_{2.5}$) to be less than significant BMPs are implemented. *Mitigation Measure AQ-1 would implement BAAQMD's standard best management practices*.

Mitigation Measure AQ-1: **Basic BMPs – Include measures to control dust and exhaust during construction.**

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. The contractor shall implement the following BMPs that are required of all projects:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as practicable. Building pads shall be laid as soon as practicable after grading unless seeding or soil binders are used.

6. All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.

7. All trucks and equipment, including their tires, shall be washed off prior to leaving the site.

8. Unpaved roads providing access to site located 100 feet of further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.

9. Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's General Air Pollution Complaints number shall be visible to ensure compliance with applicable regulations.

BAAQMD strongly encourages enhanced BMPs for construction sites near schools, residential areas, or other sensitive land uses. Enhanced measures include:

- Limit the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities.
- Install wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.
- Plant vegetative ground cover (e.g., fast-germinating native grass seed) in disturbed areas as soon as possible and water appropriately until vegetation is established.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- Minimize the amount of excavated material or waste materials stored at the site.
- Hydroseed or apply non-toxic soil stabilizers to construction areas, including previously graded areas, that are inactive for at least 10 calendar days.

The measures above are consistent with BAAQMD-recommended basic and enhanced BMPs for reducing fugitive dust contained in the BAAQMD CEQA Air Quality Guidelines. For this analysis,

only the basic set of best management practices are required as the unmitigated fugitive dust emissions from project sources were below the BAAQMD single-source threshold.

Mitigation Measure AQ-2: **Use construction equipment that has low NOx emissions.**

Implement a feasible plan to reduce NOX emissions such that increased NOx emissions from construction would be reduced below BAAQMD significance thresholds as follows:

1. All construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total shall meet U.S. EPA Tier 4 Interim emission standards for NOx.

Effectiveness of Mitigation Measure AQ-2

CalEEMod was used to compute emissions associated with mitigation measure AQ-2 assuming that all equipment met U.S. EPA Tier 4 Interim engines standards. With this measure implemented, the project's construction NOx emissions would be reduced by 12 percent to 5.40 tons per year in 2025 and would no longer exceed the BAAQMD significance threshold.

Health Risk from Project Construction

The primary health risk impact associated with construction projects are cancer risks associated with diesel exhaust (i.e., DPM), which is a known TAC, and exposure to high ambient concentrations of dust (i.e., $PM_{2.5}$). DPM poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[9] This assessment included dispersion modeling to predict the offsite and onsite concentrations resulting from project construction, so that increased cancer risks and non-cancer health effects could be estimated.

Construction Emissions

The CalEEMod model provided total uncontrolled annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles. Total DPM emissions were estimated to be 0.29 tons (590 pounds) and fugitive dust emissions ($PM_{2.5}$) to be 0.04 tons (85.2 pounds) from all construction stages. The on-road emissions are a result of haul truck travel during grading activities, worker travel, and vendor deliveries during construction. A trip length of one mile was used to represent vehicle travel while at or near the construction site. It was assumed that the emissions from on-road vehicles traveling at or near the site would occur at the construction site.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict DPM and $PM_{2.5}$ concentrations at sensitive receptors (i.e., residences) in the vicinity of the project construction area. The AERMOD

[9] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[10] Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions.

Construction Sources

To represent the construction equipment exhaust emissions, an area source emission release height of 20 feet (6 meters) was used for the area sources.[11] The release height incorporates both the physical release height from the construction equipment (i.e., the height of the exhaust pipe) and plume rise after it leaves the exhaust pipe. Plume rise is due to both the high temperature of the exhaust and the high velocity of the exhaust gas. It should be noted that when modeling an area source, plume rise is not calculated by the AERMOD dispersion model as it would do for a point source (exhaust stack). Therefore, the release height from an area source is used to represent emissions from sources with plume rise, such as construction equipment, and should be based on the height the exhaust plume is expected to achieve, not just the height of the top of the exhaust pipe.

For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 7 feet (2 meters) was used for the area source. Fugitive dust emissions at construction sites come from a variety of sources, including truck and equipment travel, grading activities, truck loading (with loaders) and unloading (rear or bottom dumping), loaders and excavators moving and transferring soil and other materials, etc. All of these activities result in fugitive dust emissions at various heights at the point(s) of generation. Once generated, the dust plume will tend to rise as it moves downwind across the site and exit the site at a higher elevation than when it was generated. For all these reasons, a 7-foot release height was used as the average release height across the construction site. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources.

Transmission Line Alternative Routes

As mentioned above in the Criteria Pollutant Emissions section of this report, the project's Battery Energy Storage System (BESS) would connect to the nearby PG&E Martin Substation via a 115 kilovolts (kV) transmission line. The transmission line would follow one of three potential alignments to the PG&E Martin Substation. All three alignments would be entirely underground and are shown in Figure 1. The applicant intends to use the same construction equipment regardless of the alignment chosen. As a result, the emissions would not vary from alignment to alignment.

For this analysis, the emissions from construction of the transmission line along each route were modeled as an area source along a line (line area). The same release heights that were used in the area source models at the project site were used to model emissions from transmission line construction. A width of 10 feet was assumed for each line area source. The same receptors were used to model the project site and construction of the transmission line alternate routes. No additional receptors along the alternate routes were included when modeling the transmission line.

[10] BAAQMD, 2023, *Appendix E of the 2022 BAAQMD CEQA Guidelines.* April.
[11] California Air Resource Board, 2007. *Proposed Regulation for In-Use Off-Road Diesel Vehicles, Appendix D: Health Risk Methodology.* April. Web: https://ww3.arb.ca.gov/regact/2007/ordiesl07/ordiesl07.htm

This is because the majority of the construction emissions and health risks are expected to occur near the project site. For reference, the DPM emissions from project site construction represent about 88 percent of the total DPM emissions from project construction.

AERMOD Inputs and Meteorological Data

The modeling used a five-year data set (2013 - 2017) of hourly meteorological data from the San Francisco International Airport was used with the AERMOD model. Construction emissions were modeled as occurring daily between 7:00 a.m. to 6:00 p.m., when the majority of construction activity is expected to occur according to the project applicant. Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2025-2026 and 2051 periods were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptors. Receptor heights of 5 feet (1.5 meters), 15 feet (4.5 meters), and 25 feet (7.6 meters) were used to represent the breathing height on the first, second, and third floors of nearby single- and multi-family residences.[12]

Summary of Construction Health Risk Impacts

The maximum increased cancer risks were calculated using the modeled TAC concentrations combined with the BAAQMD CEQA guidance for age sensitivity factors and exposure parameters. Non-cancer health hazards (HI) and maximum $PM_{2.5}$ concentrations were also calculated and identified. Age-sensitivity factors reflect the greater sensitivity of infants and children to cancer causing TACs. Third-trimester, infant, child, and adult exposures were assumed to occur at all residences during the entire construction period.

The modeled maximum annual $PM_{2.5}$ concentration was calculated based on combined exhaust and fugitive concentrations. The maximum computed HI value was based on the ratio of the maximum DPM concentration modeled and the chronic inhalation reference exposure level of 5 $\mu g/m^3$.

The maximum modeled annual DPM and $PM_{2.5}$ concentrations, which includes both the DPM and fugitive $PM_{2.5}$ concentrations, were identified at nearby sensitive receptors (as shown in Figure 1) to find the maximally exposed individuals (MEI). Results of this assessment indicated that the construction residential MEI was located on the first floor (5 feet above ground) at a single-family home southwest of the project site. Table 4 summarizes the maximum cancer risks, $PM_{2.5}$ concentrations, and health hazard indexes for project related construction activities affecting the construction MEI. *Attachment 2* to this report includes the emission calculations used for the construction area source modeling and the cancer risk calculations.

Table 4 also includes the mitigation effects the project's construction risk impacts would experience from the inclusion of Mitigation Measure AQ-2 to control NOx emissions. While Mitigation Measure AQ-2 is not necessary to reduce the project's construction risk impacts, implementation of the measure to reduce NOx emissions would also reduce the project's construction risk impacts further below the BAAQMD single-source thresholds.

[12] Bay Area Air Quality Management District, 2012, Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0. May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en

Table 4. Construction Risk Impacts at the Off-site MEI

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Impact				
Project Site Construction w/ Alternative 1	Unmitigated	9.16 (infant)	0.09*	0.01
Project Site Construction w/ Alternative 2	Unmitigated	9.75 (infant)	0.09*	0.01
Project Site Construction w/ Alternative 3	Unmitigated	9.72 (infant)	0.09*	0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Any Alternative Exceed Threshold?	Unmitigated	*No*	*No*	*No*

* Value prorated based on modeled value with BMPs included.

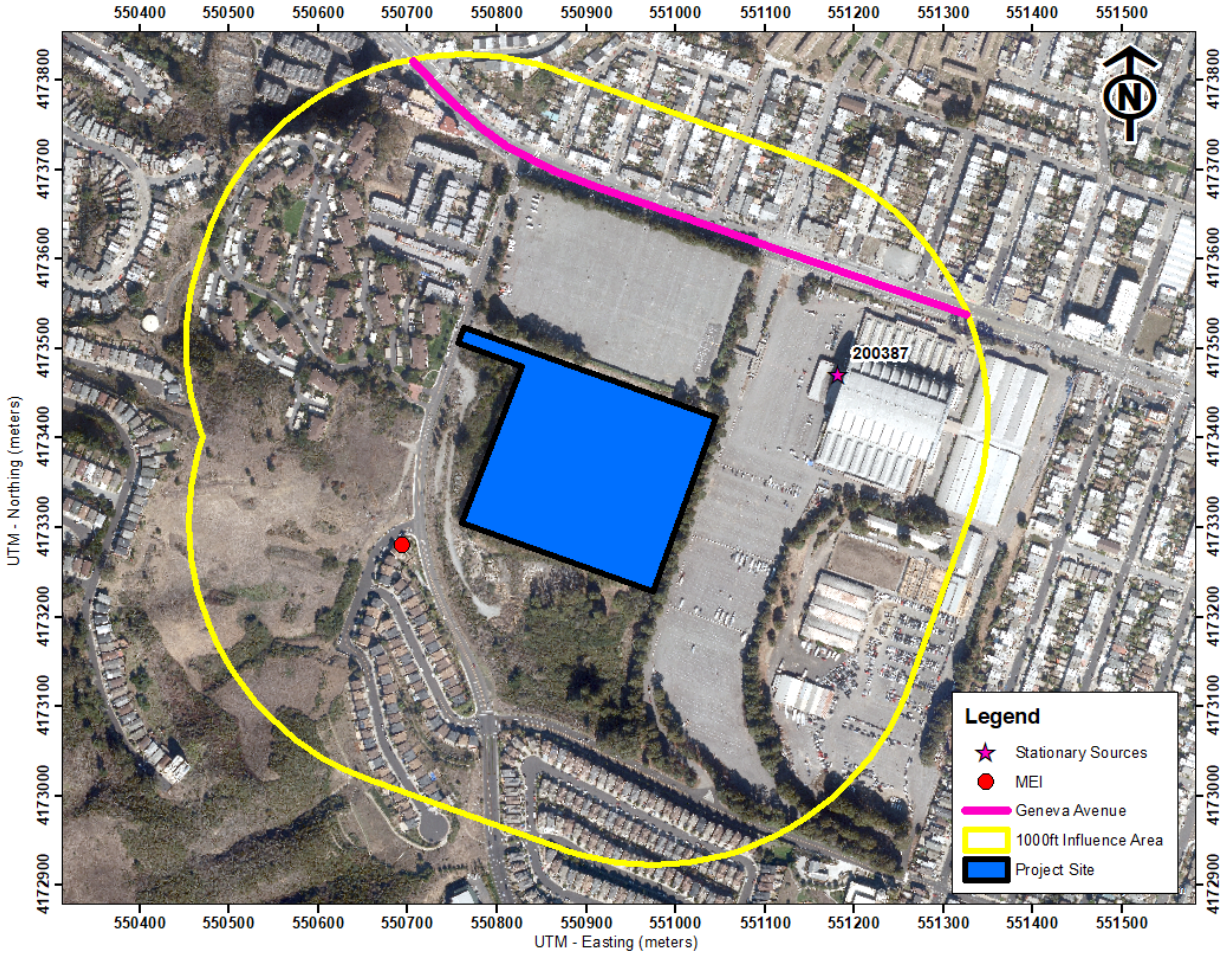
Figure 1. Locations of Project Construction Site, Off-Site Sensitive Receptors, and Maximum TAC Impact

Cumulative Health Risks of all TAC Sources at the Offsite Project MEI

Cumulative health risk assessments typically look at all substantial sources of TACs that can affect sensitive receptors that are located within 1,000 feet of a project site (i.e., influence area). These sources include rail lines, highways, busy surface streets, and stationary sources identified by BAAQMD.

A review of the project area and based on provided traffic information indicated that one roadway, Geneva Avenue, within the influence area could have traffic exceeding 10,000 vehicles per day. A review of BAAQMD's stationary source geographic information systems (GIS) map tool identified one stationary source with the potential to affect the MEI. Figure 2 shows the location of the sources affecting the MEI. Health risk impacts from these sources upon the MEI reported in Table 6. Details of the modeling and health risk calculations are included in *Attachment 3*.

Figure 2. Project Site and Nearby TAC and $PM_{2.5}$ Sources



Roadways – Geneva Avenue

The project site is located near Geneva Avenue (see Figure 2). Cancer risk, $PM_{2.5}$ concentrations, and HI associated with traffic on Geneva Avenue was estimated using BAAQMD screening values

provided via GIS data files (i.e., raster files). BAAQMD raster files provide screening-level cancer risk, $PM_{2.5}$ concentrations, and HI for roadways within the Bay Area and were produced using AERMOD and 20x20-meter emissions grid.

Screening-level cancer risk, $PM_{2.5}$ concentration, and HI at the project MEIs were identified using GIS software and are listed in Table 5. At the MEI, the increased cancer risk from the roadway would be 3.25 per million, the $PM_{2.5}$ concentration from the highway would be less than 0.09 $\mu g/m^3$, and the HI from the highway would be 0.01. Note that these values are not adjusted for age sensitivity or exposure duration and are considered higher than values that would be obtained with refined modeling methods.

BAAQMD Permitted Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Permitted Stationary Sources 2021* GIS website,[13] which identifies the location of nearby stationary sources and their estimated risk and hazard impacts, including emissions and adjustments to account for new OEHHA guidance. One source was identified using this tool, a generator. Figure 2 shows the region included within the influence area and the off-site MEIs. Health risk impacts from these sources upon the MEIs are reported in Table 5. Details of the modeling and health risk calculations are included in *Attachment 3.*

The screening risk and hazard levels provided by BAAQMD for the stationary sources were adjusted for distance using BAAQMD's *Distance Adjustment Multiplier Tool for Diesel Internal Combustion Engines* and *Gasoline Dispensing Facilities.* Health risk impacts from the stationary source upon the MEIs are reported in Table 5.

Summary of Health Risk Impact at Construction MEI

Table 6 reports both the highest project alternative and cumulative health risk impacts at the sensitive receptors most affected by construction (i.e., the MEI). The other alternatives would yield lower cumulative health risks at the MEI. The project would not have any exceedances with respect to health risk caused by project activities, since the maximum unmitigated cancer risk, $PM_{2.5}$ concentration, and HI do not exceed the BAAQMD single-source thresholds. In addition, the combined unmitigated cancer risk, $PM_{2.5}$ concentration, and HI do not exceed their cumulative-source thresholds.

[13] BAAQMD, https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=845658c19eae4594b9f4b805fb9d89a3

Table 5. Cumulative Health Risk Impacts at the Location of the Project MEI

Source		Cancer Risk (per million)	Annual $PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
Project Impacts				
Project Construction w/ Alternative 2	Unmitigated	9.75 (infant)	0.09	0.01
BAAQMD Single-Source Threshold		***10***	***0.3***	***1.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*
Cumulative Sources				
New Cingular Wireless PCS LLC dba AT&T Mobility (Facility ID #200387, Generator), MEI at 1000+ feet.		0.25	<0.01	<0.01
Geneva Avenue, BAAQMD Raster		3.25	0.09	0.01
Combined Sources	Unmitigated	13.25	<0.19	<0.03
BAAQMD Cumulative Source Threshold		***100***	***0.8***	***10.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*

Supporting Documentation

Attachment 1 includes the CalEEMod output for project construction and operation emissions. Also included are any modeling assumptions.

Attachment 2 is the health risk assessment. This includes the summary of the dispersion modeling and the cancer risk calculations for construction. The AERMOD dispersion modeling files for this assessment, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 3 includes the cumulative health risk calculations from existing sources affecting the construction MEI.

Attachment 1: CalEEMod Modeling Inputs and Outputs

Air Quality/Noise Construction Information Data Request

Project Name: Cormorant Energy Storage

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size	0 Dwelling Units	10 total project acres disturbed	
	0 s.f. residential		**Pile Driving? Y/N? No**
	0 s.f. retail		
	0 s.f. office/commercial		**Project include on-site GENERATOR OR FIRE PUMP during project OPERATION (not construction)? Y/N? No**
	0 s.f. other, specify:		**IF YES (if BOTH separate values) -->**
	0 s.f. parking garage	0 spaces	**Kilowatts/Horsepower:**
	0 s.f. parking lot	0 spaces	**Fuel Type:**
Construction Days (i.e, M-F)	M to	F	**Location in project (Plans Desired if Available):**
Construction Hours	7:00 am to	6:00 pm	

DO NOT MULTIPLY EQUIPMENT HOURS/DAY BY THE QUANTITY OF EQUIPMENT

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	HP Annual Hours	Comments
	BESS Site Preparation	**Start Date:**	**3/1/2025**	**Total phase:**	**10**			**One-way trips per day: workers (20), vendor (2), Hauling (0)**
		End Date:	**3/14/2025**					
2	Tractors/Loaders/Backhoes	84.0	0.37	8	10	8	4973	
2	Graders	148	0.41	8	10	8	9709	
2	Rubber Tired Loaders	150	0.36	8	10	8	8640	
2	Skid Steer Loaders	71.0	0.37	8	10	8	4203	
	Collector Substation Site Preparatic	**Start Date:**	**3/1/2025**	**Total phase:**	**10**			**One-way trips per day: workers (10), vendor (2), Hauling (0)**
		End Date:	**3/14/2025**					
2	Rubber Tired Dozers	367	0.40	8	10	8	23488	
2	Tractors/Loaders/Backhoes	84.0	0.37	8	10	8	4973	
	BESS Grading	**Start Date:**	**3/15/2025**	**Total phase:**	**44**			**One-way trips per day: workers (30), vendor (2), Hauling (0)**
		End Date:	**5/15/2025**					
2	Graders	148	0.41	8	44	8	42719	
2	Tractors/Loaders/Backhoes	84.0	0.37	8	44	8	21880	
2	Plate Compactors	8.00	0.43	8	44	8	2422	
2	Rollers	36.0	0.38	8	44	8	9631	
2	Rubber Tired Loaders	150	0.36	8	44	8	38016	
2	Skid Steer Loaders	71.0	0.37	8	44	8	18494	
	Collector Substation Grading	**Start Date:**	**3/15/2025**	**Total phase:**	**22**			**One-way trips per day: workers (16), vendor (2), Hauling (0)**
		End Date:	**4/13/2025**					
2	Rubber Tired Dozers	367	0.40	8	22	8	51674	
2	Tractors/Loaders/Backhoes	84.0	0.37	8	22	8	10940	
2	Rollers	36.0	0.38	8	22	8	4815	
	Battery/Container Installation/Const	**Start Date:**	**5/16/2025**	**Total phase:**	**154**			**One-way trips per day: workers (46), vendor (4), Hauling (4)**
		End Date:	**12/15/2025**					
2	Cranes	367	0.29	8	154	8	262244	
2	Generator Sets	14.0	0.74	8	154	8	25527	
2	Tractors/Loaders/Backhoes	84.0	0.37	8	154	8	76581	
3	Forklifts	82.0	0.20	8	154	8	60614	
2	Air Compressors	37.0	0.48	8	154	8	43761	
2	Excavators	36.0	0.38	8	154	8	33708	
2	Graders	148	0.41	8	154	8	149516	
2	Plate Compactors	8.00	0.43	8	154	8	8476	
2	Rollers	36.0	0.38	8	154	8	33708	
2	Skid Steer Loaders	71.0	0.37	8	154	8	64729	
	Collector Substation Installation/Co	**Start Date:**	**4/14/2025**	**Total phase:**	**88**			**One-way trips per day: workers (60), vendor (2), Hauling (0)**
		End Date:	**8/15/2025**					
2	Cranes	367	0.29	8	88	8	149853	
2	Generator Sets	14.0	0.74	8	88	8	14587	
2	Tractors/Loaders/Backhoes	84.0	0.37	8	88	8	43761	
2	Air Compressors	37.0	0.48	8	88	8	25006	
2	Aerial Lifts	46.0	0.31	8	88	8	20078	
2	Bore/Drill Rigs	83.0	0.50	8	88	8	58432	
2	Excavators	36.0	0.38	8	88	8	19261	
2	Graders	148	0.41	8	88	8	85437	
2	Rubber Tired Dozers	367	0.40	8	88	8	206694	
2	Rollers	36.0	0.38	8	88	8	19261	
2	Skid Steer Loaders	71.0	0.37	8	88	8	36988	
2	Trenchers	40.0	0.50	8	88	8	28160	
	Gen-Tie Duct Bank and Vault Installa	**Start Date:**	**8/16/2025**	**Total phase:**	**66**			**One-way trips per day: workers (26), vendor (6), Hauling (0)**
		End Date:	**11/15/2025**					
2	Cranes	367	0.29	8	66	8	112390	
2	Generator Sets	14.0	0.74	8	66	8	10940	
2	Tractors/Loaders/Backhoes	84.0	0.37	8	66	8	32820	
2	Aerial Lifts	46.0	0.31	8	66	8	15059	
2	Skid Steer Loaders	71.0	0.37	8	66	8	27741	
	Gen-Tie Road Resurface and Clean-u	**Start Date:**	**12/16/2025**	**Total phase:**	**22**			**One-way trips per day: workers (10), vendor (2), Hauling (0)**
		End Date:	**1/15/2026**					**0.5 acre paved**
1	Pavers	81.0	0.42	8	22	8	5988	
1	Rollers	36.0	0.38	8	22	8	2408	
1	Skid Steer Loaders	71.0	0.37	8	22	8	4624	
1	Tractors/Loaders/Backhoes	84.0	0.37	8	22	8	5470	
	PG&E Facility Upgrades	**Start Date:**	**1/16/2026**	**Total phase:**	**174**			
		End Date:	**9/15/2026**					
2	Cranes	367	0.29	8	174	8	296301	
2	Tractors/Loaders/Backhoes	84.0	0.37	8	174	8	86527	
1	Off Highway Tractor	124	0.44	8	174	8	75948	
1	Aerial Lifts	46.0	0.31	8	174	8	19850	
	Gen-Tie Trenching	**Start Date:**	**8/16/2025**	**Total phase:**	**66**			**One-way trips per day: workers (20), vendor (2), Hauling (50)**
		End Date:	**11/15/2025**					26,400 cy exported
2	Pumps	11.0	0.74	8	66	8	1056	
2	Skid Steer Loaders	71.0	0.37	8	66	8	1056	
2	Tractors/Loaders/Backhoes	84.0	0.37	8	66	8	1056	
2	Trenchers	40.0	0.50	8	66	8	1056	
	Gen-Tie Jack-and-Bore (Trenching)	**Start Date:**	**11/16/2025**	**Total phase:**	**22**			**One-way trips per day: workers (14), vendor (2), Hauling (0)**
		End Date:	**12/15/2025**					
1	Other Construction Equipment	82.0	0.42	8	22	8	176	
1	Bore/Drill Rigs	83.0	0.50	8	22	8	176	
1	Skid Steer Loaders	71.0	0.37	8	22	8	176	
1	Tractors/Loaders/Backhoes	84.0	0.37	8	22	8	176	
1	Welders	46.0	0.45	8	22	8	176	
	Decommissioning	**Start Date:**	**3/1/2051**	**Total phase:**	**22**			**One-way trips per day: workers (20), vendor (2), Hauling (30)**
		End Date:	**3/31/2051**					
2	Concrete/Industrial Saws	33.0	0.73	8	22	8	352	
2	Rubber Tired Dozers	367	0.40	8	22	8	352	
2	Cranes	367	0.29	8	22	8	352	
2	Tractors/Loaders/Backhoes	84.0	0.37	8	22	8	352	

Equipment types listed in "Equipment Types" worksheet tab.

Equipment listed in this sheet is to provide an example of inputs

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horsepower or load factor, as appropriate

Complete one sheet for each project component

Construction Criteria Air Pollutants							
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	PM2.5 Fugitive	CO2e	
Year	Tons					MT	
Construction Equipment							
2025	0.67	6.14	0.25	0.23	0.07	1332.03	
2026	0.10	0.96	0.04	0.03	0.00	241.52	
2051	0.04	0.35	0.01	0.01	0.002	60.77	
	Total Construction Emissions						
Tons	0.81	7.45	0.30	0.27		1634.32	
Pounds/Workdays	*Average Daily Emissions*					Workdays	
2025	6.12	55.83	2.25	2.07			**220**
2026	1.12	10.39	0.38	0.35			**184**
2051	3.26	30.77	1.26	1.17			**23**
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			
	Total Construction Emissions						
Pounds	7.23	66.22	2.63	2.42		0.00	
Average	3.81	34.90	1.39	1.28		0.00	427.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

Total Mitigated Construction Criteria Air Pollutants							
Mitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	M2.5 Fugitiv	CO2e	
Year	Tons					MT	
Construction Equipment							
2025		5.40					
2026		0.87					
2051							
	Total Construction Emissions						
Tons	0.00	6.26	0.00	0.00		0.00	
Pounds/Workdays	*Average Daily Emissions*					Workdays	
2025	0.00	49.07	0.00	0.00			**220**
2026	0.00	9.42	0.00	0.00			**184**
2051	0.00	0.00	0.00	0.00			**23**
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			
	Total Construction Emissions						
Pounds	0.00	58.49	0.00	0.00		0.00	
Average	0.00	29.34	0.00	0.00		0.00	427.00
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**			

23-016 2150 Geneva Battery Storage Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	23-016 2150 Geneva Battery Storage
Construction Start Date	3/1/2025
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	4.60
Precipitation (days)	2.60
Location	2150 Geneva Ave, San Francisco, CA 94134, USA
County	San Mateo
City	Daly City
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1176
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	436	1000sqft	10.0	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.6	8.82	77.9	88.5	0.16	3.23	5.93	7.64	2.97	2.77	4.34	—	16,754	16,754	1.14	0.83	11.8	16,837
Mit.	3.28	2.76	65.0	96.7	0.16	1.14	5.93	6.30	1.07	2.77	3.11	—	16,754	16,754	1.14	0.83	11.8	16,837
% Reduced	69%	69%	17%	-9%	—	65%	—	18%	64%	—	28%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.51	5.73	57.1	65.7	0.16	2.05	5.93	7.64	1.89	2.77	4.34	—	16,354	16,354	1.14	0.85	0.31	16,636
Mit.	3.28	2.41	56.1	75.4	0.16	1.06	5.93	6.30	0.99	2.77	3.11	—	16,354	16,354	1.14	0.85	0.31	16,636
% Reduced	56%	58%	2%	-15%	—	48%	—	18%	48%	—	28%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.53	3.69	33.7	39.1	0.07	1.35	1.11	2.47	1.25	0.38	1.63	—	7,968	7,968	0.41	0.22	1.42	8,046
Mit.	1.46	1.25	29.6	43.0	0.07	0.52	1.11	1.63	0.48	0.38	0.86	—	7,968	7,968	0.41	0.22	1.42	8,046
% Reduced	68%	66%	12%	-10%	—	62%	—	34%	61%	—	47%	—	—	—	—	—	—	—

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.83	0.67	6.14	7.13	0.01	0.25	0.20	0.45	0.23	0.07	0.30	—	1,319	1,319	0.07	0.04	0.23	1,332
Mit.	0.27	0.23	5.40	7.85	0.01	0.09	0.20	0.30	0.09	0.07	0.16	—	1,319	1,319	0.07	0.04	0.23	1,332
% Reduced	68%	66%	12%	-10%	—	62%	—	34%	61%	—	47%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	10.6	8.82	77.9	88.5	0.16	3.23	5.93	7.64	2.97	2.77	4.34	—	16,754	16,754	1.14	0.83	11.8	16,837
2026	1.38	1.16	10.8	12.5	0.03	0.39	0.12	0.52	0.36	0.03	0.39	—	3,002	3,002	0.12	0.02	0.36	3,013
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	7.51	5.73	57.1	65.7	0.16	2.05	5.93	7.64	1.89	2.77	4.34	—	16,354	16,354	1.14	0.85	0.31	16,636
2026	1.38	1.16	10.8	12.5	0.03	0.39	0.12	0.52	0.36	0.03	0.39	—	2,996	2,996	0.12	0.03	0.01	3,007
2051	—	—	—	—	—	—	0.56	0.56	—	0.14	0.14	—	0.00	0.00	0.00	0.00	—	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	4.53	3.69	33.7	39.1	0.07	1.35	1.11	2.47	1.25	0.38	1.63	—	7,968	7,968	0.41	0.22	1.42	8,046
2026	0.67	0.56	5.24	6.11	0.01	0.19	0.06	0.25	0.18	0.01	0.19	—	1,453	1,453	0.06	0.01	0.08	1,459
2051	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.83	0.67	6.14	7.13	0.01	0.25	0.20	0.45	0.23	0.07	0.30	—	1,319	1,319	0.07	0.04	0.23	1,332
2026	0.12	0.10	0.96	1.12	< 0.005	0.04	0.01	0.05	0.03	< 0.005	0.03	—	241	241	0.01	< 0.005	0.01	242
2051	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	0.00	0.00	0.00	0.00	—	0.00

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.28	2.76	65.0	96.7	0.16	1.14	5.93	6.30	1.07	2.77	3.11	—	16,754	16,754	1.14	0.83	11.8	16,837
2026	0.40	0.40	9.71	16.5	0.03	0.12	0.12	0.24	0.11	0.03	0.14	—	3,002	3,002	0.12	0.02	0.36	3,013
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.28	2.41	56.1	75.4	0.16	1.06	5.93	6.30	0.99	2.77	3.11	—	16,354	16,354	1.14	0.85	0.31	16,636
2026	0.40	0.40	9.72	16.5	0.03	0.12	0.12	0.24	0.11	0.03	0.14	—	2,996	2,996	0.12	0.03	0.01	3,007
2051	—	—	—	—	—	—	0.56	0.56	—	0.14	0.14	—	0.00	0.00	0.00	0.00	—	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.46	1.25	29.6	43.0	0.07	0.52	1.11	1.63	0.48	0.38	0.86	—	7,968	7,968	0.41	0.22	1.42	8,046
2026	0.20	0.19	4.75	8.01	0.01	0.06	0.06	0.12	0.06	0.01	0.07	—	1,453	1,453	0.06	0.01	0.08	1,459
2051	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.27	0.23	5.40	7.85	0.01	0.09	0.20	0.30	0.09	0.07	0.16	—	1,319	1,319	0.07	0.04	0.23	1,332
2026	0.04	0.04	0.87	1.46	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	241	241	0.01	< 0.005	0.01	242
2051	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	0.00	0.00	0.00	0.00	—	0.00

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	7.67	7.09	4.61	58.8	0.17	0.09	16.1	16.2	0.08	4.08	4.16	291	16,978	17,269	29.7	0.56	45.5	18,225
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.59	6.97	5.44	58.1	0.16	0.09	16.1	16.2	0.08	4.08	4.16	291	16,236	16,527	29.8	0.62	1.18	17,458
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.17	4.75	3.55	38.7	0.11	0.06	11.1	11.2	0.06	2.82	2.88	291	11,284	11,576	29.6	0.42	13.6	12,452
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.94	0.87	0.65	7.06	0.02	0.01	2.03	2.04	0.01	0.52	0.53	48.2	1,868	1,916	4.89	0.07	2.26	2,062

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.67	7.09	4.61	58.8	0.17	0.09	16.1	16.2	0.08	4.08	4.16	—	16,978	16,978	0.61	0.56	45.5	17,207
Area	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
Energy	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
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	291	0.00	291	29.1	0.00	—	1,018
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	7.67	7.09	4.61	58.8	0.17	0.09	16.1	16.2	0.08	4.08	4.16	291	16,978	17,269	29.7	0.56	45.5	18,225
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.59	6.97	5.44	58.1	0.16	0.09	16.1	16.2	0.08	4.08	4.16	—	16,236	16,236	0.69	0.62	1.18	16,439
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Energy	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
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	291	0.00	291	29.1	0.00	—	1,018
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	7.59	6.97	5.44	58.1	0.16	0.09	16.1	16.2	0.08	4.08	4.16	291	16,236	16,527	29.8	0.62	1.18	17,458
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.17	4.75	3.55	38.7	0.11	0.06	11.1	11.2	0.06	2.82	2.88	—	11,284	11,284	0.46	0.42	13.6	11,433
Area	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
Energy	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
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	291	0.00	291	29.1	0.00	—	1,018
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	5.17	4.75	3.55	38.7	0.11	0.06	11.1	11.2	0.06	2.82	2.88	291	11,284	11,576	29.6	0.42	13.6	12,452
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.94	0.87	0.65	7.06	0.02	0.01	2.03	2.04	0.01	0.52	0.53	—	1,868	1,868	0.08	0.07	2.26	1,893
Area	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
Energy	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
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	48.2	0.00	48.2	4.82	0.00	—	169
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.94	0.87	0.65	7.06	0.02	0.01	2.03	2.04	0.01	0.52	0.53	48.2	1,868	1,916	4.89	0.07	2.26	2,062

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	7.67	7.09	4.61	58.8	0.17	0.09	16.1	16.2	0.08	4.08	4.16	—	16,978	16,978	0.61	0.56	45.5	17,207
Area	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
Energy	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
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	291	0.00	291	29.1	0.00	—	1,018
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	7.67	7.09	4.61	58.8	0.17	0.09	16.1	16.2	0.08	4.08	4.16	291	16,978	17,269	29.7	0.56	45.5	18,225
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.59	6.97	5.44	58.1	0.16	0.09	16.1	16.2	0.08	4.08	4.16	—	16,236	16,236	0.69	0.62	1.18	16,439
Area	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	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
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	291	0.00	291	29.1	0.00	—	1,018
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	7.59	6.97	5.44	58.1	0.16	0.09	16.1	16.2	0.08	4.08	4.16	291	16,236	16,527	29.8	0.62	1.18	17,458
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	5.17	4.75	3.55	38.7	0.11	0.06	11.1	11.2	0.06	2.82	2.88	—	11,284	11,284	0.46	0.42	13.6	11,433
Area	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
Energy	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
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	291	0.00	291	29.1	0.00	—	1,018
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	5.17	4.75	3.55	38.7	0.11	0.06	11.1	11.2	0.06	2.82	2.88	291	11,284	11,576	29.6	0.42	13.6	12,452
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.94	0.87	0.65	7.06	0.02	0.01	2.03	2.04	0.01	0.52	0.53	—	1,868	1,868	0.08	0.07	2.26	1,893
Area	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

Energy	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
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	48.2	0.00	48.2	4.82	0.00	—	169
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.94	0.87	0.65	7.06	0.02	0.01	2.03	2.04	0.01	0.52	0.53	48.2	1,868	1,916	4.89	0.07	2.26	2,062

3. Construction Emissions Details

3.1. BESS Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.78	1.50	13.1	20.4	0.03	0.64	—	0.64	0.59	—	0.59	—	3,210	3,210	0.13	0.03	—	3,221
Dust From Material Movement	—	—	—	—	—	—	0.41	0.41	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.36	0.56	< 0.005	0.02	—	0.02	0.02	—	0.02	—	87.9	87.9	< 0.005	< 0.005	—	88.2

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.6	14.6	< 0.005	< 0.005	—	14.6
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.58	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	156	156	< 0.005	0.01	0.01	158
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	< 0.005	60.1
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.28	4.28	< 0.005	< 0.005	0.01	4.34
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.58	1.58	< 0.005	< 0.005	< 0.005	1.65
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.71	0.71	< 0.005	< 0.005	< 0.005	0.72

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.27
Hauling	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	0.00

3.2. BESS Site Preparation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.49	0.49	13.6	22.5	0.03	0.15	—	0.15	0.14	—	0.14	—	3,210	3,210	0.13	0.03	—	3,221
Dust From Material Movement	—	—	—	—	—	—	0.41	0.41	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.37	0.62	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	87.9	87.9	< 0.005	< 0.005	—	88.2
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.07	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.6	14.6	< 0.005	< 0.005	—	14.6
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.58	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	156	156	< 0.005	0.01	0.01	158
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	< 0.005	60.1
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.28	4.28	< 0.005	< 0.005	0.01	4.34
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.58	1.58	< 0.005	< 0.005	< 0.005	1.65
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.71	0.71	< 0.005	< 0.005	< 0.005	0.72
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.27
Hauling	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	0.00

3.3. Collector Substation Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.54	2.14	20.4	18.8	0.03	0.88	—	0.88	0.81	—	0.81	—	3,337	3,337	0.14	0.03	—	3,348
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.56	0.52	< 0.005	0.02	—	0.02	0.02	—	0.02	—	91.4	91.4	< 0.005	< 0.005	—	91.7
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.1	15.1	< 0.005	< 0.005	—	15.2

Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.29	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	77.8	77.8	< 0.005	< 0.005	0.01	78.8
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	< 0.005	60.1
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.14	2.14	< 0.005	< 0.005	< 0.005	2.17
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.58	1.58	< 0.005	< 0.005	< 0.005	1.65
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.36
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.27
Hauling	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	0.00

3.4. Collector Substation Site Preparation (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	0.40	9.04	17.5	0.03	0.06	—	0.06	0.06	—	0.06	—	3,337	3,337	0.14	0.03	—	3,348
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.25	0.48	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	91.4	91.4	< 0.005	< 0.005	—	91.7
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.05	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.1	15.1	< 0.005	< 0.005	—	15.2
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—

Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.29	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	77.8	77.8	< 0.005	< 0.005	0.01	78.8
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	< 0.005	60.1
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.14	2.14	< 0.005	< 0.005	< 0.005	2.17
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.58	1.58	< 0.005	< 0.005	< 0.005	1.65
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.36
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.27
Hauling	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	0.00

3.5. BESS Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	2.19	1.84	15.4	22.8	0.03	0.74	—	0.74	0.68	—	0.68	—	3,562	3,562	0.14	0.03	—	3,574
Dust From Material Movement	—	—	—	—	—	—	0.41	0.41	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.19	1.84	15.4	22.8	0.03	0.74	—	0.74	0.68	—	0.68	—	3,562	3,562	0.14	0.03	—	3,574
Dust From Material Movement	—	—	—	—	—	—	0.41	0.41	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.85	2.75	< 0.005	0.09	—	0.09	0.08	—	0.08	—	429	429	0.02	< 0.005	—	431
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.05	0.04	0.34	0.50	< 0.005	0.02	—	0.02	0.01	—	0.01	—	71.1	71.1	< 0.005	< 0.005	—	71.3
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.93	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	247	247	< 0.005	< 0.005	0.82	249
Vendor	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	0.14	60.3
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.87	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	233	233	0.01	0.01	0.02	237
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	< 0.005	60.1
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.2	28.2	< 0.005	< 0.005	0.04	28.6
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.94	6.94	< 0.005	< 0.005	0.01	7.26
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.67	4.67	< 0.005	< 0.005	0.01	4.74
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.15	1.15	< 0.005	< 0.005	< 0.005	1.20
Hauling	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	0.00

3.6. BESS Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.60	16.3	24.9	0.03	0.24	—	0.24	0.22	—	0.22	—	3,562	3,562	0.14	0.03	—	3,574
Dust From Material Movement	—	—	—	—	—	—	0.41	0.41	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.62	0.60	16.3	24.9	0.03	0.24	—	0.24	0.22	—	0.22	—	3,562	3,562	0.14	0.03	—	3,574
Dust From Material Movement	—	—	—	—	—	—	0.41	0.41	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.07	1.96	3.00	< 0.005	0.03	—	0.03	0.03	—	0.03	—	429	429	0.02	< 0.005	—	431

Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.36	0.55	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	71.1	71.1	< 0.005	< 0.005	—	71.3
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.05	0.93	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	247	247	< 0.005	< 0.005	0.82	249
Vendor	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	0.14	60.3
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	0.87	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	233	233	0.01	0.01	0.02	237
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	< 0.005	60.1
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.2	28.2	< 0.005	< 0.005	0.04	28.6
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.94	6.94	< 0.005	< 0.005	0.01	7.26

Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.67	4.67	< 0.005	< 0.005	0.01	4.74
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.15	1.15	< 0.005	< 0.005	< 0.005	1.20
Hauling	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	0.00

3.7. Collector Substation Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.87	2.41	22.1	20.8	0.03	0.96	—	0.96	0.89	—	0.89	—	3,620	3,620	0.15	0.03	—	3,632
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.87	2.41	22.1	20.8	0.03	0.96	—	0.96	0.89	—	0.89	—	3,620	3,620	0.15	0.03	—	3,632
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—

Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.21	1.14	< 0.005	0.05	—	0.05	0.05	—	0.05	—	198	198	0.01	< 0.005	—	199
Dust From Material Movement	—	—	—	—	—	—	0.28	0.28	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.22	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	32.8	32.8	< 0.005	< 0.005	—	33.0
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.50	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	132	132	< 0.005	< 0.005	0.44	133
Vendor	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	0.14	60.3
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.46	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	125	125	< 0.005	0.01	0.01	126

Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	< 0.005	60.1
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.84	6.84	< 0.005	< 0.005	0.01	6.94
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.15	3.15	< 0.005	< 0.005	< 0.005	3.30
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.13	1.13	< 0.005	< 0.005	< 0.005	1.15
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.52	0.52	< 0.005	< 0.005	< 0.005	0.55
Hauling	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	0.00

3.8. Collector Substation Grading (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	0.44	11.2	19.5	0.03	0.13	—	0.13	0.12	—	0.12	—	3,620	3,620	0.15	0.03	—	3,632
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.44	0.44	11.2	19.5	0.03	0.13	—	0.13	0.12	—	0.12	—	3,620	3,620	0.15	0.03	—	3,632
Dust From Material Movement	—	—	—	—	—	—	5.11	5.11	—	2.63	2.63	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.02	0.02	0.62	1.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	198	198	0.01	< 0.005	—	199
Dust From Material Movement	—	—	—	—	—	—	0.28	0.28	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	< 0.005	< 0.005	0.11	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.8	32.8	< 0.005	< 0.005	—	33.0
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.50	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	132	132	< 0.005	< 0.005	0.44	133
Vendor	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	0.14	60.3

Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.46	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	125	125	< 0.005	0.01	0.01	126
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	< 0.005	60.1
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.84	6.84	< 0.005	< 0.005	0.01	6.94
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.15	3.15	< 0.005	< 0.005	< 0.005	3.30
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.13	1.13	< 0.005	< 0.005	< 0.005	1.15
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.52	0.52	< 0.005	< 0.005	< 0.005	0.55
Hauling	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	0.00

3.9. Battery/Container Installation/Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.74	3.13	27.5	32.0	0.06	1.18	—	1.18	1.09	—	1.09	—	5,845	5,845	0.24	0.05	—	5,865
Onsite truck	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	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.74	3.13	27.5	32.0	0.06	1.18	—	1.18	1.09	—	1.09	—	5,845	5,845	0.24	0.05	—	5,865
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.56	1.30	11.4	13.3	0.02	0.49	—	0.49	0.45	—	0.45	—	2,434	2,434	0.10	0.02	—	2,442
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.28	0.24	2.09	2.43	< 0.005	0.09	—	0.09	0.08	—	0.08	—	403	403	0.02	< 0.005	—	404
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.11	0.08	1.43	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	379	379	0.01	< 0.005	1.25	381
Vendor	0.02	< 0.005	0.16	0.10	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	115	115	0.01	0.02	0.29	121
Hauling	0.06	0.01	0.48	0.33	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	315	315	0.05	0.05	0.62	331
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.11	0.11	1.33	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	358	358	0.01	0.01	0.03	363

Vendor	0.02	< 0.005	0.17	0.10	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	115	115	0.01	0.02	0.01	120
Hauling	0.06	0.01	0.51	0.33	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	314	314	0.05	0.05	0.02	331
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.54	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	150	150	< 0.005	0.01	0.23	152
Vendor	0.01	< 0.005	0.07	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	47.9	47.9	< 0.005	0.01	0.05	50.1
Hauling	0.02	< 0.005	0.21	0.14	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	131	131	0.02	0.02	0.11	138
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	24.8	24.8	< 0.005	< 0.005	0.04	25.1
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.94	7.94	< 0.005	< 0.005	0.01	8.30
Hauling	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	21.7	21.7	< 0.005	< 0.005	0.02	22.8

3.10. Battery/Container Installation/Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	1.04	25.5	36.4	0.06	0.47	—	0.47	0.44	—	0.44	—	5,845	5,845	0.24	0.05	—	5,865
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	1.04	25.5	36.4	0.06	0.47	—	0.47	0.44	—	0.44	—	5,845	5,845	0.24	0.05	—	5,865

Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.46	0.44	10.6	15.1	0.02	0.20	—	0.20	0.18	—	0.18	—	2,434	2,434	0.10	0.02	—	2,442
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.08	1.94	2.76	< 0.005	0.04	—	0.04	0.03	—	0.03	—	403	403	0.02	< 0.005	—	404
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.11	0.08	1.43	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	379	379	0.01	< 0.005	1.25	381
Vendor	0.02	< 0.005	0.16	0.10	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	115	115	0.01	0.02	0.29	121
Hauling	0.06	0.01	0.48	0.33	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	315	315	0.05	0.05	0.62	331
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.11	0.11	1.33	0.00	0.00	0.38	0.38	0.00	0.09	0.09	—	358	358	0.01	0.01	0.03	363
Vendor	0.02	< 0.005	0.17	0.10	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	115	115	0.01	0.02	0.01	120
Hauling	0.06	0.01	0.51	0.33	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	314	314	0.05	0.05	0.02	331
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.54	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	150	150	< 0.005	0.01	0.23	152
Vendor	0.01	< 0.005	0.07	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	47.9	47.9	< 0.005	0.01	0.05	50.1

Hauling	0.02	< 0.005	0.21	0.14	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	131	131	0.02	0.02	0.11	138
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	24.8	24.8	< 0.005	< 0.005	0.04	25.1
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.94	7.94	< 0.005	< 0.005	0.01	8.30
Hauling	< 0.005	< 0.005	0.04	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	21.7	21.7	< 0.005	< 0.005	0.02	22.8

3.11. Collector Substation Installation/Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	6.46	5.42	49.5	52.7	0.09	2.04	—	2.04	1.88	—	1.88	—	9,549	9,549	0.39	0.08	—	9,582
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.59	1.34	12.2	13.0	0.02	0.50	—	0.50	0.46	—	0.46	—	2,355	2,355	0.10	0.02	—	2,363
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.29	0.24	2.23	2.37	< 0.005	0.09	—	0.09	0.08	—	0.08	—	390	390	0.02	< 0.005	—	391
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.15	0.11	1.87	0.00	0.00	0.50	0.50	0.00	0.12	0.12	—	494	494	0.01	< 0.005	1.63	497
Vendor	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	0.14	60.3
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.41	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	115	115	< 0.005	< 0.005	0.17	117
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.2	14.2	< 0.005	< 0.005	0.02	14.8
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	19.1	19.1	< 0.005	< 0.005	0.03	19.4
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.35	2.35	< 0.005	< 0.005	< 0.005	2.46
Hauling	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	0.00

3.12. Collector Substation Installation/Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.49	1.45	38.5	56.6	0.09	0.67	—	0.67	0.62	—	0.62	—	9,549	9,549	0.39	0.08	—	9,582
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.36	9.49	13.9	0.02	0.16	—	0.16	0.15	—	0.15	—	2,355	2,355	0.10	0.02	—	2,363
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.07	1.73	2.55	< 0.005	0.03	—	0.03	0.03	—	0.03	—	390	390	0.02	< 0.005	—	391
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.15	0.11	1.87	0.00	0.00	0.50	0.50	0.00	0.12	0.12	—	494	494	0.01	< 0.005	1.63	497
Vendor	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	0.14	60.3
Hauling	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	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.41	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	115	115	< 0.005	< 0.005	0.17	117
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.2	14.2	< 0.005	< 0.005	0.02	14.8
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	19.1	19.1	< 0.005	< 0.005	0.03	19.4
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.35	2.35	< 0.005	< 0.005	< 0.005	2.46
Hauling	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	0.00

3.13. Gen-Tie Duct Bank and Vault Installation (Construction) (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.64	1.37	14.3	15.7	0.03	0.51	—	0.51	0.47	—	0.47	—	3,554	3,554	0.14	0.03	—	3,566
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.64	1.37	14.3	15.7	0.03	0.51	—	0.51	0.47	—	0.47	—	3,554	3,554	0.14	0.03	—	3,566

Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.24	2.54	2.79	0.01	0.09	—	0.09	0.08	—	0.08	—	633	633	0.03	0.01	—	635
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.46	0.51	< 0.005	0.02	—	0.02	0.02	—	0.02	—	105	105	< 0.005	< 0.005	—	105
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.81	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	214	214	< 0.005	< 0.005	0.71	215
Vendor	0.02	0.01	0.25	0.15	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	173	173	0.02	0.02	0.43	181
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.75	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	202	202	< 0.005	0.01	0.02	205
Vendor	0.02	0.01	0.26	0.15	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	173	173	0.02	0.02	0.01	180
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	36.1	36.1	< 0.005	< 0.005	0.05	36.7
Vendor	< 0.005	< 0.005	0.05	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.8	30.8	< 0.005	< 0.005	0.03	32.2

Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.98	5.98	< 0.005	< 0.005	0.01	6.07
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.09	5.09	< 0.005	< 0.005	0.01	5.32
Hauling	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	0.00

3.14. Gen-Tie Duct Bank and Vault Installation (Construction) (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.68	0.64	13.6	20.4	0.03	0.28	—	0.28	0.26	—	0.26	—	3,554	3,554	0.14	0.03	—	3,566
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.68	0.64	13.6	20.4	0.03	0.28	—	0.28	0.26	—	0.26	—	3,554	3,554	0.14	0.03	—	3,566
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.11	2.42	3.63	0.01	0.05	—	0.05	0.05	—	0.05	—	633	633	0.03	0.01	—	635

Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.44	0.66	< 0.005	0.01	—	0.01	0.01	—	0.01	—	105	105	< 0.005	< 0.005	—	105
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.81	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	214	214	< 0.005	< 0.005	0.71	215
Vendor	0.02	0.01	0.25	0.15	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	173	173	0.02	0.02	0.43	181
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.75	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	202	202	< 0.005	0.01	0.02	205
Vendor	0.02	0.01	0.26	0.15	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	173	173	0.02	0.02	0.01	180
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	36.1	36.1	< 0.005	< 0.005	0.05	36.7
Vendor	< 0.005	< 0.005	0.05	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.8	30.8	< 0.005	< 0.005	0.03	32.2
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.98	5.98	< 0.005	< 0.005	0.01	6.07
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.09	5.09	< 0.005	< 0.005	0.01	5.32
Hauling	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	0.00

3.15. Gen-Tie Road Resurface and Clean-up (Paving) (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.54	0.46	4.44	6.47	0.01	0.19	—	0.19	0.18	—	0.18	—	993	993	0.04	0.01	—	996
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.14	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.15	5.15	< 0.005	< 0.005	—	5.16
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.29	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	77.8	77.8	< 0.005	< 0.005	0.01	78.8
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	< 0.005	60.1
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.44	2.44	< 0.005	< 0.005	< 0.005	2.48
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.80	1.80	< 0.005	< 0.005	< 0.005	1.88
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.40	0.40	< 0.005	< 0.005	< 0.005	0.41
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	< 0.005	0.31
Hauling	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	0.00

3.16. Gen-Tie Road Resurface and Clean-up (Paving) (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.16	0.16	4.84	6.95	0.01	0.09	—	0.09	0.09	—	0.09	—	993	993	0.04	0.01	—	996
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.15	0.22	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.15	5.15	< 0.005	< 0.005	—	5.16
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.29	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	77.8	77.8	< 0.005	< 0.005	0.01	78.8
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	< 0.005	60.1
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.44	2.44	< 0.005	< 0.005	< 0.005	2.48
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.80	1.80	< 0.005	< 0.005	< 0.005	1.88
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.40	0.40	< 0.005	< 0.005	< 0.005	0.41
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.30	0.30	< 0.005	< 0.005	< 0.005	0.31
Hauling	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	0.00

3.17. Gen-Tie Road Resurface and Clean-up (Paving) (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.52	0.44	4.26	6.46	0.01	0.17	—	0.17	0.16	—	0.16	—	992	992	0.04	0.01	—	996
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.19	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	29.1	29.1	< 0.005	< 0.005	—	29.2
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.82	4.82	< 0.005	< 0.005	—	4.84
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.27	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	76.2	76.2	< 0.005	< 0.005	0.01	77.3
Vendor	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	56.5	56.5	0.01	0.01	< 0.005	59.0
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.25	2.25	< 0.005	< 0.005	< 0.005	2.28
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.66	1.66	< 0.005	< 0.005	< 0.005	1.73
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.37	0.37	< 0.005	< 0.005	< 0.005	0.38
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.27	0.27	< 0.005	< 0.005	< 0.005	0.29
Hauling	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	0.00

3.18. Gen-Tie Road Resurface and Clean-up (Paving) (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.16	4.84	6.95	0.01	0.09	—	0.09	0.09	—	0.09	—	992	992	0.04	0.01	—	996
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.14	0.20	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	29.1	29.1	< 0.005	< 0.005	—	29.2
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.82	4.82	< 0.005	< 0.005	—	4.84
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.27	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	76.2	76.2	< 0.005	< 0.005	0.01	77.3
Vendor	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	56.5	56.5	0.01	0.01	< 0.005	59.0
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.25	2.25	< 0.005	< 0.005	< 0.005	2.28
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.66	1.66	< 0.005	< 0.005	< 0.005	1.73
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.37	0.37	< 0.005	< 0.005	< 0.005	0.38
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.27	0.27	< 0.005	< 0.005	< 0.005	0.29
Hauling	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	0.00

3.19. Gen-Tie Trenching (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.06	0.89	7.75	10.6	0.02	0.30	—	0.30	0.28	—	0.28	—	1,648	1,648	0.07	0.01	—	1,654

Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.06	0.89	7.75	10.6	0.02	0.30	—	0.30	0.28	—	0.28	—	1,648	1,648	0.07	0.01	—	1,654
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.38	1.89	< 0.005	0.05	—	0.05	0.05	—	0.05	—	294	294	0.01	< 0.005	—	295
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.25	0.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.6	48.6	< 0.005	< 0.005	—	48.8

Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.62	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	165	165	< 0.005	< 0.005	0.54	166
Vendor	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	0.14	60.3
Hauling	0.71	0.09	6.05	4.10	0.05	0.04	0.93	0.97	0.04	0.25	0.30	—	3,932	3,932	0.59	0.63	7.79	4,142
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.58	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	156	156	< 0.005	0.01	0.01	158
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	< 0.005	60.1
Hauling	0.71	0.09	6.35	4.10	0.05	0.05	0.93	0.97	0.05	0.25	0.30	—	3,931	3,931	0.59	0.63	0.20	4,134
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.8	27.8	< 0.005	< 0.005	0.04	28.2
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.01	10.7
Hauling	0.13	0.02	1.11	0.73	0.01	0.01	0.16	0.17	0.01	0.05	0.05	—	700	700	0.11	0.11	0.60	737
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.60	4.60	< 0.005	< 0.005	0.01	4.67
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.70	1.70	< 0.005	< 0.005	< 0.005	1.77
Hauling	0.02	< 0.005	0.20	0.13	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	116	116	0.02	0.02	0.10	122

3.20. Gen-Tie Trenching (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.40	9.35	11.2	0.02	0.26	—	0.26	0.24	—	0.24	—	1,648	1,648	0.07	0.01	—	1,654
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.40	9.35	11.2	0.02	0.26	—	0.26	0.24	—	0.24	—	1,648	1,648	0.07	0.01	—	1,654
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	1.67	2.00	< 0.005	0.05	—	0.05	0.04	—	0.04	—	294	294	0.01	< 0.005	—	295
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.30	0.37	< 0.005	0.01	—	0.01	0.01	—	0.01	—	48.6	48.6	< 0.005	< 0.005	—	48.8
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.62	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	165	165	< 0.005	< 0.005	0.54	166
Vendor	0.01	< 0.005	0.08	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	0.14	60.3
Hauling	0.71	0.09	6.05	4.10	0.05	0.04	0.93	0.97	0.04	0.25	0.30	—	3,932	3,932	0.59	0.63	7.79	4,142
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.58	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	156	156	< 0.005	0.01	0.01	158
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	< 0.005	60.1
Hauling	0.71	0.09	6.35	4.10	0.05	0.05	0.93	0.97	0.05	0.25	0.30	—	3,931	3,931	0.59	0.63	0.20	4,134
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.8	27.8	< 0.005	< 0.005	0.04	28.2
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.01	10.7
Hauling	0.13	0.02	1.11	0.73	0.01	0.01	0.16	0.17	0.01	0.05	0.05	—	700	700	0.11	0.11	0.60	737
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.60	4.60	< 0.005	< 0.005	0.01	4.67

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.70	1.70	< 0.005	< 0.005	< 0.005	1.77
Hauling	0.02	< 0.005	0.20	0.13	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	116	116	0.02	0.02	0.10	122

3.21. Gen-Tie Jack-and-Bore (Trenching) (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.76	0.64	6.34	9.58	0.01	0.25	—	0.25	0.23	—	0.23	—	1,446	1,446	0.06	0.01	—	1,451
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.36	0.55	< 0.005	0.01	—	0.01	0.01	—	0.01	—	83.2	83.2	< 0.005	< 0.005	—	83.5
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.8	13.8	< 0.005	< 0.005	—	13.8
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.40	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	109	109	< 0.005	< 0.005	0.01	110
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	< 0.005	60.1
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.29	6.29	< 0.005	< 0.005	0.01	6.38
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.31	3.31	< 0.005	< 0.005	< 0.005	3.46
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.04	1.04	< 0.005	< 0.005	< 0.005	1.06
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.55	0.55	< 0.005	< 0.005	< 0.005	0.57
Hauling	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	0.00

3.22. Gen-Tie Jack-and-Bore (Trenching) (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.23	0.23	6.99	10.2	0.01	0.12	—	0.12	0.11	—	0.11	—	1,446	1,446	0.06	0.01	—	1,451
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.40	0.59	< 0.005	0.01	—	0.01	0.01	—	0.01	—	83.2	83.2	< 0.005	< 0.005	—	83.5
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.07	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.8	13.8	< 0.005	< 0.005	—	13.8
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.40	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	109	109	< 0.005	< 0.005	0.01	110
Vendor	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	57.6	57.6	0.01	0.01	< 0.005	60.1
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.29	6.29	< 0.005	< 0.005	0.01	6.38
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.31	3.31	< 0.005	< 0.005	< 0.005	3.46
Hauling	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.04	1.04	< 0.005	< 0.005	< 0.005	1.06
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.55	0.55	< 0.005	< 0.005	< 0.005	0.57
Hauling	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	0.00

3.23. Decommissioning (2051) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	—	—	—	—	—	—	0.16	0.16	—	0.04	0.04	—	—	—	—	—	—	—

Vendor	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Hauling	—	—	—	—	—	—	0.40	0.40	—	0.10	0.10	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Vendor	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Hauling	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Vendor	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Hauling	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

3.24. Decommissioning (2051) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	—	—	—	—	—	—	0.16	0.16	—	0.04	0.04	—	—	—	—	—	—	—
Vendor	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Hauling	—	—	—	—	—	—	0.40	0.40	—	0.10	0.10	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Vendor	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Hauling	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Vendor	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Hauling	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

3.25. PG&E Facility Upgrades (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.34	1.13	10.8	12.1	0.03	0.39	—	0.39	0.36	—	0.36	—	2,881	2,881	0.12	0.02	—	2,891

Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.34	1.13	10.8	12.1	0.03	0.39	—	0.39	0.36	—	0.36	—	2,881	2,881	0.12	0.02	—	2,891
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	0.53	5.10	5.73	0.01	0.19	—	0.19	0.17	—	0.17	—	1,366	1,366	0.06	0.01	—	1,370
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.93	1.05	< 0.005	0.03	—	0.03	0.03	—	0.03	—	226	226	0.01	< 0.005	—	227
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.43	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	121	121	< 0.005	< 0.005	0.36	122
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.04	0.03	0.03	0.40	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	114	114	< 0.005	< 0.005	0.01	116
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.18	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	54.4	54.4	< 0.005	< 0.005	0.07	55.2
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.00	9.00	< 0.005	< 0.005	0.01	9.13
Vendor	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	0.00
Hauling	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	0.00

3.26. PG&E Facility Upgrades (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.36	9.69	16.1	0.03	0.12	—	0.12	0.11	—	0.11	—	2,881	2,881	0.12	0.02	—	2,891
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.36	0.36	9.69	16.1	0.03	0.12	—	0.12	0.11	—	0.11	—	2,881	2,881	0.12	0.02	—	2,891
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.17	4.59	7.61	0.01	0.06	—	0.06	0.05	—	0.05	—	1,366	1,366	0.06	0.01	—	1,370
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.84	1.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	226	226	0.01	< 0.005	—	227
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.43	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	121	121	< 0.005	< 0.005	0.36	122
Vendor	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	0.00
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.40	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	114	114	< 0.005	< 0.005	0.01	116
Vendor	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	0.00
Hauling	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	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.18	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	54.4	54.4	< 0.005	< 0.005	0.07	55.2
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.00	9.00	< 0.005	< 0.005	0.01	9.13
Vendor	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	0.00
Hauling	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	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	7.67	7.09	4.61	58.8	0.17	0.09	16.1	16.2	0.08	4.08	4.16	—	16,978	16,978	0.61	0.56	45.5	17,207
Total	7.67	7.09	4.61	58.8	0.17	0.09	16.1	16.2	0.08	4.08	4.16	—	16,978	16,978	0.61	0.56	45.5	17,207
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	7.59	6.97	5.44	58.1	0.16	0.09	16.1	16.2	0.08	4.08	4.16	—	16,236	16,236	0.69	0.62	1.18	16,439
Total	7.59	6.97	5.44	58.1	0.16	0.09	16.1	16.2	0.08	4.08	4.16	—	16,236	16,236	0.69	0.62	1.18	16,439

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.94	0.87	0.65	7.06	0.02	0.01	2.03	2.04	0.01	0.52	0.53	—	1,868	1,868	0.08	0.07	2.26	1,893
Total	0.94	0.87	0.65	7.06	0.02	0.01	2.03	2.04	0.01	0.52	0.53	—	1,868	1,868	0.08	0.07	2.26	1,893

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	7.67	7.09	4.61	58.8	0.17	0.09	16.1	16.2	0.08	4.08	4.16	—	16,978	16,978	0.61	0.56	45.5	17,207
Total	7.67	7.09	4.61	58.8	0.17	0.09	16.1	16.2	0.08	4.08	4.16	—	16,978	16,978	0.61	0.56	45.5	17,207
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	7.59	6.97	5.44	58.1	0.16	0.09	16.1	16.2	0.08	4.08	4.16	—	16,236	16,236	0.69	0.62	1.18	16,439
Total	7.59	6.97	5.44	58.1	0.16	0.09	16.1	16.2	0.08	4.08	4.16	—	16,236	16,236	0.69	0.62	1.18	16,439
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.94	0.87	0.65	7.06	0.02	0.01	2.03	2.04	0.01	0.52	0.53	—	1,868	1,868	0.08	0.07	2.26	1,893
Total	0.94	0.87	0.65	7.06	0.02	0.01	2.03	2.04	0.01	0.52	0.53	—	1,868	1,868	0.08	0.07	2.26	1,893

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	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
Total	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	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
Total	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Heavy Industry	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
Total	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

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	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
Total	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	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
Total	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	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
Total	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

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	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
Total	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landsca Equipment	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
Total	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

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	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
Total	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consum Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	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
Total	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

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	291	0.00	291	29.1	0.00	—	1,018
Total	—	—	—	—	—	—	—	—	—	—	—	291	0.00	291	29.1	0.00	—	1,018
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	291	0.00	291	29.1	0.00	—	1,018
Total	—	—	—	—	—	—	—	—	—	—	—	291	0.00	291	29.1	0.00	—	1,018
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	48.2	0.00	48.2	4.82	0.00	—	169
Total	—	—	—	—	—	—	—	—	—	—	—	48.2	0.00	48.2	4.82	0.00	—	169

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	291	0.00	291	29.1	0.00	—	1,018
Total	—	—	—	—	—	—	—	—	—	—	—	291	0.00	291	29.1	0.00	—	1,018

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	291	0.00	291	29.1	0.00	—	1,018
Total	—	—	—	—	—	—	—	—	—	—	—	291	0.00	291	29.1	0.00	—	1,018
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	48.2	0.00	48.2	4.82	0.00	—	169
Total	—	—	—	—	—	—	—	—	—	—	—	48.2	0.00	48.2	4.82	0.00	—	169

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipm Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
BESS Site Preparation	Site Preparation	3/1/2025	3/14/2025	5.00	10.0	—
Collector Substation Site Preparation	Site Preparation	3/1/2025	3/14/2025	5.00	10.0	—
BESS Grading	Grading	3/15/2025	5/15/2025	5.00	44.0	—
Collector Substation Grading	Grading	3/15/2025	4/13/2025	5.00	20.0	—
Battery/Container Installation/Construction	Building Construction	5/16/2025	12/15/2025	5.00	152	—
Collector Substation Installation/Construction	Building Construction	4/14/2025	8/15/2025	5.00	90.0	—
Gen-Tie Duct Bank and Vault Installation (Construction)	Building Construction	8/16/2025	11/15/2025	5.00	65.0	—

Gen-Tie Road Resurface and Clean-up (Paving)	Paving	12/16/2025	1/15/2026	5.00	23.0	—
Gen-Tie Trenching	Trenching	8/16/2025	11/15/2025	5.00	65.0	—
Gen-Tie Jack-and-Bore (Trenching)	Trenching	11/16/2025	12/15/2025	5.00	21.0	—
Decommissioning	Trenching	3/1/2051	3/31/2051	5.00	23.0	—
PG&E Facility Upgrades	Trenching	1/16/2026	9/15/2026	5.00	173	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
BESS Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
BESS Site Preparation	Graders	Diesel	Average	2.00	8.00	148	0.41
BESS Site Preparation	Rubber Tired Loaders	Diesel	Average	2.00	8.00	150	0.36
BESS Site Preparation	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Collector Substation Site Preparation	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Collector Substation Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
BESS Grading	Graders	Diesel	Average	2.00	8.00	148	0.41
BESS Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
BESS Grading	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
BESS Grading	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
BESS Grading	Rubber Tired Loaders	Diesel	Average	2.00	8.00	150	0.36
BESS Grading	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37

Collector Substation Grading	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Collector Substation Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Collector Substation Grading	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Battery/Container Installation/Construction	Cranes	Diesel	Average	2.00	8.00	367	0.29
Battery/Container Installation/Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Battery/Container Installation/Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Battery/Container Installation/Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Battery/Container Installation/Construction	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48
Battery/Container Installation/Construction	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Battery/Container Installation/Construction	Graders	Diesel	Average	2.00	8.00	148	0.41
Battery/Container Installation/Construction	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
Battery/Container Installation/Construction	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Battery/Container Installation/Construction	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Collector Substation Installation/Construction	Cranes	Diesel	Average	2.00	8.00	367	0.29
Collector Substation Installation/Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Collector Substation Installation/Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Collector Substation Installation/Construction	Air Compressors	Diesel	Average	2.00	8.00	37.0	0.48

Collector Substation Installation/Construction	Aerial Lifts	Diesel	Average	2.00	8.00	46.0	0.31
Collector Substation Installation/Construction	Bore/Drill Rigs	Diesel	Average	2.00	8.00	83.0	0.50
Collector Substation Installation/Construction	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Collector Substation Installation/Construction	Graders	Diesel	Average	2.00	8.00	148	0.41
Collector Substation Installation/Construction	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Collector Substation Installation/Construction	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Collector Substation Installation/Construction	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Collector Substation Installation/Construction	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Gen-Tie Duct Bank and Vault Installation (Construction)	Cranes	Diesel	Average	2.00	8.00	367	0.29
Gen-Tie Duct Bank and Vault Installation (Construction)	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Gen-Tie Duct Bank and Vault Installation (Construction)	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Gen-Tie Duct Bank and Vault Installation (Construction)	Aerial Lifts	Diesel	Average	2.00	8.00	46.0	0.31
Gen-Tie Duct Bank and Vault Installation (Construction)	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Gen-Tie Road Resurface and Clean-up (Paving)	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Gen-Tie Road Resurface and Clean-up (Paving)	Rollers	Diesel	Average	1.00	8.00	36.0	0.38

Gen-Tie Road Resurface and Clean-up (Paving)	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Gen-Tie Road Resurface and Clean-up (Paving)	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Gen-Tie Trenching	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Gen-Tie Trenching	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Gen-Tie Trenching	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Gen-Tie Trenching	Trenchers	Diesel	Average	2.00	8.00	40.0	0.50
Gen-Tie Jack-and-Bore (Trenching)	Other Construction Equipment	Diesel	Average	1.00	8.00	82.0	0.42
Gen-Tie Jack-and-Bore (Trenching)	Bore/Drill Rigs	Diesel	Average	1.00	8.00	83.0	0.50
Gen-Tie Jack-and-Bore (Trenching)	Skid Steer Loaders	Diesel	Average	1.00	8.00	71.0	0.37
Gen-Tie Jack-and-Bore (Trenching)	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Gen-Tie Jack-and-Bore (Trenching)	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Decommissioning	Concrete/Industrial Saws	Diesel	Average	2.00	8.00	33.0	0.73
Decommissioning	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Decommissioning	Cranes	Diesel	Average	2.00	8.00	367	0.29
Decommissioning	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
PG&E Facility Upgrades	Cranes	Diesel	Average	2.00	8.00	367	0.29

PG&E Facility Upgrades	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
PG&E Facility Upgrades	Off-Highway Tractors	Diesel	Average	1.00	8.00	38.0	0.44
PG&E Facility Upgrades	Aerial Lifts	Diesel	Average	1.00	8.00	46.0	0.31

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
BESS Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.00	84.0	0.37
BESS Site Preparation	Graders	Diesel	Tier 4 Interim	2.00	8.00	148	0.41
BESS Site Preparation	Rubber Tired Loaders	Diesel	Tier 4 Interim	2.00	8.00	150	0.36
BESS Site Preparation	Skid Steer Loaders	Diesel	Tier 4 Interim	2.00	8.00	71.0	0.37
Collector Substation Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Interim	2.00	8.00	367	0.40
Collector Substation Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.00	84.0	0.37
BESS Grading	Graders	Diesel	Tier 4 Interim	2.00	8.00	148	0.41
BESS Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.00	84.0	0.37
BESS Grading	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
BESS Grading	Rollers	Diesel	Tier 4 Interim	2.00	8.00	36.0	0.38
BESS Grading	Rubber Tired Loaders	Diesel	Tier 4 Interim	2.00	8.00	150	0.36
BESS Grading	Skid Steer Loaders	Diesel	Tier 4 Interim	2.00	8.00	71.0	0.37
Collector Substation Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	2.00	8.00	367	0.40
Collector Substation Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.00	84.0	0.37

Collector Substation Grading	Rollers	Diesel	Tier 4 Interim	2.00	8.00	36.0	0.38
Battery/Container Installation/Construction	Cranes	Diesel	Tier 4 Interim	2.00	8.00	367	0.29
Battery/Container Installation/Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Battery/Container Installation/Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.00	84.0	0.37
Battery/Container Installation/Construction	Forklifts	Diesel	Tier 4 Interim	3.00	8.00	82.0	0.20
Battery/Container Installation/Construction	Air Compressors	Diesel	Tier 4 Interim	2.00	8.00	37.0	0.48
Battery/Container Installation/Construction	Excavators	Diesel	Tier 4 Interim	2.00	8.00	36.0	0.38
Battery/Container Installation/Construction	Graders	Diesel	Tier 4 Interim	2.00	8.00	148	0.41
Battery/Container Installation/Construction	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
Battery/Container Installation/Construction	Rollers	Diesel	Tier 4 Interim	2.00	8.00	36.0	0.38
Battery/Container Installation/Construction	Skid Steer Loaders	Diesel	Tier 4 Interim	2.00	8.00	71.0	0.37
Collector Substation Installation/Construction	Cranes	Diesel	Tier 4 Interim	2.00	8.00	367	0.29
Collector Substation Installation/Construction	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Collector Substation Installation/Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.00	84.0	0.37
Collector Substation Installation/Construction	Air Compressors	Diesel	Tier 4 Interim	2.00	8.00	37.0	0.48
Collector Substation Installation/Construction	Aerial Lifts	Diesel	Tier 4 Interim	2.00	8.00	46.0	0.31
Collector Substation Installation/Construction	Bore/Drill Rigs	Diesel	Tier 4 Interim	2.00	8.00	83.0	0.50

Collector Substation Installation/Construction	Excavators	Diesel	Tier 4 Interim	2.00	8.00	36.0	0.38
Collector Substation Installation/Construction	Graders	Diesel	Tier 4 Interim	2.00	8.00	148	0.41
Collector Substation Installation/Construction	Rubber Tired Dozers	Diesel	Tier 4 Interim	2.00	8.00	367	0.40
Collector Substation Installation/Construction	Rollers	Diesel	Tier 4 Interim	2.00	8.00	36.0	0.38
Collector Substation Installation/Construction	Skid Steer Loaders	Diesel	Tier 4 Interim	2.00	8.00	71.0	0.37
Collector Substation Installation/Construction	Trenchers	Diesel	Tier 4 Interim	2.00	8.00	40.0	0.50
Gen-Tie Duct Bank and Vault Installation (Construction)	Cranes	Diesel	Tier 4 Interim	2.00	8.00	367	0.29
Gen-Tie Duct Bank and Vault Installation (Construction)	Generator Sets	Diesel	Average	2.00	8.00	14.0	0.74
Gen-Tie Duct Bank and Vault Installation (Construction)	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.00	84.0	0.37
Gen-Tie Duct Bank and Vault Installation (Construction)	Aerial Lifts	Diesel	Tier 4 Interim	2.00	8.00	46.0	0.31
Gen-Tie Duct Bank and Vault Installation (Construction)	Skid Steer Loaders	Diesel	Tier 4 Interim	2.00	8.00	71.0	0.37
Gen-Tie Road Resurface and Clean-up (Paving)	Pavers	Diesel	Tier 4 Interim	1.00	8.00	81.0	0.42
Gen-Tie Road Resurface and Clean-up (Paving)	Rollers	Diesel	Tier 4 Interim	1.00	8.00	36.0	0.38
Gen-Tie Road Resurface and Clean-up (Paving)	Skid Steer Loaders	Diesel	Tier 4 Interim	1.00	8.00	71.0	0.37

Gen-Tie Road Resurface and Clean-up (Paving)	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	8.00	84.0	0.37
Gen-Tie Trenching	Pumps	Diesel	Average	2.00	8.00	11.0	0.74
Gen-Tie Trenching	Skid Steer Loaders	Diesel	Tier 4 Interim	2.00	8.00	71.0	0.37
Gen-Tie Trenching	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.00	84.0	0.37
Gen-Tie Trenching	Trenchers	Diesel	Tier 4 Interim	2.00	8.00	40.0	0.50
Gen-Tie Jack-and-Bore (Trenching)	Other Construction Equipment	Diesel	Tier 4 Interim	1.00	8.00	82.0	0.42
Gen-Tie Jack-and-Bore (Trenching)	Bore/Drill Rigs	Diesel	Tier 4 Interim	1.00	8.00	83.0	0.50
Gen-Tie Jack-and-Bore (Trenching)	Skid Steer Loaders	Diesel	Tier 4 Interim	1.00	8.00	71.0	0.37
Gen-Tie Jack-and-Bore (Trenching)	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	8.00	84.0	0.37
Gen-Tie Jack-and-Bore (Trenching)	Welders	Diesel	Tier 4 Interim	1.00	8.00	46.0	0.45
Decommissioning	Concrete/Industrial Saws	Diesel	Tier 4 Interim	2.00	8.00	33.0	0.73
Decommissioning	Rubber Tired Dozers	Diesel	Tier 4 Interim	2.00	8.00	367	0.40
Decommissioning	Cranes	Diesel	Tier 4 Interim	2.00	8.00	367	0.29
Decommissioning	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.00	84.0	0.37
PG&E Facility Upgrades	Cranes	Diesel	Tier 4 Interim	2.00	8.00	367	0.29
PG&E Facility Upgrades	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	2.00	8.00	84.0	0.37
PG&E Facility Upgrades	Off-Highway Tractors	Diesel	Tier 4 Interim	1.00	8.00	38.0	0.44

PG&E Facility Upgrades	Aerial Lifts	Diesel	Tier 4 Interim	1.00	8.00	46.0	0.31

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
BESS Site Preparation	—	—	—	—
BESS Site Preparation	Worker	20.0	11.7	LDA,LDT1,LDT2
BESS Site Preparation	Vendor	2.00	8.40	HHDT,MHDT
BESS Site Preparation	Hauling	0.00	20.0	HHDT
BESS Site Preparation	Onsite truck	—	—	HHDT
Collector Substation Site Preparation	—	—	—	—
Collector Substation Site Preparation	Worker	10.0	11.7	LDA,LDT1,LDT2
Collector Substation Site Preparation	Vendor	2.00	8.40	HHDT,MHDT
Collector Substation Site Preparation	Hauling	0.00	20.0	HHDT
Collector Substation Site Preparation	Onsite truck	—	—	HHDT
BESS Grading	—	—	—	—
BESS Grading	Worker	30.0	11.7	LDA,LDT1,LDT2
BESS Grading	Vendor	2.00	8.40	HHDT,MHDT
BESS Grading	Hauling	0.00	20.0	HHDT
BESS Grading	Onsite truck	—	—	HHDT
Collector Substation Grading	—	—	—	—
Collector Substation Grading	Worker	16.0	11.7	LDA,LDT1,LDT2
Collector Substation Grading	Vendor	2.00	8.40	HHDT,MHDT
Collector Substation Grading	Hauling	0.00	20.0	HHDT
Collector Substation Grading	Onsite truck	—	—	HHDT
Battery/Container Installation/Construction	—	—	—	—

Battery/Container Installation/Construction	Worker	46.0	11.7	LDA,LDT1,LDT2
Battery/Container Installation/Construction	Vendor	4.00	8.40	HHDT,MHDT
Battery/Container Installation/Construction	Hauling	4.00	20.0	HHDT
Battery/Container Installation/Construction	Onsite truck	—	—	HHDT
Collector Substation Installation/Construction	—	—	—	—
Collector Substation Installation/Construction	Worker	60.0	11.7	LDA,LDT1,LDT2
Collector Substation Installation/Construction	Vendor	2.00	8.40	HHDT,MHDT
Collector Substation Installation/Construction	Hauling	0.00	20.0	HHDT
Collector Substation Installation/Construction	Onsite truck	—	—	HHDT
Gen-Tie Duct Bank and Vault Installation (Construction)	—	—	—	—
Gen-Tie Duct Bank and Vault Installation (Construction)	Worker	26.0	11.7	LDA,LDT1,LDT2
Gen-Tie Duct Bank and Vault Installation (Construction)	Vendor	6.00	8.40	HHDT,MHDT
Gen-Tie Duct Bank and Vault Installation (Construction)	Hauling	0.00	20.0	HHDT
Gen-Tie Duct Bank and Vault Installation (Construction)	Onsite truck	—	—	HHDT
Gen-Tie Road Resurface and Clean-up (Paving)	—	—	—	—
Gen-Tie Road Resurface and Clean-up (Paving)	Worker	10.0	11.7	LDA,LDT1,LDT2
Gen-Tie Road Resurface and Clean-up (Paving)	Vendor	2.00	8.40	HHDT,MHDT

Gen-Tie Road Resurface and Clean-up (Paving)	Hauling	0.00	20.0	HHDT
Gen-Tie Road Resurface and Clean-up (Paving)	Onsite truck	—	—	HHDT
Gen-Tie Trenching	—	—	—	—
Gen-Tie Trenching	Worker	20.0	11.7	LDA,LDT1,LDT2
Gen-Tie Trenching	Vendor	2.00	8.40	HHDT,MHDT
Gen-Tie Trenching	Hauling	50.0	20.0	HHDT
Gen-Tie Trenching	Onsite truck	—	—	HHDT
Gen-Tie Jack-and-Bore (Trenching)	—	—	—	—
Gen-Tie Jack-and-Bore (Trenching)	Worker	14.0	11.7	LDA,LDT1,LDT2
Gen-Tie Jack-and-Bore (Trenching)	Vendor	2.00	8.40	HHDT,MHDT
Gen-Tie Jack-and-Bore (Trenching)	Hauling	0.00	20.0	HHDT
Gen-Tie Jack-and-Bore (Trenching)	Onsite truck	—	—	HHDT
Decommissioning	—	—	—	—
Decommissioning	Worker	20.0	11.7	LDA,LDT1,LDT2
Decommissioning	Vendor	2.00	8.40	HHDT,MHDT
Decommissioning	Hauling	30.0	20.0	HHDT
Decommissioning	Onsite truck	—	—	HHDT
PG&E Facility Upgrades	—	—	—	—
PG&E Facility Upgrades	Worker	15.0	11.7	LDA,LDT1,LDT2
PG&E Facility Upgrades	Vendor	—	8.40	HHDT,MHDT
PG&E Facility Upgrades	Hauling	0.00	20.0	HHDT
PG&E Facility Upgrades	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
BESS Site Preparation	—	—	—	—
BESS Site Preparation	Worker	20.0	11.7	LDA,LDT1,LDT2

BESS Site Preparation	Vendor	2.00	8.40	HHDT,MHDT
BESS Site Preparation	Hauling	0.00	20.0	HHDT
BESS Site Preparation	Onsite truck	—	—	HHDT
Collector Substation Site Preparation	—	—	—	—
Collector Substation Site Preparation	Worker	10.0	11.7	LDA,LDT1,LDT2
Collector Substation Site Preparation	Vendor	2.00	8.40	HHDT,MHDT
Collector Substation Site Preparation	Hauling	0.00	20.0	HHDT
Collector Substation Site Preparation	Onsite truck	—	—	HHDT
BESS Grading	—	—	—	—
BESS Grading	Worker	30.0	11.7	LDA,LDT1,LDT2
BESS Grading	Vendor	2.00	8.40	HHDT,MHDT
BESS Grading	Hauling	0.00	20.0	HHDT
BESS Grading	Onsite truck	—	—	HHDT
Collector Substation Grading	—	—	—	—
Collector Substation Grading	Worker	16.0	11.7	LDA,LDT1,LDT2
Collector Substation Grading	Vendor	2.00	8.40	HHDT,MHDT
Collector Substation Grading	Hauling	0.00	20.0	HHDT
Collector Substation Grading	Onsite truck	—	—	HHDT
Battery/Container Installation/Construction	—	—	—	—
Battery/Container Installation/Construction	Worker	46.0	11.7	LDA,LDT1,LDT2
Battery/Container Installation/Construction	Vendor	4.00	8.40	HHDT,MHDT
Battery/Container Installation/Construction	Hauling	4.00	20.0	HHDT
Battery/Container Installation/Construction	Onsite truck	—	—	HHDT
Collector Substation Installation/Construction	—	—	—	—

Collector Substation Installation/Construction	Worker	60.0	11.7	LDA,LDT1,LDT2
Collector Substation Installation/Construction	Vendor	2.00	8.40	HHDT,MHDT
Collector Substation Installation/Construction	Hauling	0.00	20.0	HHDT
Collector Substation Installation/Construction	Onsite truck	—	—	HHDT
Gen-Tie Duct Bank and Vault Installation (Construction)	—	—	—	—
Gen-Tie Duct Bank and Vault Installation (Construction)	Worker	26.0	11.7	LDA,LDT1,LDT2
Gen-Tie Duct Bank and Vault Installation (Construction)	Vendor	6.00	8.40	HHDT,MHDT
Gen-Tie Duct Bank and Vault Installation (Construction)	Hauling	0.00	20.0	HHDT
Gen-Tie Duct Bank and Vault Installation (Construction)	Onsite truck	—	—	HHDT
Gen-Tie Road Resurface and Clean-up (Paving)	—	—	—	—
Gen-Tie Road Resurface and Clean-up (Paving)	Worker	10.0	11.7	LDA,LDT1,LDT2
Gen-Tie Road Resurface and Clean-up (Paving)	Vendor	2.00	8.40	HHDT,MHDT
Gen-Tie Road Resurface and Clean-up (Paving)	Hauling	0.00	20.0	HHDT
Gen-Tie Road Resurface and Clean-up (Paving)	Onsite truck	—	—	HHDT
Gen-Tie Trenching	—	—	—	—
Gen-Tie Trenching	Worker	20.0	11.7	LDA,LDT1,LDT2
Gen-Tie Trenching	Vendor	2.00	8.40	HHDT,MHDT
Gen-Tie Trenching	Hauling	50.0	20.0	HHDT
Gen-Tie Trenching	Onsite truck	—	—	HHDT
Gen-Tie Jack-and-Bore (Trenching)	—	—	—	—

Gen-Tie Jack-and-Bore (Trenching)	Worker	14.0	11.7	LDA,LDT1,LDT2
Gen-Tie Jack-and-Bore (Trenching)	Vendor	2.00	8.40	HHDT,MHDT
Gen-Tie Jack-and-Bore (Trenching)	Hauling	0.00	20.0	HHDT
Gen-Tie Jack-and-Bore (Trenching)	Onsite truck	—	—	HHDT
Decommissioning	—	—	—	—
Decommissioning	Worker	20.0	11.7	LDA,LDT1,LDT2
Decommissioning	Vendor	2.00	8.40	HHDT,MHDT
Decommissioning	Hauling	30.0	20.0	HHDT
Decommissioning	Onsite truck	—	—	HHDT
PG&E Facility Upgrades	—	—	—	—
PG&E Facility Upgrades	Worker	15.0	11.7	LDA,LDT1,LDT2
PG&E Facility Upgrades	Vendor	—	8.40	HHDT,MHDT
PG&E Facility Upgrades	Hauling	0.00	20.0	HHDT
PG&E Facility Upgrades	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
BESS Site Preparation	—	—	10.0	0.00	—
Collector Substation Site Preparation	—	—	10.0	0.00	—
BESS Grading	—	—	44.0	0.00	—
Collector Substation Grading	—	—	20.0	0.00	—
Gen-Tie Road Resurface and Clean-up (Paving)	0.00	0.00	0.00	0.00	0.00
Gen-Tie Trenching	—	26,400	44.0	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Heavy Industry	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005
2051	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Heavy Industry	1,712	2,797	2,217	707,750	14,001	22,872	18,134	5,788,409

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Heavy Industry	1,712	2,797	2,217	707,750	14,001	22,872	18,134	5,788,409

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Heavy Industry	0.00	204	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Heavy Industry	0.00	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Heavy Industry	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Heavy Industry	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Heavy Industry	540	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Heavy Industry	540	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Heavy Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Heavy Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	5.39	annual days of extreme heat
Extreme Precipitation	7.75	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	7.98	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	2	0	0	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	2	1	1	3
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	6.38
AQ-PM	27.1
AQ-DPM	66.4
Drinking Water	51.5
Lead Risk Housing	71.9
Pesticides	3.28
Toxic Releases	40.5
Traffic	21.6
Effect Indicators	—
CleanUp Sites	97.3
Groundwater	48.5
Haz Waste Facilities/Generators	86.6
Impaired Water Bodies	77.3
Solid Waste	39.0
Sensitive Population	—
Asthma	53.9

Cardio-vascular	30.5
Low Birth Weights	44.8
Socioeconomic Factor Indicators	—
Education	68.6
Housing	76.0
Linguistic	88.3
Poverty	43.3
Unemployment	69.1

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	48.8387014
Employed	82.34312845
Median HI	57.02553574
Education	—
Bachelor's or higher	51.02014629
High school enrollment	100
Preschool enrollment	65.96945977
Transportation	—
Auto Access	33.77389965
Active commuting	85.0891826
Social	—
2-parent households	15.14179392
Voting	41.60143719
Neighborhood	—
Alcohol availability	44.98909278

Park access	81.35506224
Retail density	35.55755165
Supermarket access	25.59989734
Tree canopy	66.58539715
Housing	—
Homeownership	54.3308097
Housing habitability	27.80700629
Low-inc homeowner severe housing cost burden	15.89888361
Low-inc renter severe housing cost burden	15.62941101
Uncrowded housing	29.56499423
Health Outcomes	—
Insured adults	36.50712178
Arthritis	54.3
Asthma ER Admissions	41.4
High Blood Pressure	40.5
Cancer (excluding skin)	68.9
Asthma	83.3
Coronary Heart Disease	66.7
Chronic Obstructive Pulmonary Disease	71.2
Diagnosed Diabetes	26.4
Life Expectancy at Birth	74.2
Cognitively Disabled	84.2
Physically Disabled	74.5
Heart Attack ER Admissions	87.3
Mental Health Not Good	63.6
Chronic Kidney Disease	45.1
Obesity	78.7
Pedestrian Injuries	53.7

Physical Health Not Good	51.8
Stroke	51.7
Health Risk Behaviors	—
Binge Drinking	96.4
Current Smoker	66.4
No Leisure Time for Physical Activity	29.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	91.9
Children	62.5
Elderly	29.3
English Speaking	9.4
Foreign-born	97.9
Outdoor Workers	37.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	18.4
Traffic Density	19.2
Traffic Access	70.7
Other Indices	—
Hardship	60.8
Other Decision Support	—
2016 Voting	33.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	65.0
Healthy Places Index Score for Project Location (b)	57.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No

Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	No buildings on site. Site is battery storage and substation. Lot acreage provided by applicant and converted to square footage for unit size.
Construction: Construction Phases	Phases provided by project applicant. PG&E phase dates estimated based on length of phase provided by applicant.
Construction: Off-Road Equipment	Equipment list provided by applicant and project narrative.
Construction: Dust From Material Movement	Soil export provided by applicant.
Construction: Trips and VMT	Trip quantities provided by applicant. Trips in PG&E phase only calculated by CalEEMod.
Operations: Water and Waste Water	100% aerobic. 0 gallons since no building. Site is electricity storage via batteries.
Construction: Off-Road Equipment EF	CalEEMod could not generate EF's for 2051 equipment. Equipment EFs set to 2050 values which are the last year of EFs provided by CalEEMod Appendix G.

2. Emissions Summary - HRA

2.2 Construction Emissions by Year, Unmitigated

Year	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily - Summer (Max)																		
2025	10.456505	8.7884015	77.167724	85.746118	0.1475522	3.2222868	5.5603615	7.2621156	2.9645391	2.6798396	4.2454675		15532.604	15532.604	0.6485183	0.1521927	0.7370676	15590.672
2026	1.3720930	1.1569650	10.759727	12.207622	0.0266118	0.3944112	0.0105980	0.4050092	0.3628583	0.0024841	0.3653424		2893.9451	2893.9451	0.1188656	0.0243683	0.0307379	2904.2092
Daily - Winter (Max)																		
2025	6.7752038	5.6320935	50.844425	60.115079	0.1103925	1.9975345	5.5603615	7.2621156	1.8380598	2.6798396	4.2454675		11471.414	11471.414	0.5483501	0.1530305	0.0191325	11530.745
2026	1.3720930	1.1566343	10.761711	12.241352	0.0266118	0.3944112	0.0105980	0.4050092	0.3628583	0.0024841	0.3653424		2893.4427	2893.4427	0.1191963	0.0246990	0.0009426	2903.7838
Average Daily																		
2025	4.3661244	3.6593187	32.354490	37.379527	0.0641895	1.3443818	0.5322211	1.8766029	1.2368834	0.2346794	1.4715628		6752.6989	6752.6989	0.2945425	0.0701439	0.1000787	6781.0654
2026	0.6660874	0.5614633	5.2265635	5.9870662	0.0128836	0.1920260	0.0052723	0.1972983	0.1766641	0.0012374	0.1779016		1401.0312	1401.0312	0.0577654	0.0120064	0.0067582	1406.0600
Annual																		
2025	0.7968177	0.6678256	5.9046946	6.8217637	0.0117145	0.2453496	0.0971303	0.3424800	0.2257312	0.0428289	0.2685602		1117.9863	1117.9863	0.0487648	0.0116131	0.0165691	1122.6827
2026	0.1215609	0.1024670	0.9538478	1.0926395	0.0023512	0.0350447	0.0009621	0.0360069	0.0322412	0.0002258	0.0324670		231.95670	231.95670	0.0095637	0.0019878	0.0011188	232.78928

5.3. Construction Vehicles - HRA

5.3.1 Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
BESS Site Preparation				
BESS Site Preparation	Worker	20	1	LDA,LDT1,LDT2
BESS Site Preparation	Vendor	2	1	HHDT,MHDT
BESS Site Preparation	Hauling	0	1	HHDT
BESS Site Preparation	Onsite truck			HHDT
Collector Substation Site Preparation				
Collector Substation Site Preparation	Worker	10	1	LDA,LDT1,LDT2
Collector Substation Site Preparation	Vendor	2	1	HHDT,MHDT
Collector Substation Site Preparation	Hauling	0	1	HHDT
Collector Substation Site Preparation	Onsite truck			HHDT
BESS Grading				
BESS Grading	Worker	30	1	LDA,LDT1,LDT2
BESS Grading	Vendor	2	1	HHDT,MHDT
BESS Grading	Hauling	0	1	HHDT
BESS Grading	Onsite truck			HHDT
Collector Substation Grading				
Collector Substation Grading	Worker	16	1	LDA,LDT1,LDT2
Collector Substation Grading	Vendor	2	1	HHDT,MHDT
Collector Substation Grading	Hauling	0	1	HHDT
Collector Substation Grading	Onsite truck			HHDT
Battery/Container Installation/Construction				
Battery/Container Installation/Construction	Worker	46	1	LDA,LDT1,LDT2
Battery/Container Installation/Construction	Vendor	4	1	HHDT,MHDT
Battery/Container Installation/Construction	Hauling	4	1	HHDT
Battery/Container Installation/Construction	Onsite truck			HHDT
Collector Substation Installation/Construction				
Collector Substation Installation/Construction	Worker	60	1	LDA,LDT1,LDT2
Collector Substation Installation/Construction	Vendor	2	1	HHDT,MHDT
Collector Substation Installation/Construction	Hauling	0	1	HHDT
Collector Substation Installation/Construction	Onsite truck			HHDT
Gen-Tie Duct Bank and Vault Installation (Construction)				
Gen-Tie Duct Bank and Vault Installation (Construction)	Worker	26	1	LDA,LDT1,LDT2
Gen-Tie Duct Bank and Vault Installation (Construction)	Vendor	6	1	HHDT,MHDT
Gen-Tie Duct Bank and Vault Installation (Construction)	Hauling	0	1	HHDT
Gen-Tie Duct Bank and Vault Installation (Construction)	Onsite truck			HHDT
Gen-Tie Road Resurface and Clean-up (Paving)				
Gen-Tie Road Resurface and Clean-up (Paving)	Worker	10	1	LDA,LDT1,LDT2
Gen-Tie Road Resurface and Clean-up (Paving)	Vendor	2	1	HHDT,MHDT
Gen-Tie Road Resurface and Clean-up (Paving)	Hauling	0	1	HHDT
Gen-Tie Road Resurface and Clean-up (Paving)	Onsite truck			HHDT
Gen-Tie Trenching				
Gen-Tie Trenching	Worker	20	1	LDA,LDT1,LDT2
Gen-Tie Trenching	Vendor	2	1	HHDT,MHDT
Gen-Tie Trenching	Hauling	50	1	HHDT
Gen-Tie Trenching	Onsite truck			HHDT
Gen-Tie Jack-and-Bore (Trenching)				
Gen-Tie Jack-and-Bore (Trenching)	Worker	14	1	LDA,LDT1,LDT2
Gen-Tie Jack-and-Bore (Trenching)	Vendor	2	1	HHDT,MHDT
Gen-Tie Jack-and-Bore (Trenching)	Hauling	0	1	HHDT
Gen-Tie Jack-and-Bore (Trenching)	Onsite truck			HHDT
Decommissioning				
Decommissioning	Worker	20	1	LDA,LDT1,LDT2
Decommissioning	Vendor	2	1	HHDT,MHDT
Decommissioning	Hauling	30	1	HHDT
Decommissioning	Onsite truck			HHDT
PG&E Facility Upgrades				
PG&E Facility Upgrades	Worker	15	1	LDA,LDT1,LDT2
PG&E Facility Upgrades	Vendor		1	HHDT,MHDT
PG&E Facility Upgrades	Hauling	0	1	HHDT
PG&E Facility Upgrades	Onsite truck			HHDT

2. Emissions Summary

2.2 Construction Emissions by Year, Unmitigated

Year	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily - Summer (Max)																		
Daily - Winter (Max)																		
2051	3.8883578	3.2636323	30.767969	28.782514	0.0560919	1.2642688	0.5636080	1.8278769	1.1662291	0.1409020	1.3071311		5805.8798	5805.8798	0.2353260	0.0443637		5824.9834
Average Daily																		
2051	0.2450198	0.2056535	1.9388035	1.8136927	0.0035345	0.0796662	0.0354517	0.1151180	0.0734884	0.0088629	0.0823513		365.84996	365.84996	0.0148287	0.0027955		367.05375
Annual																		
2051	0.0447161	0.0375317	0.3538316	0.3309989	0.0006450	0.0145390	0.0064699	0.0210090	0.0134116	0.0016174	0.0150291		60.570636	60.570636	0.0024550	0.0004628		60.769937

2. Emissions Summary -HRA

2.2 Construction Emissions by Year, Unmitigated

Year	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO_2	$NBCO_2$	CO_2T	CH_4	N_2O	R	CO_2e
Daily - Summer (Max)																		
Daily - Winter (Max)																		
2051	3.8883578	3.2636323	30.767969	28.782514	0.0560919	1.2642688	0.0344471	1.2987160	1.1662291	0.0086117	1.1748409		5805.8798	5805.8798	0.2353260	0.0443637		5824.9834
Average Daily																		
2051	0.2450198	0.2056535	1.9388035	1.8136927	0.0035345	0.0796662	0.0021667	0.0818330	0.0734884	0.0005416	0.0740301		365.84996	365.84996	0.0148287	0.0027955		367.05375
Annual																		
2051	0.0447161	0.0375317	0.3538316	0.3309989	0.0006450	0.0145390	0.0003954	0.0149345	0.0134116	0.0000988	0.0135104		60.570636	60.570636	0.0024550	0.0004628		60.769937

Attachment 2: Project Construction Emissions and Health Risk Calculations

2150 Geneva Avenue, Daly City, CA
Construction Health Impact Summary

Maximum Impacts at MEI Location - Without Mitigation

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk (per million): Infant/Child	Cancer Risk (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration ($\mu g/m^3$)
2025	0.0481	0.0092	8.55	0.14	0.01	0.06
2026	0.0073	0.0001	1.20	0.02	0.00	0.01
2051	0.0030	0.0001	0.01	0.01	0.00	0.00
Total	-	-	**9.75**	**0.17**		-
Maximum	0.0481	0.0092	**-**	**-**	**0.01**	**0.06**

2150 Geneva Avenue, Daly City, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2025	Construction	0.2142	CON_DPM	428.4	0.10670	1.34E-02	48,211	2.79E-07
2026	Construction	0.0350	CON_DPM	70.1	0.01746	2.20E-03	48,211	4.56E-08
2051	Construction	0.0145	CON_DPM	29.1	0.00724	9.13E-04	48,211	1.89E-08
Total		***0.2638***		***527.6***	***0.1314***	***0.0166***		

Construction Hours

hr/day =	11	(7am - 6pm)
days/yr =	365	
hours/year =	4015	

2150 Geneva Avenue, Daly City, CA

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2025	Construction	CON_FUG	0.0420	83.9	0.02090	2.63E-03	48,211	5.46E-08
2026	Construction	CON_FUG	0.0002	0.5	0.00011	1.42E-05	48,211	2.94E-10
2051	Construction	CON_FUG	0.0004	0.8	0.00020	2.48E-05	48,211	5.15E-10
Total			***0.0426***	***85.2***	***0.0212***	***0.0027***		

Construction Hours

hr/day =	11	(7am - 6pm)
days/yr =	365	
hours/year =	4015	

2150 Geneva Avenue, Daly City, CA - Gen-Tie Emissions

DPM Emissions and Modeling Emission Rates - Unmitigated

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	DPM Emissions (lb/hr)	DPM Emissions (g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2025 + 2026	Alternative 1	0.0312	CON_DPM	62.3	0.01552	1.96E-03	11,121	1.76E-07
2025 + 2026	Alternative 2	0.0312	CON_DPM	62.3	0.01552	1.96E-03	17,595	1.11E-07
2025 + 2026	Alternative 3	0.0312	CON_DPM	62.3	0.01552	1.96E-03	18,503	1.06E-07
Total		***0.0312***		***62.3***	***0.0155***	***0.0020***		

Construction Hours

hr/day =	11	(7am - 6pm)
days/yr =	365	
hours/year =	4015	

2150 Geneva Avenue, Daly City, CA - Gen-Tie Emissions

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	PM2.5 Emissions (lb/yr)	PM2.5 Emissions (lb/hr)	PM2.5 Emissions (g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2025 + 2026	Alternative 1	CON_FUG	0.0009	1.7	0.00043	5.41E-05	11,121	4.87E-09
2025 + 2026	Alternative 2	CON_FUG	0.0009	1.7	0.00043	5.41E-05	17,595	3.08E-09
2025 + 2026	Alternative 3	CON_FUG	0.0009	1.7	0.00043	5.41E-05	18,503	2.93E-09
Total			***0.0009***	***1.7***	***0.0004***	***0.0001***		

Construction Hours

hr/day =	11	(7am - 6pm)
days/yr =	365	
hours/year =	4015	

2150 Geneva Avenue, Daly City, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction w/ Alternative 1 Gen Tie Route
Impacts at Off-Site MEI Location - 7.6 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled		Age	Adult			
Exposure	Exposure Duration				Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2025	0.0366	10	0.50	2025	0.0366	-	-			
1	1	0 - 1	2025	0.0366	10	6.02	2025	0.0366	1	0.11	0.01	0.007	0.04
2	1	1 - 2	2026	0.0060	10	0.98	2026	0.0060	1	0.02	0.00	0.000	0.01
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26	2051	0.0020	1	0.01	2051	0.0020	1	0.01	0.00	0.000	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**7.50**				**0.13**			

* Third trimester of pregnancy

2150 Geneva Avenue, Daly City, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction w/ Alternative 2 Gen Tie Route
Impacts at Off-Site MEI Location - 7.6 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information						
							Modeled				Maximum		
Exposure Year	Exposure Duration (years)	Age	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Infant/Child Cancer Risk (per million)	DPM Conc (ug/m3) Year	DPM Conc (ug/m3) Annual	Age Sensitivity Factor	Adult Cancer Risk (per million)	Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2025	0.0395	10	0.54	2025	0.0395	-	-			
1	1	0 - 1	2025	0.0395	10	6.48	2025	0.0395	1	0.11	0.01	0.007	0.05
2	1	1 - 2	2026	0.0060	10	0.98	2026	0.0060	1	0.02	0.00	0.000	0.01
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26	2051	0.0030	1	0.01	2051	0.0030	1	0.01	0.00	0.000	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**8.01**				**0.14**			

* Third trimester of pregnancy

2150 Geneva Avenue, Daly City, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction w/ Alternative 3 Gen Tie Route
Impacts at Off-Site MEI Location - 7.6 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled		Age	Adult			
Exposure	Exposure Duration				Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2025	0.0393	10	0.53	2025	0.0393	-	-			
1	1	0 - 1	2025	0.0393	10	6.46	2025	0.0393	1	0.11	0.01	0.007	0.05
2	1	1 - 2	2026	0.0060	10	0.98	2026	0.0060	1	0.02	0.00	0.000	0.01
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26	2051	0.0030	1	0.01	2051	0.0030	1	0.01	0.00	0.000	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**7.98**				**0.14**			

* Third trimester of pregnancy

2150 Geneva Avenue, Daly City, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction w/ Alternative 1 Gen Tie Route
Impacts at Off-Site MEI Location - 4.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled		Age	Adult			
Exposure	Exposure Duration				Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2025	0.0408	10	0.55	2025	0.0408	-	-			
1	1	0 - 1	2025	0.0408	10	6.70	2025	0.0408	1	0.12	0.01	0.008	0.05
2	1	1 - 2	2026	0.0066	10	1.09	2026	0.0066	1	0.02	0.00	0.000	0.01
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26	2051	0.0028	1	0.01	2051	0.0028	1	0.01	0.00	0.000	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**8.35**				**0.14**			

* Third trimester of pregnancy

2150 Geneva Avenue, Daly City, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction w/ Alternative 2 Gen Tie Route
Impacts at Off-Site MEI Location - 4.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled		Age	Adult			
Exposure	Exposure Duration				Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2025	0.0451	10	0.61	2025	0.0451	-	-			
1	1	0 - 1	2025	0.0451	10	7.41	2025	0.0451	1	0.13	0.01	0.008	0.05
2	1	1 - 2	2026	0.0066	10	1.09	2026	0.0066	1	0.02	0.00	0.000	0.01
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26	2051	0.0030	1	0.01	2051	0.0030	1	0.01	0.00	0.000	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**9.12**				**0.16**			

* Third trimester of pregnancy

2150 Geneva Avenue, Daly City, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction w/ Alternative 3 Gen Tie Route
Impacts at Off-Site MEI Location - 4.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled DPM Conc (ug/m3)		Age	Adult			
Exposure Year	Exposure Duration (years)	Age	Year	Annual	Sensitivity Factor	Cancer Risk (per million)	Year	Annual	Sensitivity Factor	Cancer Risk (per million)	Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2025	0.0449	10	0.61	2025	0.0449	-	-			
1	1	0 - 1	2025	0.0449	10	7.38	2025	0.0449	1	0.13	0.01	0.008	0.05
2	1	1 - 2	2026	0.0066	10	1.09	2026	0.0066	1	0.02	0.00	0.000	0.01
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26	2051	0.0030	1	0.01	2051	0.0030	1	0.01	0.00	0.000	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**9.09**				**0.16**			

* Third trimester of pregnancy

2150 Geneva Avenue, Daly City, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction w/ Alternative 1 Gen Tie Route
Impacts at Off-Site MEI Location - 1.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled		Age	Adult			
Exposure	Exposure Duration				Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2025	0.0447	10	0.61	2025	0.0447	-	-			
1	1	0 - 1	2025	0.0447	10	7.35	2025	0.0447	1	0.13	0.01	0.009	0.05
2	1	1 - 2	2026	0.0073	10	1.20	2026	0.0073	1	0.02	0.00	0.000	0.01
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26	2051	0.0030	1	0.01	2051	0.0030	1	0.01	0.00	0.000	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**9.16**				**0.16**			

* Third trimester of pregnancy

2150 Geneva Avenue, Daly City, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction w/ Alternative 2 Gen Tie Route
Impacts at Off-Site MEI Location - 1.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled		Age	Adult			
Exposure	Exposure Duration				Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2025	0.0481	10	0.65	2025	0.0481	-	-			
1	1	0 - 1	2025	0.0481	10	7.89	2025	0.0481	1	0.14	0.01	0.009	0.06
2	1	1 - 2	2026	0.0073	10	1.20	2026	0.0073	1	0.02	0.00	0.000	0.01
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26	2051	0.0030	1	0.01	2051	0.0030	1	0.01	0.00	0.000	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**9.75**				**0.17**			

* Third trimester of pregnancy

2150 Geneva Avenue, Daly City, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction w/ Alternative 3 Gen Tie Route
Impacts at Off-Site MEI Location - 1.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled		Age	Adult			
Exposure	Exposure Duration				Sensitivity	Cancer Risk	DPM Conc (ug/m3)		Sensitivity	Cancer Risk	Hazard	Fugitive	Total
Year	(years)	Age	Year	Annual	Factor	(per million)	Year	Annual	Factor	(per million)	Index	PM2.5	PM2.5
0	0.25	-0.25 - 0*	2025	0.0479	10	0.65	2025	0.0479	-	-			
1	1	0 - 1	2025	0.0479	10	7.87	2025	0.0479	1	0.14	0.01	0.009	0.06
2	1	1 - 2	2026	0.0073	10	1.20	2026	0.0073	1	0.02	0.00	0.000	0.01
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26	2051	0.0030	1	0.01	2051	0.0030	1	0.01	0.00	0.000	0.00
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**9.72**				**0.17**			

* Third trimester of pregnancy

Attachment 3: Health Risk Modeling Information and Calculations

BAAQMD Raster Roadway Cancer Risk

BAAQMD Raster Roadway Annual $PM_{2.5}$ Concentration

BAAQMD Raster Roadway Hazard Index

Bay Area Air Quality Management District

Risk & Hazard Stationary Source Inquiry Form

This form is required when users request stationary source data from BAAQMD

This form is to be used with the BAAQMD's Google Earth stationary source screening tables.

Click here for guidance on coducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.

Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.

Table A: Requester Contact Information

Date of Request	**4/14/2023**
Contact Name	Jordyn Bauer
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x103
Email	jbauer@illingworthrodkin.com
Project Name	Geneva Battery Storage
Address	2150 Geneva Avenue
City	Daly City
County	San Mateo
Type (residential, commercial, mixed use, industrial, etc.)	Industrial
Project Size (# of units or building square feet)	10 Acres
Comments:	

For Air District assistance, the following steps must be completed:

1. Complete all the contact and project information requested in Table A ncomplete forms will not be processed. Please include a project site map.

2. Download and install the free program Google Earth, **http://www.google.com/earth/download/ge/,** and then download the county specific Google Earth stationary source application files from the District's website, **http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.** The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.

3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.

4. Identify stationary sources within at least a 1000ft radius of project site. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google Earth address search box to confirm the source's address location. Please report any mapping errors to the District.

5. List the stationary source information in Table B lue section only.

6. Note that a small percentage of the stationa sources ve Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further.

7. Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.

Submit forms, maps, and questions to Matthew Hanson at 415-749-8733, or mhanson@baaqmd.gov

Table B: Google Earth data

Project MEI

Distance from Receptor (feet) or MEI[1]	Plant No.	Facility Name	Address	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
1000+	200387	New Cingular Wireless PCS LLC	2600 GENEVA AVE	6.25	0.002	0.008		Generator		2021 Dataset	0.04	0.25	0.00008	0.0003

Footnotes:

1. Maximally exposed individual
2. These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.
3. Each plant may have multiple permits and sources.
4. Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.
5. Fuel codes: 98 = diesel, 189 = Natural Gas.
6. If a Health Risk Screening Assessment (HRSA) was completed for the source, the application number will be listed here.

8. Engineer who completed the HRSA. For District purposes only.
9. All HRSA completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.
10. The HRSA "Chronic Health" number represents the Hazard Index.
11. Further information about common sources:
    a. Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.
    b. The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic hazard index of 0.003 or
    c. BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010. Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.
    d. Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year period, but instead should reflect
    e. Gas stations can be adjusted using BAAQMD's Gas Station Distance Mulitplier worksheet.
    f. Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.
    g. This spray booth is considered to be insignificant.

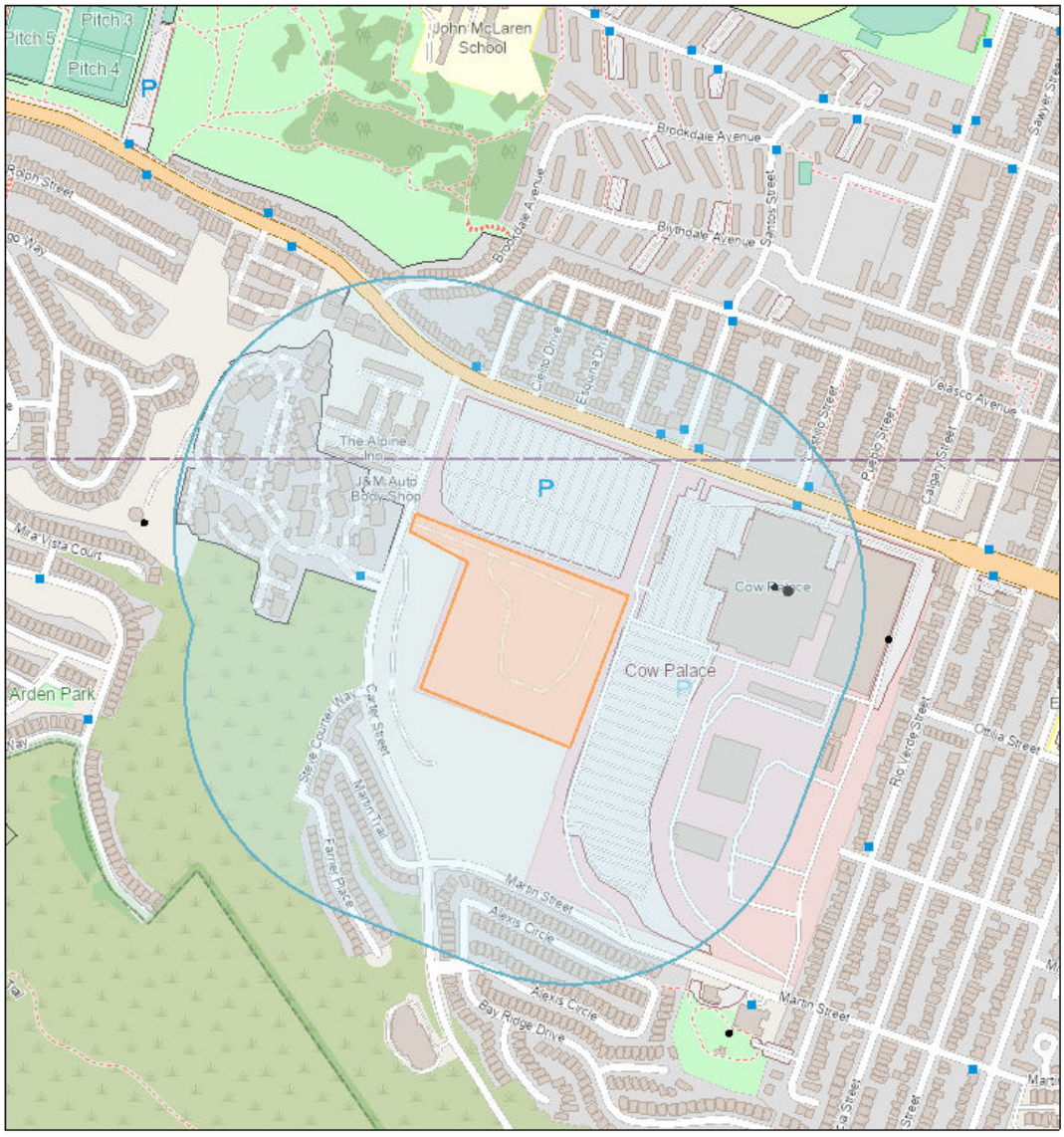
Date last updated:
03/13/2018

Screening Report

Area of Interest (AOI) Information

Area : 6,770,210.96 ft²

Apr 14 2023 17:09:59 Pacific Daylight Time



Permitted Stationary Sources

1:9,028

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

Summary

Name	Count	Area(ft²)	Length(ft)
Permitted Stationary Sources	1	N/A	N/A

Permitted Stationary Sources

#	Facility_I	Facility_N	Address	City	State
1	200387	New Cingular Wireless PCS LLC dba AT&T Mobility	2600 GENEVA AVE	Daly City	CA

#	Zip	County	Latitude	Longitude	Details
1	94014	San Mateo	37.706766	-122.418738	Generator

#	NAICS	NAICS_Sect	NAICS_Subs	NAICS_Indu	Cancer_Ris
1	517210	Information	Telecommunications	Wireless Telecommunications Carriers (except Satellite)	6.250000

#	Chronic_Ha	PM25	Count
1	0.002000	0.008000	1

NOTE: A larger buffer than 1000 feet may be warranted depending on proximity to significant sources.