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MEMORANDUM

To:	Nighthawk Energy Storage, LLC (Applicant)
From:	Jennifer Reed, Dudek
Subject:	Nighthawk Battery Energy Storage System Air Quality and Greenhouse Gas Emissions Analysis Technical Memorandum
Date:	February 20, 2023
cc:	David Hochart, Candice Magnus, Dudek
Attachment A:	Supporting Emission Calculations

1 Introduction and Purpose

The purpose of this memorandum is to estimate criteria air pollutants and greenhouse gas (GHG) emissions from construction and operation of the Nighthawk Battery Energy Storage System (BESS) (Project) in the City of Poway (City) and evaluate potential air quality and GHG emissions impacts resulting from Project implementation under the California Environmental Quality Act (CEQA). This memorandum supports the Section 15183 Categorical Exemption/Initial Study prepared for the Project, which allows a streamlined environmental review process for projects that are consistent with the densities established by existing zoning, community plan or general plan policies for which an Environmental Impact Report (EIR) was certified. The relevant EIR for purposes of the Project's Section 15183 evaluation is the South Poway Planned Development Plan EIR.

The contents and organization of this memorandum are as follows: (2) project description; (3) air quality assessment, including brief background, thresholds of significance, methodology, and impact analysis; (4) GHG emissions assessment, including a brief background, thresholds of significance, methodology, and impact analysis (5) a summary of conclusions, and (6) references cited.

2 Project Description

Overview

The Project consists of a 300-megawatt BESS that will deliver and receive electric power from the existing San Diego Gas & Electric (SDG&E) Sycamore Canyon Substation. The primary Project components will be located on a portion of approximately 82 acres of partially developed land consisting of Assessor Parcel Numbers (APN) 320-031-0300 in the City of Poway, California and improvements associated with a high-voltage underground transmission line will be located within the City of San Diego, and Marine Corps Air Station Miramar (Miramar Marine Corps).

The Project will be composed of lithium-ion batteries installed in racks, inverters, medium-voltage (MV) transformers, switchgear, a collector substation, and other associated equipment to interconnect into the SDG&E Sycamore Canyon Substation (point of interconnection). The batteries will be installed either in containers or in purpose-built enclosures. The containers or enclosures will have battery storage racks, with relay and communications systems for automated monitoring and managing of the batteries to ensure design performance. A battery management system will be provided to control the charging/discharging of the batteries, along with temperature monitoring and control of the individual battery cell temperature with an integrated cooling system. Batteries operate with direct current (DC) electricity, which must be converted to alternating current (AC) for compatibility with the existing electric grid. Power inverters to convert between AC and DC, along with transformers to step up the voltage, will be included.

The proposed facility will provide a service to the regional electric grid by receiving energy (charging) from the SDG&E electric transmission system, storing energy on site, and then later delivering energy (discharging) back to the point of interconnection.

Location

The primary Project components will be located on a property that consists of approximately 82 acres in the City of Poway, California, within the Planned Community 7- South Poway Business Park. The Project site is located in the southern portion of the City, north of Beeler Canyon Road and south of Kirkham Way. The Project site is approximately 1.2 miles to the east of Interstate 15 (I-15).

The southern portion of the Project site is currently being utilized for mineral resource extraction in accordance with the Planned Community 7 – South Poway Business Park permitted uses. The primary Project components will be located on the northern section of the 82-acre parcel adjacent to Kirkham Way. Surrounding land uses in the area consist of undeveloped lands, mineral resource extraction and commercial uses. The SDG&E Sycamore Canyon Substation is located approximately 1.1 miles to the south. The SDG&E Sycamore Canyon Substation will receive and deliver power from the project site via an underground high-voltage transmission line constructed within the City of San Diego and MCAS.

Project Characteristics

The Project will include the development of energy storage facilities and associated infrastructure. The proposed BESS will be housed in enclosures that will consist of modular battery units. Power released or captured by the proposed Project will be transferred to and from the SDG&E Sycamore Canyon Substation via a generation transmission (gen-tie) line. The Project will consist of lithium-ion batteries, which will be installed in racks; inverters; MV transformers; switchgear; a collector substation; and other associated equipment. The Project will include the following components, which are described in more detail following the bulleted list:

- **Energy Storage Facility:** Energy storage enclosures and appurtenances will be constructed to provide energy storage capacity and dispatch services for the electric grid.
- **Power Inverters and Transformers:** Power inverters to convert between AC and DC will be included, along with transformers that will step up the voltage.
- **Collector Substation:** A collector substation will be installed that will include the open rack, air insulated switch gear, and the main power transformer to step up from 34.5 kilovolts (kV) to 138 kV.

- **Telecommunication Facilities:** Telecommunication equipment, including underground and overhead fiber optics or supervisory control and data acquisition (SCADA), will be installed.
- **Site Access and Security:** On-site access driveways, perimeter security fencing, and nighttime directional lighting will be provided for the Project.
- **Gen-Tie Line:** A 138 kV gen-tie line will be constructed to transfer power between the SDG&E Sycamore Canyon Substation and the proposed Project. The gen-tie facility will be located on lands within the City of Poway, City of San Diego and Miramar Marine Corps Base.

The facilities are intended to operate year-round and will be available to receive and deliver energy 24 hours per day, 365 days per year.

3 Air Quality Assessment

3.1 Background

The Project is located within the San Diego Air Basin (SDAB) and is within the jurisdictional boundaries of the San Diego Air Pollution Control District (SDAPCD), which has jurisdiction over the City of Poway where the Project is located. The SDAB lies in the southwest corner of California, which comprises the entire San Diego region, and covers approximately 4,260 square miles. California Air Resources Board (CARB) is responsible for the regulation of mobile emissions sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing air quality standards and regulating stationary sources. The SDAPCD is the regional agency responsible for the regulation and enforcement of federal and state regulations.

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. Criteria air pollutants that are evaluated include volatile organic compounds (VOCs; also referred to as reactive organic gases [ROGs]), oxides of nitrogen (NO_x), carbon monoxide (CO), sulfur oxides (SO_x), particulate matter with an aerodynamic diameter less than or equal to 10 microns in size (coarse particulate matter, or PM_{10}), and particulate matter with an aerodynamic diameter less than or equal to 2.5 microns in size (fine particulate matter, or $PM_{2.5}$). VOCs and NO_x are important because they are precursors to ozone (O_3).

Regarding National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) attainment status,[1] the SDAB is designated as a nonattainment area for federal O_3 standards, and state O_3, PM_{10}, $PM_{2.5}$ standards (SDAPCD 2022a). The SDAB is designated as an attainment or unclassified area for all other criteria air pollutants.

Regionally, the SDAPCD and SANDAG are responsible for developing and implementing the clean air plans for attainment and maintenance of the NAAQS and CAAQS in the SDAB; specifically, the SIP and RAQS. The federal O_3 maintenance plan, which is part of the SIP, was adopted in 2016. The SIP includes a demonstration that current strategies and tactics will maintain acceptable air quality in the SDAB based on the NAAQS. The RAQS was initially

1 An area is designated as in attainment when it is in compliance with the NAAQS and/or the CAAQS. These standards are set by the Environmental Protection Agency (EPA) and California Air Resources Board (CARB), respectively, for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare. Attainment = meets the standards; attainment/maintenance = achieve the standards after a nonattainment designation; nonattainment = does not meet the standards.

adopted in 1991 and is updated every 3 years (most recently in 2022). The RAQS outlines SDAPCD's plans and control measures designed to attain the CAAQS for O_3.

Air quality varies as a direct function of the amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. Air quality problems arise when the rate of pollutant emissions exceeds the rate of dispersion. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution, as identified by the California Air Resources Board (CARB), include children, older adults, and people with cardiovascular and chronic respiratory diseases. According to the SDAPCD, sensitive receptors are those who are especially susceptible to adverse health effects from exposure to toxic air contaminants, such as children, the elderly, and the ill. Sensitive receptors include residences, schools (grades Kindergarten through 12), libraries, day care centers, nursing homes, retirement homes, health clinics, and hospitals within 2 kilometers of the facility (SDAPCD 2022b). The closest sensitive receptors to the Project site are single-family residences located approximately 2,700 feet south of the BESS and approximately 375 feet west and east of the gen-tie line.

3.2 Thresholds of Significance

The significance criteria used to evaluate Project impacts to air quality are based on the recommendations provided in Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.), as follows:

A. Conflict with or obstruct implementation of the applicable air quality plan

B. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard

C. Expose sensitive receptors to substantial pollutant concentrations

D. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) indicates that, where available, the significance criteria established by the applicable air quality management district or pollution control district may be relied upon to determine whether the project would have a significant impact on air quality. The SDAPCD has not developed thresholds of significance for air quality, however, the SDAPCD has provided emission levels under its permitting authority for new source review for which an AQIA is triggered. The County of San Diego has reviewed SDAPCD's trigger levels, as well as EPA rulemaking, and CEQA thresholds adopted by the South Coast Air Quality Management District (SCAQMD) to develop screening level thresholds (SLTs) to assist lead agencies in determining the significance of project-level air quality impacts within the County. The City of Poway has chosen to apply the County of San Diego SLT's for determining mass daily criteria air pollutant thresholds of significance. For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that the Project's total emissions would or would not result in a significant impact to air quality. Project related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds in Table 1 are exceeded.

Table 1. Air Quality Significance Thresholds

Construction Emissions			
Pollutant	Total Emissions (Pounds per Day)		
Coarse particulate matter (PM_{10})	100		
Fine particulate matter ($PM_{2.5}$)	55		
Oxides of nitrogen (NO_x)	250		
Sulfur oxides (SO_x)	250		
Carbon monoxide (CO)	550		
Volatile organic compounds (VOCs)	75[a]		
Operational Emissions			
Pollutant	Total Emissions		
	Pounds per Hour	Pounds per Day	Tons per Year
Coarse particulate matter (PM_{10})	—	100	15
Fine particulate matter ($PM_{2.5}$)	—	55	10
Oxides of nitrogen (NO_x)	25	250	40
Sulfur oxides (SO_x)	25	250	40
Carbon monoxide (CO)	100	550	100
Lead and lead compounds	—	3.2	0.6
Volatile organic compounds (VOCs)	—	75*	13.7

Source: County of San Diego 2007.
Notes:
a VOC threshold based on the threshold of significance for VOCs from the South Coast Air Quality Management District (SCAQMD) for the Coachella Valley as stated in the San Diego County Guidelines for Determining Significance.

The thresholds listed in Table 1 represent screening-level thresholds that can be used to evaluate whether Project-related emissions would cause a significant impact on air quality. Emissions below the screening-level thresholds would not cause a significant impact. In the event that emissions exceed these thresholds, modeling would be required to demonstrate that the Project's total air quality impacts result in ground-level concentrations that are below the CAAQS and NAAQS, including appropriate background levels. For non-attainment pollutants, if emissions exceed the thresholds shown in Table 1, the Project could have the potential to result in a cumulatively considerable net increase in these pollutants and thus could have a significant impact on the ambient air quality.

SDAPCD Rule 51 (Public Nuisance) prohibits emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person (SDAPCD 1976). A project that proposes a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

3.3 Approach and Methodology

The California Emissions Estimator Model (CalEEMod) Version 2022.1 was used to estimate emissions from construction and operation of the project. CalEEMod is a statewide computer model developed in cooperation with air districts throughout the state to quantify criteria air pollutant and GHG emissions associated with construction activities and operation of a variety of land use projects, such as residential, commercial, and industrial facilities. CalEEMod input parameters, including the land use type used to represent the project and its size, construction schedule, and anticipated use of construction equipment, were based on information provided by the applicant or default model assumptions if project specifics were unavailable.

3.3.1 Construction

For the purposes of modeling, it was assumed that construction of the Project would commence in March 2023[2] and would last approximately 12 months, ending in February 2024. The project was assumed to be operational for 30 years and then be decommissioned and removed at the end of its lifetime. The analysis contained herein is based on the following subset area schedule assumptions (duration of phases is approximate):

- BESS Site Preparation: March 2023 (2 weeks)
- Collector Substation Site Preparation: March 2023 (2 weeks)
- BESS Grading: March 2023 – May 2023 (2 months)
- Collector Substation Grading: March 2023 – April 2023 (1 month)
- Battery/Container Installation: May 2023 – December 2023 (7 months)
- Collector Substation Construction/Installation: April 2023 – August 2023 (4 months)
- Gen-tie Trenching: August 2023 – November 2023 (3 months)
- Gen-Tie Duct Bank and Vault Installation: August 2023 – November 2023 (3 months)
- Gen-Tie Jack-and-Bore: November 2023 – December 2023 (1 month)
- Gen-Tie Road Resurface and Clean-up: December 2023 – February 2024 (3 months)
- Decommissioning: March 2054 (1 month)[3]

The majority of the phases listed above would occur concurrently and would not occur sequentially in isolation. The estimated construction duration was provided by the Project applicant. Detailed construction equipment modeling assumptions are provided in Attachment A, CalEEMod Outputs. For the analysis, it was assumed that heavy construction equipment would be operating 5 days per week (22 days per month) during Project construction. The construction equipment mix used for estimating the construction emissions of the Project is based on information provided by the project applicant and is shown in Table 2.

Table 2. Construction Scenario Assumptions

	One-Way Vehicle Trips			Equipment		
Construction Phase	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips	Equipment Type	Quantity	Usage Hours
BESS Site Preparation	20	2	0	Graders	2	8

2 The analysis assumes a construction start date of March 2023, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

3 Decommissioning that is anticipated to occur in 2054 was modeled as 2050 in CalEEMod as there are no construction emission factors following 2050.

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips	Equipment Type	Quantity	Usage Hours
				Rubber Tired Loaders (front end loader)	2	8
				Skid Steer Loaders	2	8
				Tractors/Loaders/ Backhoes	2	8
Collector Substation Site Preparation	10	2	0	Rubber Tired Dozer	2	8
				Tractors/Loaders/ Backhoes	2	8
BESS Grading	30	2	0	Graders	2	8
				Plate Compactors	2	8
				Rollers	2	8
				Rubber Tired Loaders (front end loader)	2	8
				Skid Steer Loaders	2	8
				Tractors/Loaders/ Backhoes	2	8
Collector Substation Grading	16	2	0	Rollers	2	8
				Rubber Tired Dozers	2	8
				Tractors/Loaders/ Backhoes	2	8
Battery/Container Installation	46	4	4	Air Compressors	2	8
				Cranes	2	8
				Excavators	2	8
				Generator Sets	2	8
				Graders (Gradall)	2	8
				Plate Compactors (compactor [ground])	2	8
				Rollers	2	8
				Skid Steer Loaders	2	8
				Tractors/Loaders/ Backhoes	2	8
Collector Substation Construction/Installation	60	2	0	Air Compressors	2	8
				Aerial Lift (man lift)	2	8
				Bore/Drill Rig (auger drill rig)	2	8
				Cranes	2	8
				Excavators	2	8
				Generator Sets	2	8
				Graders (Gradall)	2	8

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Average Daily Haul Truck Trips	Equipment Type	Quantity	Usage Hours
				Rubber Tired Dozer (dozer)	2	8
				Rollers	2	8
				Skid Steer Loaders	2	8
				Trencher (slurry trenching machine)	2	8
				Tractors/Loaders/ Backhoes	2	8
Gen-tie Trenching	20	2	50	Pumps	2	8
				Skid Steer Loaders	2	8
				Trencher (slurry trenching machine)	2	8
				Tractors/Loaders/ Backhoes	2	8
Gen-Tie Duct Bank and Vault Installation	26	6	0	Aerial Lift (man lift)	2	8
				Cranes	2	8
				Generator Sets	2	8
				Skid Steer Loaders	2	8
				Tractors/Loaders/ Backhoes	2	8
Gen-Tie Jack-and-Bore	14	2	0	Boring Jack Power Unit (Other Construction Equipment)	1	8
				Horizontal Boring Hydraulic Jack (Bore/Drill Rig)	1	8
				Skid Steer Loaders	1	8
				Tractors/Loaders/ Backhoes	1	8
				Welders (torch)	1	8
Gen-Tie Road Resurface and Clean-up	10	2	0	Pavers	1	8
				Rollers	1	8
				Skid Steer Loaders	1	8
				Tractors/Loaders/ Backhoes	1	8
Decommissioning	20	2	30	Concrete/Industrial Saws	2	8
				Cranes	2	8
				Rubber Tired Dozers	2	8
				Tractors/Loaders/ Backhoes	2	8

Note: See Attachment A for details.

Implementation of the Project would generate criteria air pollutant emissions from entrained dust, off-road equipment, vehicle emissions, and asphalt pavement application (no architectural; coatings are anticipated). Internal combustion engines used by construction equipment, vendor trucks (i.e., delivery trucks), haul trucks, and worker vehicles would result in emissions of VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$. The application of asphalt pavement would also produce VOC emissions. Based on project specific information, no net import or export of material is expected during the grading phase. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. Construction of Project components would be subject to SDAPCD Rule 55 – Fugitive Dust Control. Compliance with Rule 55 would limit fugitive dust (PM_{10} and $PM_{2.5}$) that may be generated during grading and construction activities. Standard construction practices that would be employed to reduce fugitive dust emissions include watering of the active sites two times per day, depending on weather conditions; however, this best practice was conservatively not included in the emission estimates. A detailed depiction of the construction schedule—including information regarding phases and equipment used during each phase—is included in Attachment A to this memorandum.

3.3.2 Operation

Emissions from the operational phase of the Project were estimated using CalEEMod. Operational year 2024 was assumed, as it would be the first year following completion of construction (although not the first full year).

Mobile Sources

The Project would generate minimal mobile sources (vehicular traffic) as a result of the maintenance activity of the Project. It is anticipated that the facility would be operated remotely by the applicant or an affiliated company through the supervisory control and data acquisition (SCADA) system. Only occasional, on-site maintenance is expected to be required following commissioning, including replacement of inverter power modules, filters, and miscellaneous electrical repairs on an as-needed basis. Routine operations would require one or two workers in a light-duty vehicles or utility truck to visit the facility on a weekly basis. Typically, one major maintenance inspection would take place annually. CalEEMod default data, including trip characteristics, vehicle fleet, and emissions factors representing 2024 were used to estimate emissions associated with mobile sources.

Area Sources

The area source category calculates direct sources of air pollutant emissions located at a Project site, including consumer product use, architectural coatings, hearth, and landscape maintenance equipment; however, only landscape equipment is anticipated to be applicable to the Project.

Consumer products are various solvents used in non-industrial applications which emit VOCs during their product use; however, no cleaning supplies or parking surface degreasers are anticipated to be necessary for the Project containers. Reapplication of architectural coatings (e.g., paints and other finishes) also emit VOCs; however, the Project's prefabricated containers are not anticipated to required interior or exterior finish maintenance. The Project would also not include any hearths (fireplaces or stoves).

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chainsaws, and hedge trimmers, as well as air compressors, generators, and pumps. The emissions associated from landscape equipment use were estimated using CalEEMod. The emission factors are multiplied by the number of summer days that represent the number of operational days.

Energy Sources

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage. Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod, since criteria pollutant emissions occur at the site of the power plant, which is typically off site.

The battery storage containers would have ventilation and air conditioning systems to keep the batteries in the optimal operating temperatures, which would be provided by electricity. The Project would have no natural gas needs or natural gas connections. As such, no energy criteria air pollutant emissions are presented.

Off-Road Sources

The Project is anticipated to involve using a crane once every 5 years during routine maintenance to be able to lift and move the modular containers. CalEEMod default equipment size and load factors were assumed. It was assumed that the crane would operate for 8 hours, 4 days, every 5 years.

3.4 Impact Analysis

3.4.1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

As stated in Section 3.1, Background, the SDAPCD and SANDAG are responsible for developing and implementing the clean air plans for attainment and maintenance of the NAAQS and CAAQS in the SDAB; specifically, the SIP and RAQS.[4] If a project proposes development that is greater than that anticipated in the local plan and SANDAG's growth projections, the project might conflict with the SIP and RAQS and may contribute to a potentially significant cumulative impact on air quality.

The Project's components are located within the City of Poway and are consistent with the development density of the site's Planned Community General Plan land use designation and PC-7 zoning designation, authorizing uses allowed by the South Poway Planned Community Development Plan adopted in 1985 upon certification of the Final EIR, dated July 30, 1985. The plan designated the area of the Project site Light Industrial (LI) and permitted "public utility electric transmission and distribution substations" as a permitted use within the LI land use designation. On a routine daily basis, the Project would be operated remotely by the applicant or an affiliated company and would not result in an increase in employee population. The Project does not include residential development that would generate a residential population. As such, the Project does not generate residential or employment growth that may not have been included in SANDAG's Regional Growth Forecast and thus, the RAQS that rely on SANDAG growth projections. As such, the Project will not conflict with or obstruct implementation of the SDAPCD RAQs, which is the applicable air quality plan.

4 For the purpose of this discussion, the relevant federal air quality plan is the O_3 maintenance plan (SDAPCD 2016b). The RAQS is the applicable plan for purposes of state air quality planning. Both plans reflect growth projections in the SDAB.

Impacts Analyzed in South Poway Planned Development Plan EIR

The South Poway Planned Community Development Plan EIR concluded that short-term fugitive dust and exhaust emissions would occur during construction and grading for the plan's implementation, and long-term stationary and mobile source emissions would occur both onsite and offsite during the plan operation. The EIR found that these impacts would be less than significant with the implementation of Air Resources Mitigation Measures 1 through 8, which included a variety of measures to reduce emissions. The Project would also incorporate Air Resources Mitigation Measure 1, which would require the implementation of all rules and regulations of the SDAPCD. In addition, during construction, the Project would incorporate BMPs and fugitive dust control measures in accordance with uniformly applied development policies or standards previously adopted by the City to further reduce any potential impacts. With the implementation of these mitigation measures and BMPs, impacts would be less than significant.

Offsite and/or Cumulative Impacts Not Analyzed in South Poway Planned Community Development EIR

Improvements within the City of San Diego and Miramar Marine Corps relating to the gen-tie line would not cause significant offsite or cumulative air quality impacts not analyzed in the South Poway Planned Community Development EIR because they are a necessary component of the permitted public utility grid reliability-enhancing BESS facility within the scope of the development analyzed in the EIR. As discussed above, the Project is anticipated in the local plan and SANDAG's growth projections. The Project would not conflict with or obstruct implementation of the applicable air quality plan. In addition, these components would also incorporate air quality Mitigation Measures 1 of the South Poway Planned Community Development Plan EIR, which requires compliance with all rules and regulations of the SDAPCD

Offsite Project components that would also be located within the MCAS Miramar property would also not generate any new air quality impacts because they would be subject to Mitigation Measure AIR-1 of the Sycamore-Peñasquitos 230-kV Transmission Line Project Final EIR, which would require a Fugitive Dust Control measures.

Conclusion

The Project would comply with the applicable rules and regulations of the SDAPCD that would apply to construction and operation of the Project. Additionally, with the incorporation of the aforementioned mitigation measures, uniformly adopted development standards and policies of SDAPCD and the City of Poway, the Project would have no project-specific significant effects related to conflicts or obstruction of the implementation of the SDAPCD RAQs, which is the applicable air quality plan applicable to the Project site The Project would also have no project-specific significant effects related to impacts not analyzed as significant effects in the South Poway Planned Community Development Plan EIR, including offsite or cumulative impacts; determined to be more severe than discussed in the prior EIR due to substantial new information; or which cannot be substantially mitigated by the imposition of uniformly applied development policies or standards.

3.4.2 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is

nonattainment under an applicable federal or state ambient air quality standard?

Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and SDAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.

Construction and Decommissioning

Proposed construction activities would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and VOC off-gassing) and off-site sources (i.e., on-road vendor trucks, haul trucks, and worker vehicle trips). Construction emissions can vary substantially from day to day, depending on the level of activity; the specific type of operation; and, for particulate matter, the prevailing weather conditions. Therefore, such emission levels can only be approximately estimated.

Criteria air pollutant emissions associated with construction activities were quantified using CalEEMod. Default values provided by the program were used where detailed Project information was not available. A detailed depiction of the construction schedule—including information regarding phasing, equipment used during each phase, haul trucks, vendor trucks, and worker vehicles—is included in Section 3.3.1 above.

Development of the Project would generate air pollutant emissions from entrained dust, off-road equipment, vehicle emissions, and asphalt pavement application. As described previously, fugitive dust would be limited through compliance with SDAPCD Rule 55, which requires the restriction of visible emissions of fugitive dust beyond the property line.

Table 3 shows the estimated maximum unmitigated daily construction emissions associated with construction and decommissioning of the Project. Complete details of the emissions calculations are provided in Appendix A, *Air Quality and Greenhouse Gas Emissions CalEEMod Output Files*. "Summer" emissions are representative of the conditions that may occur during the O_3 season (May 1 to October 31), and "winter" emissions are representative of the conditions that may occur during the balance of the year (November 1 to April 30).

Table 3. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions

Construction Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Summer						
2023	10.2	90.5	94.9	0.16	16.8	8.98
2024	–	–	–	–	–	–
2054	–	–	–	–	–	–
Winter						
2023	6.44	62.0	65.4	0.16	16.8	8.98
2024	0.59	4.74	6.96	0.01	0.31	0.22
2054	1.88	12.9	18.3	0.07	1.06	0.49
Maximum	***10.2***	***90.5***	***94.9***	***0.16***	***16.8***	***8.98***

Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; – = no emission estimates reported.
Year 2050 was used to model 2054 in CalEEMod.
See Attachment A for complete results.

As shown in Table 3, daily construction emissions for the Project would not exceed the County of San Diego's significance thresholds. Therefore, the Project would have a less than significant impact related to emissions of criteria air pollutant emissions during construction.

Operation

Operation of the Project would generate minimal VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile sources (vehicle trips), area sources (landscape maintenance equipment), and offroad equipment (no air quality-relevant energy sources identified). Criteria air pollutant emissions associated with long-term operations were quantified using CalEEMod as explained in Section 3.3.2.

Table 4 presents the unmitigated maximum daily emissions associated with the operation of the Project in 2024 following completion of construction. Complete details of the emissions calculations are provided in Appendix A, *Air Quality and Greenhouse Gas Emissions CalEEMod Output Files*.

Table 4. Estimated Maximum Daily Operational Criteria Air Pollutant Emissions

Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Summer						
Mobile	0.50	0.41	4.12	0.01	0.32	0.06
Area	1.59	0.02	2.32	<0.01	<0.01	<0.01
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Offroad Equipment	0.39	4.00	3.15	0.01	0.16	0.15
Total	***2.48***	***4.43***	***9.59***	***0.02***	***0.48***	***0.21***
Winter						
Mobile	0.49	0.45	3.83	0.01	0.32	0.06
Area	1.21	–	–	–	–	–
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Offroad Equipment	0.39	4.00	3.15	0.01	0.16	0.15
Total	***2.09***	***4.45***	***6.99***	***0.02***	***0.48***	***0.21***
Threshold	*75*	*250*	*550*	*250*	*100*	*55*
Threshold exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; <0.01 = reported value is less than 0.01; – = no emission estimates reported.
See Attachment A for complete results.

As shown in Table 4, daily operational emissions for the Project would not exceed the County of San Diego's significance thresholds for any criteria air pollutant. Therefore, the Project would result in a less than significant impact related to emissions of criteria air pollutant emissions during operation.

Impacts Analyzed in South Poway Planned Community Development Plan EIR

The South Poway Planned Community Development Plan EIR found that while development of individual projects would minimally contribute to the air quality degradation in the SDAB; however, in conjunction with surrounding developments and the usage of automobiles as the primary means of transportation, the air pollutants contributed by individual projects to the air basin could have significant impacts and mitigation would be required. The Project would implement Air Resources Mitigation Measures 1 and 2 identified in the South Poway Planned Community Development Plan, which would require the rules and regulations of the SDAPCD would be complied with and construction and grading would be scheduled to reduce fugitive dust during construction. The Project would also incorporate Air Resources Mitigation Measure 1, further reducing potential impacts.

Offsite and/or Cumulative Impacts Not Analyzed in South Poway Planned Community Development EIR

As discussed above, the Project is anticipated in the local plan and SANDAG's growth projections. The Project would not conflict with or obstruct implementation of the applicable air quality plan. In addition, these components would also incorporate air quality Mitigation Measures 1 of the South Poway Planned Community Development Plan EIR, which requires compliance with all rules and regulations of the SDAPCD.

Offsite Project components that would also be located within the MCAS Miramar property would also not generate any new air quality impacts because they would be subject to Mitigation Measure AIR-1 of the Sycamore-Peñasquitos 230-kV Transmission Line Project Final EIR, which would require a Fugitive Dust Control measures.

Conclusion

The Project would not exceed the applied thresholds of significance during construction or operation for any criteria air pollutant, resulting in a less than significant impact. The Project would also implement the aforementioned air resources mitigation measures. With the implementation of these mitigation measures, uniformly adopted development standards and policies of SDAPCD and the City of Poway, the Project would have no project-specific significant effects related to the cumulative net increase of criteria pollutants peculiar to the Project or its site, not analyzed as significant in the South Poway Planned Community Development Plan EIR, including offsite or cumulative impacts; determined to be more severe than discussed in the prior EIR due to substantial new information; or which cannot be substantially mitigated by the imposition of uniformly applied development policies or standards.

3.4.3 Would the project expose sensitive receptors to substantial pollutant concentrations?

Carbon Monoxide Hotspots

Mobile source impacts occur on two scales – regionally and locally; however, the Project would generate minimal regional and local trips including no routine daily trips.. If traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles cold-started and operating at pollution-inefficient speeds, and is operating on roadways already crowded with non-proposed project traffic, there is a potential for the formation of microscale CO hotspots in the area immediately around points of congested traffic. Because of continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SDAB is steadily decreasing.

During construction, the Project would result in CO emissions from construction worker vehicles, haul trucks, and off-road equipment. Title 40, section 93.123(c)(5) of the California Code of Regulations, Procedures for Determining Localized CO, PM_{10}, and $PM_{2.5}$ Concentrations (hot-spot analysis), states that "CO, PM_{10}, and $PM_{2.5}$ hot-spot analyses are not required to consider construction-related activities, which cause temporary increases in emissions. Temporary increases are defined as those which occur only during the construction phase and last five years or less at any individual site" (Cal. Code Regs., tit. 40, § 93.123). Since construction activities would be temporary, a project-level construction hotspot analysis would not be required.

The City does not have guidance regarding CO hotspots; as such, the County's CO hotspot screening guidance was followed to determine whether the Project would require a site-specific hotspot analysis. Since the last update of the County's guidance (2007), the County has evaluated the potential for the growth anticipated under the General Plan Update to result in CO "hot spots" throughout the County (County of San Diego 2009). To do this, the County reviewed the CO "hot spot" analysis conducted by the SCAQMD for their request to the USEPA for redesignation as a CO attainment area (SCAQMD 2003).

At the time that the 1993 SCAQMD Handbook was published, the South Coast Air Basin (SCAB) was designated nonattainment under the CAAQS and NAAQS for CO. In 2007, the SCAQMD was designated in attainment for CO under both the CAAQS and NAAQS as a result of the steady decline in CO concentrations in the SCAB due to turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities. The SCAQMD conducted CO modeling for the 2003 AQMP[5] (SCAQMD 2003) for the four worst-case intersections in the SCAB: (1) Wilshire Boulevard and Veteran Avenue, (2) Sunset Boulevard and Highland Avenue, (3) La Cienega Boulevard and Century Boulevard, and (4) Long Beach Boulevard and Imperial Highway. At the time the 2003 AQMP was prepared, the intersection of Wilshire Boulevard and Veteran Avenue was the most congested intersection in Los Angeles County, with an average daily traffic volume of about 100,000 vehicles per day. Using CO emission factors for 2002, the peak modeled CO 1-hour concentration was estimated to be 4.6 ppm at the intersection of Wilshire Boulevard and Veteran Avenue, while the CAAQS is 20 ppm.

The 2003 AQMP also projected 8-hour CO concentrations at these four intersections for 1997 and from 2002 through 2005. From years 2002 through 2005, the maximum 8-hour CO concentration was 3.8 ppm at the Sunset Boulevard and Highland Avenue intersection in 2002; the maximum 8-hour CO concentration was 3.4 ppm at the Wilshire Boulevard and Veteran Avenue in 2002, while the CAAQS is 9.0 ppm.

Accordingly, CO concentrations at congested intersections would not exceed the 1-hour or 8-hour CO CAAQS unless projected daily traffic would be at least over 100,000 vehicles per day. Because the Project would generate no increase in routine daily employees, it would not increase daily traffic volumes at any study intersection to more than 100,000 vehicles per day, a CO hotspot is not anticipated to occur, and associated impacts would be less than significant. As such, potential Project-generated impacts associated with CO hotspots would be less than significant.

Health Effects of Criteria Air Pollutants

Construction and operation of the Project would not result in emissions that exceed County of San Diego's emission thresholds for any criteria air pollutants. The SDAPCD thresholds are based on the SDAB complying with the NAAQS

5 SCAQMD's CO hotspot modeling guidance has not changed since 2003.

and CAAQS which are protective of public health; therefore, no adverse effects to human health would result from the Project. The following provides a general discussion of criteria air pollutants and their health effects.

Regarding VOCs, some VOCs would be associated with motor vehicles and construction equipment, while others are associated with asphalt off-gassing, the emissions of which would not result in exceedances of County of San Diego thresholds. Generally, the VOCs in architectural coatings and asphalt are of relatively low toxicity.

In addition, VOCs and NO_x are precursors to O_3, for which the SDAB is designated as nonattainment with respect to the NAAQS and CAAQS (the SDAB is designated by EPA as an attainment area for the 1-hour O_3 NAAQS standard). The health effects associated with O_3 are generally associated with reduced lung function. The contribution of VOCs and NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the SDAB due to O_3 precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the VOC emissions would occur because exceedances of the O_3 NAAQS and CAAQS tend to occur between April and October when solar radiation is highest. The holistic effect of a single project's emissions of O_3 precursors is speculative due to the lack of quantitative methods to assess this impact. Nonetheless, the VOC and NO_x emissions associated with Project construction could minimally contribute to regional O_3 concentrations and the associated health impacts. Due to the minimal contribution during construction and operation, health impacts would be considered less than significant.

Regarding NO_2, which is a constituent of NO_x, construction and operation of the Project would not contribute to exceedances of the NAAQS and CAAQS for NO_2 since NO_x emissions would be less than the applicable County of San Diego threshold. NO_2 health impacts are associated with respiratory irritation, which may be experienced by nearby receptors during the periods of heaviest use of off-road construction equipment. However, these operations would be relatively short term, and the off-road construction equipment would be operating on various portions of the site and would not be concentrated in one portion of the site at any one time.

Health effects associated with PM_{10} or $PM_{2.5}$ depending on short- or long-term exposure include premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, restricted activity days, and reduced lung function growth in children. Construction of the Project would not exceed thresholds for PM_{10} or $PM_{2.5}$ and would not contribute to exceedances of the NAAQS and CAAQS for particulate matter.

Based on the preceding considerations, health impacts from Project-related criteria air pollutant emissions would be considered less than significant.

Toxic Air Contaminants

In addition to impacts from criteria pollutants, Project impacts may include emissions of pollutants identified by the state and federal government as TACs or hazardous air pollutants. State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program and aimed at TACs that are a problem in California. The state has formally identified more than 200 substances as TACs, including the federal hazardous air pollutants, and has adopted appropriate control measures for sources of these TACs. The following measures are required by state law to reduce DPM emissions:

- Fleet owners of mobile construction equipment are subject to the CARB Regulation for In-use Off-road Diesel Vehicles (13 CCR 2449), the purpose of which is to reduce DPM and criteria pollutant emissions from in-use (existing) off-road diesel-fueled vehicles.
- All commercial diesel vehicles are subject to Title 13, Section 2485 of the California Code of Regulations, limiting engine idling time. Idling of heavy-duty diesel construction equipment and trucks during loading and unloading shall be limited to five minutes; electric auxiliary power units should be used whenever possible.

Health effects from carcinogenic air toxics are usually described in terms of cancer risk. The SDAPCD recommends an incremental cancer risk threshold of 10 in a million (SDAPCD 2022). “Incremental cancer risk” is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period will contract cancer based on the use of standard Office of Environmental Health Hazard Assessment risk-assessment methodology.

The greatest potential for TAC emissions during construction would be DPM emissions from heavy equipment operations and heavy-duty trucks during construction of the Project and the associated potential health impacts to sensitive receptors. DPM has established cancer risk factors and relative exposure values for long-term chronic health hazard impacts; however, no short-term, acute relative exposure level has been established for DPM. Total Project construction would last approximately 12 months, after which Project-related TAC emissions would cease. A 12-month construction schedule represents a short duration of exposure (3% of a 30-year exposure period) while cancer and chronic risk from DPM are typically associated with long-term exposure. Thus, the Project would not result in a long-term source of TAC emissions. In addition, the Project would not require the extensive operation of heavy-duty diesel construction equipment, which is subject to a CARB Airborne Toxics Control Measure for in-use diesel construction equipment to reduce DPM emissions and would not involve extensive use of diesel trucks, which are also subject to a CARB Airborne Toxics Control Measure. Furthermore, as shown in Table 3, maximum daily particulate matter (i.e., PM_{10} or $PM_{2.5}$) emissions generated by construction equipment operation and haul-truck trips during construction (exhaust particulate matter, or DPM), combined with fugitive dust generated by equipment operation and vehicle travel, is minimal.

Of importance, the closest sensitive receptors to the Project’s BESS component, where the majority of Project construction would occur, are single-family residences located approximately 2,700 feet south, and which is a substantial distance between the sources and receptors whereas potential generation of TAC emissions are anticipated to be largely dispersed. Sensitive receptors (also single-family residences) are located approximately 375 feet west and east of the gen-tie line; however, gen-tie construction occurs in a linear fashion whereas construction activity and associated emissions are not concentrated in one location for a prolonged period of time. As such, the potential for the Project to result in a long-term exposure of receptors to TACs is limited. Therefore, the exposure of Project-related TAC emission impacts to sensitive receptors would be less than significant.

No residual TAC emissions and corresponding health risk are anticipated after construction, and no long-term sources of TAC emissions are anticipated during operation of the Project. CARB has published the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB 2005), which identifies certain types of facilities or sources that may emit substantial quantities of TACs and therefore could conflict with sensitive land uses, such as “schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities.” The *Air Quality and Land Use Handbook* is a guide for siting of new sensitive land uses, and CARB recommends that sensitive receptors not be located downwind or in proximity to such sources to avoid potential health hazards. Of note, the Project is not considered an air quality sensitive receptor. The enumerated facilities or sources include the following: high-traffic freeways and roads, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and large gas dispensing facilities. The Project would not include any of the above-listed land uses associated with generation of TAC emissions. In addition, while the Project is not considered a sensitive receptor, none of the above-listed land uses are located within the vicinity of the Project. Potential impacts associated with exposure of sensitive receptors to TACs would be less than significant.

Impacts Analyzed in the South Poway Planned Development Plan EIR

Although the South Poway Planned Community Final EIR found that this impact was less than significant and no mitigation was required, the Project would incorporate Air Resources Mitigation Measure 1 of the South Poway Planned Community Development Plan EIR, which would ensure the Project would comply with the rules of the SDAPCD. In addition, during construction, the Project would incorporate BMPs and fugitive dust control measures in accordance with uniformly applied development policies or standards previously adopted by the City to further reduce any potential for exposure of sensitive receptors to substantial pollutant concentrations.

Offsite and/ or Cumulative Impacts Not Analyzed in South Poway Planned Community Development EIR

Offsite project components that would also be located within the MCAS Miramar property would also be subject to MM-AIR-1, MM-AIR-2 and MM-AIR-3 of the Sycamore-Peñasquitos 230-kV Transmission Line Project Final EIR, which would require the use of architectural Coating Standards, Tier 3 Exhaust Emission Standards, and a Dust Control Management Plan.

Conclusion

The Project would result in a less than significant impact regarding the potential to expose sensitive receptors to substantial pollutant concentrations (both criteria air pollutants and TACs). With the incorporation of the aforementioned mitigation measures and uniformly applied development policies or standards previously adopted by the City appliable to the Project, the Project would have no project-specific significant effects related to sensitive receptors peculiar to the Project or its site; not analyzed as significant effects in the South Poway Planned Community Development Plan EIR, including offsite or cumulative impacts; determined to be more severe than discussed in the prior EIR due to substantial new information; or which cannot be substantially mitigated by the imposition of uniformly applied development policies or standards. No further analysis under CEQA is required.

3.4.4 Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.

Odors would be potentially generated from vehicles and equipment exhaust emissions during construction of the project. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment and asphalt pavement application. Such odors would disperse rapidly from the Project site and generally occur at magnitudes that would not affect substantial numbers of people. In addition, the closest sensitive receptors are at a substantial distance from the majority of anticipated construction activity (i.e., approximately 2,700 feet from the BESS construction). Therefore, impacts associated with odors during construction would be less than significant.

Examples of land uses and industrial operations that are commonly associated with odor complaints include agricultural uses, wastewater treatment plants, food processing facilities, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding facilities. The Project would include the development of a BESS facility and associated infrastructure and would not create any new sources of odor during operation. Therefore, Project operations would result in an odor impact that is less than significant.

Impacts Analyzed in the South Poway Planned Development Plan EIR

This impact was identified by the South Poway Planned Development Plan EIR. No mitigation was required.

Offsite and/ or Cumulative Impacts Not Analyzed in South Poway Planned Community Development EIR

Improvements within the City of San Diego and Miramar Marine Corps would include an underground gen-tie line primarily located in street rights-of-ways. Since the project would not result in other emissions such as those leading to odors, adversely affecting substantial number of people, there would be no impact and no mitigation would be required.

Conclusion

The Project would have no project-specific significant effects related to other emissions (such as those leading to odors) not analyzed as significant effects in the South Poway Planned Community Development Plan EIR, including offsite or cumulative impacts; determined to be more severe than discussed in the prior EIR due to substantial new information; or which cannot be substantially mitigated by the imposition of uniformly applied development policies or standards. No further analysis under CEQA is required.

4 Greenhouse Gas Emissions Assessment

4.1 Background

GHGs are gases that absorb infrared radiation in the atmosphere. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature. Global climate change concerns are focused on whether human activities are leading to an enhancement of the greenhouse effect. As defined in California Health and Safety Code Section 38505(g), for purposes of administering many of the state's primary GHG emissions reduction programs, GHGs include carbon dioxide (CO_2) methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3) (see also 14 CCR 15364.5). If the atmospheric concentrations of GHGs rise, the average temperature of the lower atmosphere will gradually increase. Globally, climate change has the potential to impact numerous environmental resources though uncertain impacts related to future air temperatures and precipitation patterns. Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. Climate change is already affecting California: average temperatures have increased, leading to more extreme hot days and fewer cold nights; shifts in the water cycle have been observed, with less winter precipitation falling as snow, and both snowmelt and rainwater running off earlier in the year; sea levels have risen; and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (CAT 2010).

The effect each GHG has on climate change is measured as a combination of the mass of its emissions and the potential of a gas or aerosol to trap heat in the atmosphere, known as its global warming potential (GWP), which varies among GHGs. Total GHG emissions are expressed as a function of how much warming would be caused by the same mass of CO_2. Thus, GHG emissions are typically measured in terms of pounds or tons of CO_2 equivalent (CO_2e). The CO_2e for a gas is derived by multiplying the mass of the gas by the associated GWP, such that metric tons (MT) of CO_2e = (MT of a GHG) × (GWP of the GHG). California Emissions Estimator Model (CalEEMod) assumes that the GWP for CH_4 is 25, which means that emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2, and the GWP for N_2O is 298, based on the Intergovernmental Panel on Climate Change's Fourth Assessment Report (IPCC 2007).

4.2 Thresholds of Significance

The significance criteria used to evaluate the project impacts to GHGs are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to GHG emissions would occur if the project would:

A. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.
B. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project, such as the proposed project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change. In addition, while GHG impacts are recognized exclusively as cumulative impacts (CAPCOA 2008), GHG emissions impacts must also be evaluated at a project level under CEQA.

The State CEQA Guidelines do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the State CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009). The State of California has not adopted emission-based thresholds for GHG emissions under CEQA. The Governor's Office of Planning and Research's Technical Advisory, titled "Discussion Draft CEQA and Climate Change Advisory," states that:

> "Neither the CEQA statute nor the CEQA Guidelines prescribe thresholds of significance or particular methodologies for perming an impact analysis. This is left to lead agency judgment and discretion, based upon factual data and guidance from regulatory agencies and other sources where available and applicable. Even in the absence of clearly defined thresholds for GHG emissions, such emissions must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact. (OPR 2018)

Furthermore, the advisory document indicates that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice." Amendments to Section 15064.4 of the CEQA Guidelines were adopted to assist lead agencies in determining the significance of the impacts of GHG emissions. Section 15064.4 specifies that a lead agency "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project." Section 15064.4 also provides lead agencies with the discretion to determine whether to assess those emissions quantitatively or to rely on a qualitative analysis or performance-based standards. Section 15064.7(c) of the CEQA Guidelines specifies that "when adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

In the absence of a locally adopted numeric threshold by the City and SDAPCD, projects can be evaluated using another method such as considering whether a project's GHG emissions meet the California Air Pollution Control Officers Association (CAPCOA) 900 MT CO_2e per year SLT, as explained in more detail below (CAPCOA 2008). The CAPCOA 900 MT CO_2e per year SLT was developed based on various land use densities and future discretionary project types to determine the size of projects that would likely have a less than cumulatively considerable contribution to climate change.

The CAPCOA 2008 White Paper explores two general approaches in addition to a zero threshold. The first approach was grounded in statute, specifically Assembly Bill (AB) 32 and Executive Order (EO) S-3-05. The second approach explores a tiered threshold option with seven variations, which support in meeting the statewide reductions goals, but are not specifically tied to a certain regulatory reduction target. The 900 MT CO_2e per year SLT was evaluated under the second approach, where the methodology and calculations are not tied to stature or regulation but are still consistent with AB 32 and EO S-3-05. The CAPCOA 900 MT CO_2e per year SLT was developed to ensure capture of 90% or more of likely future discretionary developments. The objective was to set the emissions threshold low enough to capture a substantial fraction of future development while setting the emission threshold high enough to exclude small development projects that would contribute a relatively small fraction of cumulative statewide GHG emissions. A development capacity threshold was determined to capture approximately 90% of residential units or office space. GHG emissions associated with 50 single-family residential units were estimated to be 900 MT CO_2e per year, and 30,000 square feet of office were estimated to be 800 MT CO_2e per year. Given the variance of individual projects, a single threshold of be 900 MT CO_2e per year was selected for residential and office projects, as well as other non-office projects such as commercial and industrial projects.

As noted above, the 900 MT CO_2e per year SLT is not specifically tied to AB 32 or EO S-3-05. However, it is acknowledged that at the time of evaluation, neither SB 32, the statewide reduction target to reduce emissions to 40% below 1990 levels by year 2030, nor AB 1279, the statewide carbon neutrality and anthropogenic GHG emissions reduced to at least 85% below 1990 levels by 2045 goal, were adopted or known. Accordingly, while the 900 MT CO_2e per year SLT does not consider the reduction targets set by SB 32 or AB 1279, the CAPCOA threshold was developed with an aggressive project-level GHG emission capture rate of 90%, which is more stringent than many of the recommended or adopted GHG thresholds available throughout the state including thresholds evaluated for compliance with SB 32.[6] Due to the aggressive GHG emission capture rate, the CAPCOA threshold would still act as a viable threshold to reduce project GHG emissions proposed after 2020 and meet SB 32 targets.

Nonetheless, in a good faith effort to identify a more progressive threshold, the 900 MT CO_2e per year SLT is adjusted in attempt to reflect more stringent statewide GHG reduction targets that were not adopted at the time the SLT was evaluated. The refined threshold methodology assumes that the 900 MT CO_2e per year SLT achieves the AB 32 goal of 1990 levels by 2020 and in equating 2020 to 1990 levels, a 40% reduction below 1990 levels by 2030 would result in a LST of 540 MT CO_2e per year. As the Project's operational year is 2024, the linear regression between the 2020 SLT of 900 MT CO_2e per year and the 2030 SLT of 540 MT CO_2e per year, results in a 2024 SLT of 756 MT CO_2e per year. Therefore, a SLT of 756 MT CO_2e per year is applied in this GHG emissions analysis as a project specific SLT.

City of San Diego Climate Action Plan

The Project's gen-tie line is located partially within the City of San Diego; as such, their CEQA guidance is applied herein. The City of San Diego adopted their 2022 Climate Action Plan (CAP) Update on August 2, 2022 (City of San Diego 2022). The CAP Update identified the following six strategies to achieve the goals and targets set forth: Decarbonization of the Built Environment, Access to Clean and Renewable Energy, Mobility and Land Use, Circular Economy and Clean Communities, Resilient Infrastructure and Health Ecosystems and Emerging Climate Actions.

The City also updated its GHG threshold, which included a project's compliance with the Climate Action Plan Consistency Regulations (CAP Consistency Regulations) as the new GHG threshold implementing the CAP Consistency Regulation (Ordinance O-21528, effective October 23, 2022). The CAP Consistency Regulations establish measures that could be implemented on a project-by-project basis to demonstrate consistency with the 2022 CAP pursuant to CEQA Guidelines Section 15183.5(b)(1)(D).

4.3 Approach and Methodology

4.3.1 Construction

Construction of the Project would result in emissions of GHG emissions primarily associated with use of off-road construction equipment, on-road haul and vendor (material delivery) truck trips, and worker vehicle trips. As discussed previously in Section 3.3.1, emissions from the construction phase of Project components were estimated using the CalEEMod Version 2022.1. Per preliminary project details, it is assumed that construction of the Project would begin in March 2023 and would last approximately 12 months, reaching completion in February 2024. A detailed depiction of the construction schedule—including information regarding phasing, equipment used during each phase, haul trucks, vendor trucks, and worker vehicles—is included in Section 3.3.1, above, and complete details of the emissions calculations are provided in Attachment A. Per industry standard approaches and past County GHG guidance (County of San Diego 2013), construction-related GHG emissions were amortized over

6 As a comparison to the CAPCOA threshold, other regional air districts such as the Sacramento Metropolitan Air Quality Management District (SMAQMD) have updated their GHG emission significance thresholds to ensure future proposed projects help meet the State's 2030 emission reduction target and do not result in a cumulative impact to climate change. In April 2020 the SMAQMD published updated project screening levels and determined that projects estimated to generate less than 1,100 MT CO_2e per year would not result in a significant cumulative impact. This threshold was developed to demonstrate compliance with the statewide reduction targets in 2030 and the SLT was determined by SMAQMD to capture 98% of total GHG emissions.

the lifetime of the Project, which is assumed to be 30 years (consistent with the Project description and SCAMD guidance [SCAQMD 2008]) and added to operational emissions to assess significance.

4.3.2 Operation

Emissions from the operational phase of the Project were estimated using CalEEMod. Operational year 2024 was assumed, as it would be the first year following completion of construction.

Mobile Sources

All relevant information describing the mobile source assumptions in Section 3.3.2 is applicable to the GHG emission quantification for mobile sources.

Area Sources

Area sources relevant to GHGs include hearths and landscape maintenance equipment; however, only landscape equipment is anticipated to be applicable to the Project. As discussed under 3.3.2, landscape equipment emissions were estimated using CalEEMod.

Energy Sources

The battery storage containers would have ventilation and air conditioning systems to keep the batteries in the optimal operating temperatures, which would be provided by electricity. Additionally, there is energy lost when the batteries are discharged, resulting in use. The electricity draw for the Project was provided by the applicant. The Project would have no natural gas needs or natural gas connections. Information regarding energy demand was provided by the Project applicant. Emissions were calculated by multiplying the energy use by the utility's carbon intensity (pounds of GHGs per megawatt-hour for electricity) for CO_2 and other GHGs. Annual electricity emissions were estimated in CalEEMod using the emissions factors for SDG&E, which would be the energy source provider for the Project.

Water and Wastewater

As previously discussed, the BESS facility would be unstaffed and would include remote operational control; inspections/maintenance would be performed as necessary. The BESS facility would be uninhabited with no bathroom facilities, running water, or office space. Therefore, no indoor water use or wastewater generation during operation of the Project is anticipated. The Project would, however, result in outdoor water use for landscape maintenance. CalEEMod default values were applied to estimate GHG emissions from outdoor water use.

Solid Waste

The Project would not include full-time on-site staff or an operation and maintenance building therefore no permanent sanitary facilities would be required and GHG emissions associated with solid waste disposal are not anticipated.

Refrigerants

CalEEMod was utilized to estimate fugitive GHG emissions from refrigerants used for air conditioning (A/C) and refrigeration equipment. Different types of refrigeration equipment are used by different types of land uses and CalEEMod generates default refrigerant values based on land use subtype and industry data from the US EPA. CalEEMod quantifies refrigerant emissions from leaks during regular operation and routine servicing over the equipment lifetime and then derives average annual emissions from the lifetime estimate, but does not quantify emissions from the disposal of refrigeration and A/C equipment at the end of its lifetime.

Most of the refrigerants used today are HFCs or blends thereof, which can have high GWP values. However, California is required to reduce HFC emissions 40 percent below 2013 levels by 2030 under Senate Bill 1383 and regulations have been adopted to place GWP limits on HFCs such as Senate Bill 120. While CalEEMod default refrigerant values were assumed for the land use surrogate of general heavy industrial land use, it is anticipated to be conservative.

Offroad Sources

All relevant information describing the offroad source assumptions in Section 3.3.2 is applicable to the GHG emission quantification for offroad sources.

SF_6 Leakage

The Project would result in fugitive emissions from equipment (i.e., breakers) containing sulfur hexafluoride (SF_6) gas installed at the collector substation during operations and maintenance. SF_6 has a GWP of 23,900 using CO_2 as a reference value of 1 (IPCC 2007). Potential SF_6 emissions were estimated using a spreadsheet (outside of CalEEMod). It is estimated that the Project would maintain a total of 2,400 pounds of SF_6 gas at the substation. Although leakage is unlikely, for the purposes of the Project's emissions inventory, it was assumed that the breakers would have a maximum annual leak rate of 0.5% in accordance with the Institute of Electrical and Electronics Engineers (IEEE) PC37.122 - Standard for High Voltage Gas-Insulated Substations Rated Above 52 kV (IEEE 2018). It is important to note that amendments to the regulation for reducing SF_6 emissions from gas insulated switchgear became effective January 1, 2022, which phase out SF_6 by year depending on voltage capacity and short-circuit rating.

4.4 Impact Analysis

4.4.1 Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction and Decommissioning

Construction and decommissioning of the Project would result in GHG emissions, which are primarily associated with use of off-road construction equipment, on-road vendor and haul trucks, and worker vehicles. As stated above, construction emissions are amortized over a 30-year project lifetime; therefore, the total construction and decommissioning GHG emissions were calculated, amortized over 30 years.

CalEEMod was used to estimate GHG emissions during construction and decommissioning as explained in Section 4.3.1. Construction of the project is anticipated to last up to 12 months and decommissioning 1 month. On-site sources of GHG emissions include off-road equipment and off-site sources include on-road vehicles (vendor and haul trucks and worker vehicles). Table 5 presents construction and decommissioning GHG emissions for the Project from on-site and off-site emission sources.

Table 5. Estimated Annual Construction and Decommissioning GHG Emissions

Year	CO_2	CH_4	N_2O	R	CO_2e
	Metric Tons per Year				
2023	1,328	0.06	0.04	0.29	1,340
2024	22.1	<0.01	<0.01	<0.01	22.2
2054	74.0	<0.01	<0.01	<0.01	74.9
Total	*1,424*	*0.06*	*0.04*	0.29	*1,437*
				Amortized Emissions (30 years)	47.9

Notes: GHG = greenhouse gas; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent, R=refrigerant; <0.01 = reported value is less than 0.01.
Year 2050 used to represent 2054 in CalEEMod.
See Attachment A for complete results.

As shown in Table 5, the estimated total GHG emissions during construction and decommissioning of the Project would be approximately 1,437 MT CO_2e. Estimated Project-generated construction and decommissioning emissions amortized over 30 years would be approximately 48 MT CO_2e per year. As with Project-generated construction air quality pollutant emissions, GHG emissions generated during construction of the Project would be short-term in nature, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions.

Operation

CalEEMod was used to estimate potential Project generated operational GHG emissions from mobile sources, area sources, energy sources (electricity only, no natural gas), water and wastewater, waste, refrigerants, and off-road equipment, as explained in Section 4.3.1. Table 6 presents the estimated operational GHG emissions from the Project for operational year 2024, which is assumed to be the first year of operation.

Table 6. Summary of Estimated Annual GHG Emissions

Emissions Source	CO_2	CH_4	N_2O	R	CO_2e
	Metric Tons per Year				
Mobile	22.2	<0.01	<0.01	0.04	22.5
Area	0.78	<0.01	<0.01	-	0.78
Energy	429	0.03	<0.01	-	431
Water	3.51	<0.01	<0.01	-	3.52
Waste	0.00	0.00	0.00	-	0.00
Refrigerants	-	-	-	2.30	2.30
Offroad Equipment	1.80	<0.01	<0.01	-	1.80
SF_6 Leakage	-	-	-	-	130.09

Table 6. Summary of Estimated Annual GHG Emissions

Total	**457**	**0.03**	**<0.01**	**2.34**	**592**
				Amortized Construction Emissions (30 years)	*47.9*
				Project Operations + Amortized Construction Total	***640***
				Screening Threshold Applied	*756*
				Exceeds Screening Threshold?	**No**

Notes: GHG = greenhouse gas; MT = metric tons; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent, R= refrigerants, <0.01 = reported value is less than 0.01; – = no emission estimates reported.
See Attachment A for complete results.

As shown in Table 6, the estimated total GHG emissions during operation of the Project would be approximately 510 MT CO_2e per year, including amortized construction and decommissioning emissions, which is below the applied screening level threshold of 756 MT CO_2e per year.

Impacts Analyzed in the South Poway Planned Development Plan EIR

This impact was not identified within the South Poway Planned Development Plan EIR. No mitigation was required.

Offsite and/or Cumulative Impacts Not Analyzed in South Poway Planned Community Development EIR

Project components located with the City of San Diego are anticipated as part of the CAP and required to comply with applicable standards of the CAP. With compliance with CAP standards the Project would have no significant GHG impacts. The Project would also be subject to MM-GHG-1 and MM-Traffic-1 of the Sycamore-Peñasquitos 230-kV Transmission Line Project Final EIR, which would require disposal of organic matter and waste and the preparation of a Construction Transportation Management Plan.

Conclusion

As discussed above, the Project will not contribute a substantial amount of GHG emissions; construction emissions are short-term and operational GHG emissions are anticipated to be minimal. Accordingly, the Project results in a less than significant impact regarding the potential to generate GHG emissions that may have a significant impact on the environment. Likewise, no significant impact was identified within the South Poway Planned Development Plan EIR. Moreover, the Project would be would not conflict with the appliable standards of the City of San Diego CAP as discussed in Section 4.4.2 below, With compliance with uniform development standards and policies applicable to the Project, the Project would have no project-specific significant effects related to greenhouse gas emissions peculiar to the Project or its site; not analyzed as significant effects in the South Poway Planned Community Development Plan EIR, including offsite or cumulative impacts; determined to be more severe than discussed in the prior EIR due to substantial new information; or which cannot be substantially mitigated by the imposition of uniformly applied development policies or standards.

4.4.2 Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The Project, which will include the building of a BESS facility and gen-tie line, will be part of a sustainable solution to enable renewable energy generating sources to be better used and more efficiently integrated into the grid. As such, the Project will align with the goals of the region and the State to reduce GHG emissions, as further evaluated below.

CARB Scoping Plan

The California State Legislature passed the Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32) to provide initial direction to limit California's GHG emissions to 1990 levels by 2020 and initiate the state's long-range climate objectives. Since the passage of AB 32, the State has adopted GHG emissions reduction targets for future years beyond the initial 2020 horizon year. For the Project, the relevant GHG emissions reduction targets include those established by Senate Bill 32 (SB 32) and AB 1279, which require GHG emissions be reduced to 40% below 1990 levels by 2030, and 85% below 1990 levels by 2045, respectively. In addition, AB 1279 requires the state achieve net zero GHG emissions by no later than 2045 and achieve and maintain net negative GHG emissions thereafter.

As defined by AB 32, CARB is required to develop The Scoping Plan, which provides the framework for actions to achieve the State's GHG emission targets. The Scoping Plan is required to be updated every five years and requires CARB and other state agencies to adopt regulations and initiatives that will reduce GHG emissions statewide. The first Scoping Plan was adopted in 2008, and was updated in 2014, 2017, and most recently in 2022. While the Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations,[7] it is the official framework for the measures and regulations that will be implemented to reduce California's GHG emissions in alignment with the adopted targets. Therefore, a project would be found to not conflict with the statutes if it would meet the Scoping Plan policies and would not impede attainment of the goals therein.

The 2017 *Climate Change Scoping Plan Update* (Second Update) included measures to promote renewable energy and energy efficiency (including the mandates of SB 350), increase stringency of the Low Carbon Fuel Standard (LCFS), measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant Plan, and increase stringency of SB 375 targets (CARB 2017). The *2022 Scoping Plan for Achieving Carbon Neutrality* (Third Update) builds upon and accelerates programs currently in place, including moving to zero-emission transportation; phasing out use of fossil gas use for heating homes and buildings; reducing chemical and refrigerants with high GWP; providing communities with sustainable options for walking, biking, and public transit; and displacement of fossil-fuel fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines) (CARB 2022). Many of the measures and programs included in the Scoping Plan would result in the reduction of project-related GHG emissions with no action required at the project-level.

The 2045 carbon neutrality goal required CARB to expand proposed actions in the Third Update to include those that capture and store carbon in addition to those that reduce only anthropogenic sources of GHG emissions. However, the Third Update emphasizes that reliance on carbon sequestration in the state's natural and working

7 The Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009).

lands will not be sufficient to address residual GHG emissions, and achieving carbon neutrality will require research, development, and deployment of additional methods to capture atmospheric GHG emissions (e.g., mechanical direct air capture). Given that the specific path to neutrality will require development of technologies and programs that are not currently known or available, the Project's role in supporting the statewide goal would be speculative and cannot be wholly identified at this time. Nonetheless, given that the Project is also not anticipated to result in substantial increase in operational GHG emission sources, including operational vehicle miles traveled, and would facilitate the state's transition to clean, renewable energy sources, the Project would not conflict with the Scoping Plan.

Overall, the Project would comply will all regulations adopted in furtherance of the Scoping Plan to the extent applicable and required by law. The Project would not conflict with CARB's 2017 or 2022 Scoping Plan updates and with the state's ability to achieve the 2030 and 2045 GHG reduction and carbon neutrality goals and would support decarbonization of the energy sector.

SANDAG's San Diego Forward: The 2021 Regional Plan

The passage of SB 375 requires metropolitan planning organizations (MPOs) to prepare a Sustainable Communities Strategy (SCS) in their Regional Transportation Plan (RTP). The San Diego Association of Governments (SANDAG) serves as the MPO for the San Diego region and is responsible for developing and adopting a SCS that integrates transportation, land use, and housing to meet GHG reduction targets set by CARB. The RTP/SCS is updated every 4 years in collaboration the 18 cities and unincorporated County of San Diego, in addition to regional, state, and federal partners. The most recent, *San Diego Forward: The 2021 Regional Plan* was adopted in 2021 and provides guidance on meeting or exceed GHG targets through implementation of five key transportation strategies, including complete corridors, high-speed transit services, mobility hubs, flexible fleets, and a digital platform to tie the transportation system together. Through these strategies, the 2021 Regional Plan is projected to reduce per capita GHG emissions from cars and light-duty trucks to 20% below 2005 levels by 2035, exceeding the regions state-mandated target of 19% (SANDAG 2021). The primary objective of the RTP/SCS is to provide guidance for future regional growth (i.e., the location of new residential and non-residential land uses) and transportation patterns throughout the region, as stipulated under SB 375. The Project overall would be remotely operated with no routine daily trips to and from the site. As such, the Project would not conflict with the goals and policies of the SANDAG RTP/SCS.

Project Portion within the City of San Diego CAP Consistency Regulations

Per the City's CAP Consistency Requirements. To ensure consistency with the City's CAP, all development shall comply with the CAP Consistency Regulations in Chapter 14, Article 3, Division 14. Applicability is further defined under Section 143.1403(a)(2) as "Non-residential *development* that adds more than 1,000 square feet and results in 5,000 square feet or more of total *gross floor area,* excluding unoccupied spaces such as mechanical equipment and storage areas." The portion of the Project located with the City of San Diego is the gen-tie line, which does not meet any of the applicable development descriptions. Further, while the Project's storage containers (located within the City of Poway and not the City of San Diego) are over 1,000 square feet, all of the containers would be excluded as they consist of equipment and storage. As such, the City's CAP Consistency Requirements do not apply to the Project. Nonetheless, for additional information, the CAP consistency requirements are primarily related to alternative mobility options and reducing vehicle dependency, and supporting carbon sequestration as well as enhancement of air quality and the urban tree canopy. The Project overall would be remotely operated with no routine daily trips to and from the site via vehicles or alternative modes such as pedestrian or bicycle travel. The portion of the Project within the City of San Diego is a gen-tie line, which has no routine operational requirements. The Project would also involve landscape trees. As such, the Project would not conflict with the CAP and as the Project would provide reliable energy storage, it would support the City of San Diego's goal to reduce GHG emissions.

As such, the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

Impacts Analyzed in the South Poway Planned Development Plan EIR

This impact was not identified within the South Poway Planned Development Plan EIR. No mitigation was required.

Offsite and/ or Cumulative Impacts Not Analyzed in South Poway Planned Community Development EIR

Project components located with the City of San Diego are anticipated as part of the CAP and required to comply with applicable standards of the CAP. With compliance with CAP standards the Project would have no significant impacts relating to conflicts with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions.

To comply with GHG plans and regulations (i.e., Climate Action Plan, Executive Orders S-3-05 and B-30-15), the Project would incorporate mitigation measures GHG-1, and Traffic-1, if determined to be applicable.

Conclusion

The Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Implementation of the BESS facility and gen-tie line would provide reliable energy storage and aligns with the City of San Diego's goal of reducing GHG emissions by 2035. With compliance with uniform development standards and policies applicable to the Project, the Project would have no project specific significant environmental effects relating to conflicts with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions peculiar to the Project or its site; not analyzed as significant effects in the South Poway Planned Community Development Plan EIR, including offsite or cumulative impacts; determined to be more severe than discussed in the prior EIR due to substantial new information; or which cannot be substantially mitigated by the imposition of uniformly applied development policies or standards. No further analysis under CEQA is required.

5 Summary of Conclusions

Regarding the potential for the Project to conflict with or obstruct implementation of the applicable air quality plan, the Project would result in a less than significant impact. The Project would not exceed construction or operational thresholds of significance and would result in a less than significant impact regarding the potential for the Project to result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard. Regarding the potential for the Project to expose sensitive receptors to substantial pollutant concentrations (related to CO hotspots, criteria air pollutants, and TACs), the Project would result in a less than significant impact during construction and operation. The Project was determined to result in a less-than-significant during impact during construction and operation related to the potential to result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The anticipated Project-generated GHG emissions would not exceed the applied SLT and thus, would not generate significant GHG emissions. In addition, the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs resulting in a potential cumulative GHG impact that would be less than significant.

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Attachment A
Supporting Emission Calculations

Poway Nighthawk BESS Operation 2024 Detailed Report

Table of Contents

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Poway Nighthawk BESS Operation 2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.60
Precipitation (days)	20.4
Location	32.934502512853555, -117.03756400374522
County	San Diego
City	Poway
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6130
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric

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	53.3	1000sqft	82.9	53,314	180,622	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

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.	12.1	10.2	90.5	94.9	0.16	4.05	14.6	16.8	3.73	6.95	8.98	—	16,887	16,887	0.72	0.80	13.2	16,979
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.91	6.44	62.0	65.4	0.16	2.51	14.6	16.8	2.32	6.95	8.98	—	16,241	16,241	0.72	0.80	0.34	16,498
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.11	4.25	38.7	41.1	0.07	1.70	1.94	3.64	1.57	0.76	2.33	—	8,021	8,021	0.34	0.21	1.73	8,094
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.93	0.78	7.07	7.50	0.01	0.31	0.35	0.67	0.29	0.14	0.43	—	1,328	1,328	0.06	0.04	0.29	1,340

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2023	12.1	10.2	90.5	94.9	0.16	4.05	14.6	16.8	3.73	6.95	8.98	—	16,887	16,887	0.72	0.80	13.2	16,979
2024	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	7.91	6.44	62.0	65.4	0.16	2.51	14.6	16.8	2.32	6.95	8.98	—	16,241	16,241	0.72	0.80	0.34	16,498
2024	0.62	0.59	4.74	6.96	0.01	0.21	0.10	0.31	0.20	0.02	0.22	—	1,135	1,135	0.05	0.02	0.01	1,142
2050	2.26	1.88	12.9	18.3	0.07	0.32	0.74	1.06	0.30	0.20	0.49	—	7,418	7,418	0.26	0.28	0.01	7,510
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	5.11	4.25	38.7	41.1	0.07	1.70	1.94	3.64	1.57	0.76	2.33	—	8,021	8,021	0.34	0.21	1.73	8,094
2024	0.07	0.07	0.56	0.82	< 0.005	0.03	0.01	0.04	0.02	< 0.005	0.03	—	133	133	0.01	< 0.005	0.03	134
2050	0.14	0.11	0.78	1.10	< 0.005	0.02	0.04	0.06	0.02	0.01	0.03	—	447	447	0.02	0.02	0.01	453
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.93	0.78	7.07	7.50	0.01	0.31	0.35	0.67	0.29	0.14	0.43	—	1,328	1,328	0.06	0.04	0.29	1,340
2024	0.01	0.01	0.10	0.15	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	22.1	22.1	< 0.005	< 0.005	< 0.005	22.2
2050	0.02	0.02	0.14	0.20	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.01	—	74.0	74.0	< 0.005	< 0.005	< 0.005	74.9

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.	1.43	2.48	4.43	9.59	0.02	0.17	0.31	0.48	0.16	0.06	0.21	0.00	4,587	4,587	0.24	0.06	17.7	4,629
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.01	2.09	4.45	6.99	0.02	0.17	0.31	0.48	0.16	0.06	0.21	0.00	4,533	4,533	0.25	0.07	14.0	4,573

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.28	1.47	0.12	1.73	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	0.00	2,762	2,762	0.17	0.02	14.1	2,788
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.05	0.27	0.02	0.31	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.00	457	457	0.03	< 0.005	2.34	462

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	0.55	0.50	0.41	4.12	0.01	0.01	0.31	0.32	0.01	0.06	0.06	—	974	974	0.04	0.04	3.82	990
Area	0.41	1.59	0.02	2.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.54	9.54	< 0.005	< 0.005	—	9.57
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,591	2,591	0.16	0.02	—	2,601
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	21.2	21.2	< 0.005	< 0.005	—	21.3
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.9	13.9
Off-Road	0.47	0.39	4.00	3.15	0.01	0.16	—	0.16	0.15	—	0.15	—	990	990	0.04	0.01	—	994
Total	1.43	2.48	4.43	9.59	0.02	0.17	0.31	0.48	0.16	0.06	0.21	0.00	4,587	4,587	0.24	0.06	17.7	4,629
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.54	0.49	0.45	3.83	0.01	0.01	0.31	0.32	0.01	0.06	0.06	—	930	930	0.05	0.04	0.10	943
Area	—	1.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,591	2,591	0.16	0.02	—	2,601
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	21.2	21.2	< 0.005	< 0.005	—	21.3
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.9	13.9
Off-Road	0.47	0.39	4.00	3.15	0.01	0.16	—	0.16	0.15	—	0.15	—	990	990	0.04	0.01	—	994
Total	1.01	2.09	4.45	6.99	0.02	0.17	0.31	0.48	0.16	0.06	0.21	0.00	4,533	4,533	0.25	0.07	14.0	4,573
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.08	0.07	0.06	0.55	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	134	134	0.01	0.01	0.24	136
Area	0.20	1.40	0.01	1.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.70	4.70	< 0.005	< 0.005	—	4.72
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	2,591	2,591	0.16	0.02	—	2,601
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	21.2	21.2	< 0.005	< 0.005	—	21.3
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.9	13.9
Off-Road	0.01	< 0.005	0.04	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.9	10.9	< 0.005	< 0.005	—	10.9
Total	0.28	1.47	0.12	1.73	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	0.00	2,762	2,762	0.17	0.02	14.1	2,788
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	0.01	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.2	22.2	< 0.005	< 0.005	0.04	22.5
Area	0.04	0.25	< 0.005	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	429	429	0.03	< 0.005	—	431
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	3.51	3.51	< 0.005	< 0.005	—	3.52
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.30	2.30
Off-Road	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.80	1.80	< 0.005	< 0.005	—	1.80
Total	0.05	0.27	0.02	0.31	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.00	457	457	0.03	< 0.005	2.34	462

3. Construction Emissions Details

3.1. Demolition (2050) - 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	2.17	1.82	11.1	17.4	0.06	0.29	—	0.29	0.27	—	0.27	—	5,805	5,805	0.24	0.05	—	5,825
Demolition	—	—	—	—	—	—	0.00	0.00	—	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	0.13	0.11	0.67	1.05	< 0.005	0.02	—	0.02	0.02	—	0.02	—	350	350	0.01	< 0.005	—	351
Demolition	—	—	—	—	—	—	0.00	0.00	—	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	0.02	0.02	0.12	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	57.9	57.9	< 0.005	< 0.005	—	58.1
Demolition	—	—	—	—	—	—	0.00	0.00	—	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	0.32	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	141	141	< 0.005	< 0.005	< 0.005	142
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.3	28.3	< 0.005	< 0.005	< 0.005	29.6
Hauling	0.05	0.03	1.76	0.59	0.01	0.03	0.56	0.58	0.03	0.15	0.18	—	1,444	1,444	0.02	0.23	0.01	1,514
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	—	8.58	8.58	< 0.005	< 0.005	< 0.005	8.61
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	1.78
Hauling	< 0.005	< 0.005	0.11	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	87.0	87.0	< 0.005	0.01	0.01	91.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.42	1.42	< 0.005	< 0.005	< 0.005	1.43
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.29
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	14.4	14.4	< 0.005	< 0.005	< 0.005	15.1

3.3. Site Preparation (2023) - 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	2.06	1.73	16.1	20.4	0.03	0.82	—	0.82	0.76	—	0.76	—	3,207	3,207	0.13	0.03	—	3,218

Dust From Material Movement	—	—	—	—	—	—	1.06	1.06	—	0.11	0.11	—	—	—	—	—	—	—
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	0.06	0.05	0.44	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	—	—	—	—	—	—	0.03	0.03	—	< 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	0.08	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.5	14.5	< 0.005	< 0.005	—	14.6
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	0.93	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	186	186	0.01	0.01	0.02	189
Vendor	< 0.005	< 0.005	0.08	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	51.7	51.7	< 0.005	0.01	< 0.005	54.0
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	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	5.15	5.15	< 0.005	< 0.005	0.01	5.22
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.42	1.42	< 0.005	< 0.005	< 0.005	1.48
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	—	0.85	0.85	< 0.005	< 0.005	< 0.005	0.86
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.25
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. Site Preparation (2023) - 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	3.03	2.55	25.6	22.4	0.03	1.16	—	1.16	1.07	—	1.07	—	3,337	3,337	0.14	0.03	—	3,348
Dust From Material Movement	—	—	—	—	—	—	13.1	13.1	—	6.73	6.73	—	—	—	—	—	—	—
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	0.70	0.61	< 0.005	0.03	—	0.03	0.03	—	0.03	—	91.4	91.4	< 0.005	< 0.005	—	91.7

Dust From Material Movement	—	—	—	—	—	—	0.36	0.36	—	0.18	0.18	—	—	—	—	—	—	—
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	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	15.1	15.1	< 0.005	< 0.005	—	15.2
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.46	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	93.1	93.1	0.01	< 0.005	0.01	94.3
Vendor	< 0.005	< 0.005	0.08	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	51.7	51.7	< 0.005	0.01	< 0.005	54.0
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	—	2.57	2.57	< 0.005	< 0.005	< 0.005	2.61
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.42	1.42	< 0.005	< 0.005	< 0.005	1.48
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	—	0.43	0.43	< 0.005	< 0.005	< 0.005	0.43
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.23	0.23	< 0.005	< 0.005	< 0.005	0.25

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. Grading (2023) - 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	2.52	2.11	18.5	22.9	0.03	0.95	—	0.95	0.87	—	0.87	—	3,559	3,559	0.14	0.03	—	3,571
Dust From Material Movement	—	—	—	—	—	—	1.06	1.06	—	0.11	0.11	—	—	—	—	—	—	—
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	2.52	2.11	18.5	22.9	0.03	0.95	—	0.95	0.87	—	0.87	—	3,559	3,559	0.14	0.03	—	3,571
Dust From Material Movement	—	—	—	—	—	—	1.06	1.06	—	0.11	0.11	—	—	—	—	—	—	—
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	0.30	0.25	2.23	2.76	< 0.005	0.11	—	0.11	0.10	—	0.10	—	429	429	0.02	< 0.005	—	430

Dust From Material Movement	—	—	—	—	—	—	0.13	0.13	—	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	0.06	0.05	0.41	0.50	< 0.005	0.02	—	0.02	0.02	—	0.02	—	71.0	71.0	< 0.005	< 0.005	—	71.3
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	0.11	1.58	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	296	296	0.01	0.01	1.26	301
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	51.7	51.7	< 0.005	0.01	0.13	54.1
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.13	0.12	1.39	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	279	279	0.02	0.01	0.03	283
Vendor	< 0.005	< 0.005	0.08	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	51.7	51.7	< 0.005	0.01	< 0.005	54.0
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	0.02	0.02	0.01	0.17	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.0	34.0	< 0.005	< 0.005	0.07	34.4
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.23	6.23	< 0.005	< 0.005	0.01	6.51
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	—	5.62	5.62	< 0.005	< 0.005	0.01	5.70
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.03	1.03	< 0.005	< 0.005	< 0.005	1.08
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. Grading (2023) - 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	3.41	2.87	27.5	24.4	0.03	1.26	—	1.26	1.16	—	1.16	—	3,620	3,620	0.15	0.03	—	3,632
Dust From Material Movement	—	—	—	—	—	—	13.1	13.1	—	6.73	6.73	—	—	—	—	—	—	—
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	3.41	2.87	27.5	24.4	0.03	1.26	—	1.26	1.16	—	1.16	—	3,620	3,620	0.15	0.03	—	3,632
Dust From Material Movement	—	—	—	—	—	—	13.1	13.1	—	6.73	6.73	—	—	—	—	—	—	—
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	0.21	0.17	1.66	1.47	< 0.005	0.08	—	0.08	0.07	—	0.07	—	218	218	0.01	< 0.005	—	219
Dust From Material Movement	—	—	—	—	—	—	0.79	0.79	—	0.41	0.41	—	—	—	—	—	—	—
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	0.04	0.03	0.30	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	36.1	36.1	< 0.005	< 0.005	—	36.2
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.85	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	158	158	0.01	0.01	0.67	160
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	51.7	51.7	< 0.005	0.01	0.13	54.1
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.74	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	149	149	0.01	0.01	0.02	151
Vendor	< 0.005	< 0.005	0.08	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	51.7	51.7	< 0.005	0.01	< 0.005	54.0
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	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.06	9.06	< 0.005	< 0.005	0.02	9.19

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.12	3.12	< 0.005	< 0.005	< 0.005	3.26
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.50	1.50	< 0.005	< 0.005	< 0.005	1.52
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	0.54
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

3.11. Building Construction (2023) - 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	4.15	3.48	31.1	32.3	0.06	1.44	—	1.44	1.33	—	1.33	—	5,841	5,841	0.24	0.05	—	5,861
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	4.15	3.48	31.1	32.3	0.06	1.44	—	1.44	1.33	—	1.33	—	5,841	5,841	0.24	0.05	—	5,861
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	1.75	1.47	13.1	13.6	0.02	0.61	—	0.61	0.56	—	0.56	—	2,464	2,464	0.10	0.02	—	2,473
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	0.32	0.27	2.40	2.49	< 0.005	0.11	—	0.11	0.10	—	0.10	—	408	408	0.02	< 0.005	—	409
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	0.23	0.20	0.17	2.43	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	454	454	0.02	0.02	1.93	461
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	103	103	< 0.005	0.01	0.26	108
Hauling	0.02	0.01	0.41	0.14	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	—	299	299	0.02	0.05	0.63	314
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	0.19	2.13	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	428	428	0.02	0.02	0.05	434
Vendor	0.01	< 0.005	0.15	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	103	103	< 0.005	0.01	0.01	108
Hauling	0.02	0.01	0.43	0.14	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	—	299	299	0.02	0.05	0.02	313
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	0.91	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	182	182	0.01	0.01	0.35	185
Vendor	< 0.005	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	43.6	43.6	< 0.005	0.01	0.05	45.6
Hauling	0.01	< 0.005	0.18	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	126	126	0.01	0.02	0.11	132
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.17	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	30.2	30.2	< 0.005	< 0.005	0.06	30.6
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.22	7.22	< 0.005	< 0.005	0.01	7.55
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.9	20.9	< 0.005	< 0.005	0.02	21.9

3.13. Building Construction (2023) - 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	7.43	6.23	58.4	56.7	0.09	2.60	—	2.60	2.39	—	2.39	—	9,547	9,547	0.39	0.08	—	9,580
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	1.79	1.50	14.1	13.7	0.02	0.63	—	0.63	0.58	—	0.58	—	2,302	2,302	0.09	0.02	—	2,310
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	0.33	0.27	2.57	2.50	< 0.005	0.11	—	0.11	0.11	—	0.11	—	381	381	0.02	< 0.005	—	382
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	0.30	0.26	0.22	3.17	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	592	592	0.03	0.02	2.51	601
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	51.7	51.7	< 0.005	0.01	0.13	54.1
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.68	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	136	136	0.01	0.01	0.26	138
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.5	12.5	< 0.005	< 0.005	0.01	13.0
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	22.5	22.5	< 0.005	< 0.005	0.04	22.8
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.06	2.06	< 0.005	< 0.005	< 0.005	2.16
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. Building Construction (2023) - 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	1.75	1.47	15.9	15.9	0.03	0.60	—	0.60	0.55	—	0.55	—	3,553	3,553	0.14	0.03	—	3,565
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	1.75	1.47	15.9	15.9	0.03	0.60	—	0.60	0.55	—	0.55	—	3,553	3,553	0.14	0.03	—	3,565
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	0.32	0.27	2.87	2.87	0.01	0.11	—	0.11	0.10	—	0.10	—	642	642	0.03	0.01	—	645
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	0.06	0.05	0.52	0.52	< 0.005	0.02	—	0.02	0.02	—	0.02	—	106	106	< 0.005	< 0.005	—	107
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	0.10	1.37	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	256	256	0.01	0.01	1.09	260
Vendor	0.01	0.01	0.22	0.10	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	155	155	0.01	0.02	0.39	162
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	0.13	0.11	0.10	1.20	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	242	242	0.01	0.01	0.03	245
Vendor	0.01	0.01	0.23	0.11	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	155	155	0.01	0.02	0.01	162
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	0.22	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	44.1	44.1	< 0.005	< 0.005	0.09	44.8
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.0	28.0	< 0.005	< 0.005	0.03	29.3
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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.31	7.31	< 0.005	< 0.005	0.01	7.41
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.64	4.64	< 0.005	< 0.005	0.01	4.85
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. Paving (2023) - 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	0.59	0.49	4.78	6.48	0.01	0.23	—	0.23	0.21	—	0.21	—	992	992	0.04	0.01	—	995
Paving	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.02	0.15	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Paving	—	< 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	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.14	5.14	< 0.005	< 0.005	—	5.16
Paving	—	< 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	0.04	0.04	0.46	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	93.1	93.1	0.01	< 0.005	0.01	94.3
Vendor	< 0.005	< 0.005	0.08	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	51.7	51.7	< 0.005	0.01	< 0.005	54.0
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	—	2.94	2.94	< 0.005	< 0.005	0.01	2.98
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.62	1.62	< 0.005	< 0.005	< 0.005	1.69
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	—	0.49	0.49	< 0.005	< 0.005	< 0.005	0.49
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	0.28
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. Paving (2024) - 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	0.57	0.48	4.64	6.49	0.01	0.21	—	0.21	0.20	—	0.20	—	993	993	0.04	0.01	—	996
Paving	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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	0.54	0.76	< 0.005	0.03	—	0.03	0.02	—	0.02	—	117	117	< 0.005	< 0.005	—	117
Paving	—	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	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.3	19.3	< 0.005	< 0.005	—	19.4
Paving	—	< 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	0.04	0.04	0.43	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	91.3	91.3	< 0.005	< 0.005	0.01	92.5
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	51.0	51.0	< 0.005	0.01	< 0.005	53.1
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	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.02	11.0
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.98	5.98	< 0.005	< 0.005	0.01	6.24
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.82

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.99	0.99	< 0.005	< 0.005	< 0.005	1.03
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

3.21. Trenching (2023) - 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	1.20	1.01	8.47	10.7	0.02	0.39	—	0.39	0.36	—	0.36	—	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	1.20	1.01	8.47	10.7	0.02	0.39	—	0.39	0.36	—	0.36	—	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	0.22	0.18	1.53	1.94	< 0.005	0.07	—	0.07	0.07	—	0.07	—	298	298	0.01	< 0.005	—	299

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	0.04	0.03	0.28	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	49.3	49.3	< 0.005	< 0.005	—	49.5
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	0.10	0.09	0.07	1.06	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	197	197	0.01	0.01	0.84	200
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	51.7	51.7	< 0.005	0.01	0.13	54.1
Hauling	0.30	0.08	5.15	1.78	0.05	0.07	0.93	0.99	0.07	0.25	0.32	—	3,733	3,733	0.20	0.59	7.88	3,921
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	0.93	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	186	186	0.01	0.01	0.02	189
Vendor	< 0.005	< 0.005	0.08	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	51.7	51.7	< 0.005	0.01	< 0.005	54.0
Hauling	0.30	0.07	5.33	1.80	0.05	0.07	0.93	0.99	0.07	0.25	0.32	—	3,734	3,734	0.20	0.59	0.20	3,914
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.17	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.0	34.0	< 0.005	< 0.005	0.07	34.4
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.35	9.35	< 0.005	< 0.005	0.01	9.77
Hauling	0.05	0.01	0.96	0.32	0.01	0.01	0.17	0.18	0.01	0.05	0.06	—	675	675	0.04	0.11	0.62	708

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.62	5.62	< 0.005	< 0.005	0.01	5.70
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.55	1.55	< 0.005	< 0.005	< 0.005	1.62
Hauling	0.01	< 0.005	0.18	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	112	112	0.01	0.02	0.10	117

3.23. Trenching (2023) - 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	0.92	0.77	7.30	9.69	0.01	0.35	—	0.35	0.33	—	0.33	—	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	0.06	0.05	0.44	0.58	< 0.005	0.02	—	0.02	0.02	—	0.02	—	87.2	87.2	< 0.005	< 0.005	—	87.5
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	0.08	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.5
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.65	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	130	130	0.01	< 0.005	0.02	132
Vendor	< 0.005	< 0.005	0.08	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	51.7	51.7	< 0.005	0.01	< 0.005	54.0
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	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.92	7.92	< 0.005	< 0.005	0.02	8.04
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.12	3.12	< 0.005	< 0.005	< 0.005	3.26
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.31	1.31	< 0.005	< 0.005	< 0.005	1.33
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	0.54
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	0.55	0.50	0.41	4.12	0.01	0.01	0.31	0.32	0.01	0.06	0.06	—	974	974	0.04	0.04	3.82	990
Total	0.55	0.50	0.41	4.12	0.01	0.01	0.31	0.32	0.01	0.06	0.06	—	974	974	0.04	0.04	3.82	990
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.54	0.49	0.45	3.83	0.01	0.01	0.31	0.32	0.01	0.06	0.06	—	930	930	0.05	0.04	0.10	943
Total	0.54	0.49	0.45	3.83	0.01	0.01	0.31	0.32	0.01	0.06	0.06	—	930	930	0.05	0.04	0.10	943
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.01	0.01	0.01	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.2	22.2	< 0.005	< 0.005	0.04	22.5
Total	0.01	0.01	0.01	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.2	22.2	< 0.005	< 0.005	0.04	22.5

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	—	—	—	—	—	—	—	—	—	—	—	—	2,591	2,591	0.16	0.02	—	2,601
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,591	2,591	0.16	0.02	—	2,601
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	2,591	2,591	0.16	0.02	—	2,601
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,591	2,591	0.16	0.02	—	2,601
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	429	429	0.03	< 0.005	—	431
Total	—	—	—	—	—	—	—	—	—	—	—	—	429	429	0.03	< 0.005	—	431

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

4.3. Area Emissions by Source

4.3.2. 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	—	1.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.41	0.38	0.02	2.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.54	9.54	< 0.005	< 0.005	—	9.57
Total	0.41	1.59	0.02	2.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.54	9.54	< 0.005	< 0.005	—	9.57
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	1.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	1.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.04	0.03	< 0.005	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78
Total	0.04	0.25	< 0.005	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78

4.4. Water Emissions by Land Use

4.4.2. 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	21.2	21.2	< 0.005	< 0.005	—	21.3
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	21.2	21.2	< 0.005	< 0.005	—	21.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	0.00	21.2	21.2	< 0.005	< 0.005	—	21.3
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	21.2	21.2	< 0.005	< 0.005	—	21.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	0.00	3.51	3.51	< 0.005	< 0.005	—	3.52
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	3.51	3.51	< 0.005	< 0.005	—	3.52

4.5. Waste Emissions by Land Use

4.5.2. 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

4.6. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.9	13.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.9	13.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.9	13.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.9	13.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.30	2.30
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.30	2.30

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)

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cranes	0.47	0.39	4.00	3.15	0.01	0.16	—	0.16	0.15	—	0.15	—	990	990	0.04	0.01	—	994
Total	0.47	0.39	4.00	3.15	0.01	0.16	—	0.16	0.15	—	0.15	—	990	990	0.04	0.01	—	994

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cranes	0.47	0.39	4.00	3.15	0.01	0.16	—	0.16	0.15	—	0.15	—	990	990	0.04	0.01	—	994
Total	0.47	0.39	4.00	3.15	0.01	0.16	—	0.16	0.15	—	0.15	—	990	990	0.04	0.01	—	994
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cranes	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.80	1.80	< 0.005	< 0.005	—	1.80
Total	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.80	1.80	< 0.005	< 0.005	—	1.80

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Decommissioning	Demolition	3/1/2050	3/31/2050	5.00	22.0	—
BESS Site Preparation	Site Preparation	3/1/2023	3/14/2023	5.00	10.0	—

Collector Substation Site Preparation	Site Preparation	3/1/2023	3/14/2023	5.00	10.0	—
BESS Grading	Grading	3/15/2023	5/15/2023	5.00	44.0	—
Collector Substation Grading	Grading	3/15/2023	4/13/2023	5.00	22.0	—
Battery/Container Installation/Construction	Building Construction	5/16/2023	12/15/2023	5.00	154	—
Collector Substation Installation/Construction	Building Construction	4/14/2023	8/15/2023	5.00	88.0	—
Gen-Tie Duct Bank and Vault Installation (Construction)	Building Construction	8/16/2023	11/15/2023	5.00	66.0	—
Gen-Tie Road Resurface and Clean-up (Paving)	Paving	12/16/2023	2/29/2024	5.00	21.0	—
Gen-tie Trenching	Trenching	8/16/2023	11/15/2023	5.00	66.0	—
Gen-Tie Jack-and-Bore (Trenching)	Trenching	11/16/2023	12/15/2023	5.00	22.0	—

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 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
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
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
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
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
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 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
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

Collector Substation Grading	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Battery/Container Installation/Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
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
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
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
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	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)	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)	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

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	12.0	LDA,LDT1,LDT2
BESS Site Preparation	Vendor	2.00	7.63	HHDT,MHDT
BESS Site Preparation	Hauling	0.00	20.0	HHDT
BESS Site Preparation	Onsite truck	—	—	HHDT
BESS Grading	—	—	—	—
BESS Grading	Worker	30.0	12.0	LDA,LDT1,LDT2
BESS Grading	Vendor	2.00	7.63	HHDT,MHDT
BESS Grading	Hauling	0.00	20.0	HHDT
BESS Grading	Onsite truck	0.00	—	HHDT
Battery/Container Installation/Construction	—	—	—	—
Battery/Container Installation/Construction	Worker	46.0	12.0	LDA,LDT1,LDT2
Battery/Container Installation/Construction	Vendor	4.00	7.63	HHDT,MHDT
Battery/Container Installation/Construction	Hauling	4.00	20.0	HHDT

Battery/Container Installation/Construction	Onsite truck	—	—	HHDT
Gen-Tie Road Resurface and Clean-up (Paving)	—	—	—	—
Gen-Tie Road Resurface and Clean-up (Paving)	Worker	10.0	12.0	LDA,LDT1,LDT2
Gen-Tie Road Resurface and Clean-up (Paving)	Vendor	2.00	7.63	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
Decommissioning	—	—	—	—
Decommissioning	Worker	20.0	12.0	LDA,LDT1,LDT2
Decommissioning	Vendor	2.00	7.63	HHDT,MHDT
Decommissioning	Hauling	30.0	20.0	HHDT
Decommissioning	Onsite truck	—	—	HHDT
Collector Substation Site Preparation	—	—	—	—
Collector Substation Site Preparation	Worker	10.0	12.0	LDA,LDT1,LDT2
Collector Substation Site Preparation	Vendor	2.00	7.63	HHDT,MHDT
Collector Substation Site Preparation	Hauling	0.00	20.0	HHDT
Collector Substation Site Preparation	Onsite truck	—	—	HHDT
Collector Substation Grading	—	—	—	—
Collector Substation Grading	Worker	16.0	12.0	LDA,LDT1,LDT2
Collector Substation Grading	Vendor	2.00	7.63	HHDT,MHDT
Collector Substation Grading	Hauling	0.00	20.0	HHDT
Collector Substation Grading	Onsite truck	—	—	HHDT
Collector Substation Installation/Construction	—	—	—	—

Collector Substation Installation/Construction	Worker	60.0	12.0	LDA,LDT1,LDT2
Collector Substation Installation/Construction	Vendor	2.00	7.63	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	12.0	LDA,LDT1,LDT2
Gen-Tie Duct Bank and Vault Installation (Construction)	Vendor	6.00	7.63	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 Trenching	—	—	—	—
Gen-tie Trenching	Worker	20.0	12.0	LDA,LDT1,LDT2
Gen-tie Trenching	Vendor	2.00	7.63	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	12.0	LDA,LDT1,LDT2
Gen-Tie Jack-and-Bore (Trenching)	Vendor	2.00	7.63	HHDT,MHDT
Gen-Tie Jack-and-Bore (Trenching)	Hauling	0.00	20.0	HHDT
Gen-Tie Jack-and-Bore (Trenching)	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

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 (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Decommissioning	0.00	0.00	0.00	0.00	—
BESS Site Preparation	0.00	0.00	10.0	0.00	—
Collector Substation Site Preparation	0.00	0.00	15.0	0.00	—
BESS Grading	0.00	0.00	44.0	0.00	—
Collector Substation Grading	0.00	0.00	22.0	0.00	—
Gen-Tie Road Resurface and Clean-up (Paving)	0.00	0.00	0.00	0.00	0.50
Gen-tie Trenching	0.00	26,400	1.00	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Heavy Industry	0.50	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	540	0.03	< 0.005
2024	0.00	540	0.03	< 0.005
2050	0.00	170	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	0.00	107	0.00	5,560	0.00	1,130	0.00	58,947

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

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	79,971	26,657	—

5.10.3. Landscape Equipment

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 CO_2 and CH_4 and N_2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Heavy Industry	1,752,000	540	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	2,699,245

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Heavy Industry	0.00	0.00

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

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Cranes	Diesel	Average	1.00	8.00	367	0.29

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. Biomass Cover Type

5.18.1.1. Unmitigated

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)

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	15.2	annual days of extreme heat
Extreme Precipitation	4.20	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	35.3	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 (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth 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 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
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	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	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	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	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 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	60.9
AQ-PM	41.1
AQ-DPM	33.7
Drinking Water	25.4
Lead Risk Housing	52.8
Pesticides	0.00
Toxic Releases	19.6
Traffic	40.7
Effect Indicators	—
CleanUp Sites	52.0
Groundwater	75.2
Haz Waste Facilities/Generators	89.1
Impaired Water Bodies	33.2
Solid Waste	22.1
Sensitive Population	—
Asthma	14.3
Cardio-vascular	25.3

Low Birth Weights	48.3
Socioeconomic Factor Indicators	—
Education	48.3
Housing	53.6
Linguistic	45.4
Poverty	54.4
Unemployment	60.6

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	56.2042859
Employed	84.92236623
Median HI	74.11779802
Education	—
Bachelor's or higher	55.74233286
High school enrollment	100
Preschool enrollment	64.08315155
Transportation	—
Auto Access	78.96830489
Active commuting	35.72436802
Social	—
2-parent households	60.38752727
Voting	83.47234698
Neighborhood	—
Alcohol availability	67.16283844

Park access	27.30655717
Retail density	78.30103939
Supermarket access	27.22956499
Tree canopy	14.53868857
Housing	—
Homeownership	70.80713461
Housing habitability	71.37174387
Low-inc homeowner severe housing cost burden	40.61337097
Low-inc renter severe housing cost burden	58.74502759
Uncrowded housing	56.87155139
Health Outcomes	—
Insured adults	76.99217246
Arthritis	0.0
Asthma ER Admissions	85.5
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	53.7
Cognitively Disabled	66.4
Physically Disabled	46.5
Heart Attack ER Admissions	69.8
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0

Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	59.9
SLR Inundation Area	0.0
Children	27.6
Elderly	64.7
English Speaking	49.4
Foreign-born	46.4
Outdoor Workers	31.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	77.8
Traffic Density	15.7
Traffic Access	23.0
Other Indices	—
Hardship	43.7
Other Decision Support	—
2016 Voting	88.6

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	40.0

Healthy Places Index Score for Project Location (b)	74.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
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	Project-specific information and surrogate land uses for the BESS.
Construction: Construction Phases	Project-specific values.
Construction: Off-Road Equipment	Project-specific values.
Construction: Dust From Material Movement	Project-specific information.
Construction: Paving	Project-specific estimates.
Construction: Electricity	2050 used to represent 2054.
Operations: Vehicle Data	Project-specific values.
Operations: Energy Use	Project-specific information.
Construction: Trips and VMT	Project-specific assumptions.
Operations: Refrigerants	Project-specific values.
Operations: Water and Waste Water	No indoor water use. Default values for outdoor water use.

Operations: Solid Waste	No solid waste generated.

Nighthawk BESS, City of Poway
Sulfur Hexafluoride (SF6) Leakage GHG Emission Calculations

lb SF_6	Percent leak rate	lb SF_6/year	SF_6 GWP	lb/MT	CO_2e/year
2,400	0.50%	12	23900	2204.62	130.09

Notes:

lb	pounds
MT	metric tons
SF_6	sulfur hexafluoride
CO_2e	carbon dioxide equivalent
GWP	global warming potential