Appendix B

Air Quality, Greenhouse Gas Emissions, and Energy Technical Report

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Pure Water Southern California

Air Quality, Greenhouse Gas Emissions, and Energy Technical Report

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Acronyms and Abbreviations

AB	Assembly Bill
ADT	average daily trips
AQMP	Air Quality Management Plan
AR4	Fourth Assessment Report
AR5	Fifth Assessment Report
AWP	Advanced Water Purification
BAC	biological activated carbon
C_2F_6	hexafluoroethane
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CAPP	Community Air Protection Program
CARB	California Air Resources Board
CBSC	California Building Standards Commission
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CF_4	tetraflouromethane
CFC	chlorofluorocarbon
CFR	Code of Federal Regulations
CH_4	methane
CM	construction method
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
DPM	diesel particulate matter
DPR	direct potable reuse
EC	Environmental Commitment
EO	Executive Order
ERD	Energy Recovery Devices
ESOi	Environmental Operating Solutions, Inc.
°F	degrees Fahrenheit

Acronyms and Abbreviations (cont.)

GHG	greenhouse gas
GWh	gigawatt hours
GWP	global warming potential
HELIX	HELIX Environmental Planning, Inc.
HI	hazard index
HFC	hydrofluorocarbons
HR 6	House of Representatives Bill 6
IEM	Iowa Environmental Mesonet
IPCC	Intergovernmental Panel on Climate Change
JTS	Joint Treatment Site
kW	kilowatt
LACFCD	Los Angeles County Flood Control District
LADWP	Los Angeles Department of Water and Power
LCFS	Low Carbon Fuel Standard
LST	localized significance threshold
MATES V	Multiple Air Toxics Exposure Study V
MBR	membrane bioreactor
MEIR	maximum exposed individual resident
MEIW	maximum exposed individual worker
Metropolitan	Metropolitan Water District of Southern California
MGD	million gallons per day
MMT	million metric tons
MPO	Metropolitan Planning Organization
MT	metric tons
MWh	megawatt-hours
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NASA	National Aeronautics and Space Administration
NHTSA	National Highway Traffic Safety Administration
NOAA	National Oceanic and Atmospheric Administration
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OPR	Governor's Office of Planning and Research

Acronyms and Abbreviations (cont.)

Pb	lead
PFC	perfluorocarbon
PM	particulate matter
PM_{10}	respirable particulate matter less than 10 microns in diameter
$PM_{2.5}$	fine particulate matter less than 2.5 microns in diameter
ppm	parts per million
Pure Water	Pure Water Southern California
Ramboll	Ramboll Americas Engineering Solutions, Inc.
REC	renewable energy credit
ROG	reactive organic gas
ROW	right-of-way
RPS	Renewable Portfolio Standard
RRWP	Regional Recycled Water Program
RTP	Regional Transportation Plan
Sanitation Districts	Los Angeles County Sanitation Districts
SAR	Second Assessment Report
SARA	Solar Access Roof Area
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SIP	State Implementation Plan
SO_2	sulfur dioxide
SRA	source receptor area
TACs	toxic air contaminants
UNFCCC	United Nations Framework Convention on Climate Change
USEPA	U.S. Environmental Protection Agency
VMT	vehicle miles traveled
VOC	volatile organic compound
Warren Facility	A.K. Warren Water Resource Facility
Weymouth	F.E. Weymouth
WRCC	Western Regional Climate Center
WTP	water treatment plant

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EXECUTIVE SUMMARY

This air quality, greenhouse gas (GHG) emissions, and energy technical report was prepared to evaluate the Metropolitan Water District of Southern California (Metropolitan) proposed Pure Water Southern California project (Pure Water). Pure Water would be a partnership between Metropolitan and the Los Angeles County Sanitation Districts (Sanitation Districts) to develop and implement a regional recycled water program. This report addresses components of Pure Water that are being analyzed at the project level, which consist of the construction and operation of a new Advanced Water Purification (AWP) Facility and associated improvements at a Joint Treatment Site in the City of Carson, and the construction and operation of an approximately 39-mile backbone conveyance system from the AWP Facility to the existing San Gabriel Canyon Spreading Grounds in the City of Azusa (referred to as the Proposed Project for the purposes of this report). The analysis in this report assesses potential air quality, GHG emissions, and energy consumption impacts resulting from construction and operation of the Proposed Project pursuant to the requirements of the California Environmental Quality Act (CEQA) and the federal Clean Air Act (CAA) General Conformity Rule.

The Proposed Project would result in emissions of criteria air pollutants, precursors, and toxic air contaminants (TACs) during construction and operation. Construction emissions include fugitive dust, heavy construction equipment exhaust, and vehicle trips associated with worker commute and truck trips. Operational emissions associated with the Proposed Project would be associated with treatment of water through the membrane bioreactor and the sidestream centrate treatment, emergency generators, and vehicle trips.

Mitigation measure AQ-MM-1, requiring the use of Tier 4 Final offroad equipment, would be required to reduce the Proposed Project's construction criteria pollutant and precursor emissions. Emissions of carbon monoxide during construction activities would remain in excess of the South Coast Air Quality Management District (SCAQMD) significance threshold following implementation of mitigation measure AQ-MM-1 resulting in a significant and unavoidable impact during construction. Operational emissions of criteria pollutants and precursors would be below SCAQMD significance thresholds.

Proposed Project-generated traffic would not result in a localized carbon monoxide hot spot. Construction and operation would not result in exposure of sensitive receptors to significant quantities of criteria pollutant emissions or toxic air contaminants (TACs). The Proposed Project would not conflict with the 2022 Air Quality Management Plan (AQMP). In addition, the Proposed Project would have less than significant odor impacts.

Construction sources of GHG emissions include heavy construction equipment and vehicle trips. Operational sources of GHG emissions include stationary equipment, energy use for the operation of equipment and facilities at the Joint Treatment Site and pump stations, vehicle trips, and nitrous oxide from the nitrification/denitrification process. Construction activities are estimated to generate approximately 79,458 metric tons (MT) of carbon dioxide equivalent (CO_2e). Operational activities are estimated to generate 124,838 MT CO_2e in the first full year of operations. Pure Water was analyzed and included in Metropolitan's 2022 Climate Action Plan (CAP) as the Regional Recycled Water Program (RRWP), which has been renamed as Pure Water Southern California. Although additional details regarding individual components are now available, the individual components of the Proposed Project remain largely unchanged from what was included in the CAP. Additionally, while the updated Pure Water GHG emissions estimates are higher than in the CAP, they are not high enough to affect Metropolitan's ability to achieve its GHG emission reduction targets. The Proposed Project would also

be consistent with applicable CAP strategies and measures. Therefore, implementation of the Proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Impacts related to GHGs would be less than significant.

Energy usage for the Proposed Project would be limited to that necessary for the safe and successful construction and operation of the Proposed Project. In addition, the Proposed Project's consumption of energy resources to achieve the purpose of creating and distributing a new sustainable supply for the region is considered necessary. As such, the Proposed Project would not result in inefficient, wasteful, or unnecessary consumption of energy.

Proposed Project emissions would be less than the general conformity *de minimis* levels with implementation of mitigation measure AQ-MM-1. Impacts related to conformity to the Federal Clean Air Act would be less than significant with mitigation.

1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

HELIX Environmental Planning, Inc. (HELIX) has completed this air quality, greenhouse gas (GHG) emissions, and energy technical report for the Metropolitan Water District of Southern California (Metropolitan) proposed Pure Water Southern California (Pure Water). Pure Water would be a partnership between Metropolitan and the Los Angeles County Sanitation Districts (Sanitation Districts) to develop and implement a regional recycled water program. This report addresses components of Pure Water that are being analyzed at the project level, which for the purposes of this analysis consist of the construction and operation of a new Advanced Water Purification (AWP) Facility and associated improvements at a Joint Treatment Site in the City of Carson, and the construction and operation of an approximately 39-mile backbone conveyance system from the AWP Facility to the existing San Gabriel Canyon Spreading Grounds in the City of Azusa (referred to as the Proposed Project for the purposes of this report; **Figure 1** and **Figure 2**). This report details the methods and results of the analyses and has been prepared to comply with the California Environmental Quality Act (CEQA) and the federal Clean Air Act (CAA) General Conformity Rule.

1.2 PROJECT DESCRIPTION

1.2.1 Background

Metropolitan is a public agency made up of 26 member agencies serving 19 million people in the counties of Los Angeles, Orange, San Diego, Ventura, Riverside, and San Bernardino. Metropolitan imports water from the Colorado River via the Colorado River Aqueduct and from Northern California via the State Water Project to supplement local water supplies. In addition to importing water, Metropolitan supports its member agencies in developing local water conservation, recycling, storage, and resource management programs.

The Sanitation Districts consist of 24 independent special districts that form a regional public agency that collects and treats wastewater for over 5.5 million people in Los Angeles County. The Sanitation Districts' A.K. Warren Water Resource Facility (Warren Facility) in the City of Carson is one of eleven wastewater treatment plants in their system and is one of the largest wastewater treatment plants in the world. The Warren Facility provides primary and secondary treatment for approximately 260 million gallons per day (MGD) of wastewater, which currently is discharged to the Pacific Ocean.

Pure Water would be a partnership between Metropolitan and the Sanitation Districts to develop and implement a regional recycled water program. These agencies began exploring the concept for such a program in 2010, and since that time have conducted several preliminary evaluations and investigations. These have included a pilot study (2012), a feasibility study (2016), a conceptual planning study (2019), two white papers (2019 and 2020), an economic impact study (2021), a conceptual report on cost recovery alternatives (2023), an addendum to the second white paper (2023), and a variety of technical analyses of proposed system components and processes. In addition, a 0.5-MGD demonstration-scale purification facility at the Warren Facility was constructed and began operations in October 2019. This facility is being used to evaluate treatment performance and to provide an opportunity for public outreach and education.

1.2.2 Overview of Pure Water Southern California

Pure Water would create and distribute a new sustainable water supply by harvesting the region's largest untapped source of cleaned wastewater. This new water supply would help reduce the region's dependence on imported water and would assist the region in addressing disruptions to imported water supplies. This purified water would not only provide a more diversified water supply to Southern California, it also would enhance Metropolitan's operational resilience, reliability, and flexibility in the face of ongoing challenges, including long-term drought and climate change.

Specifically, Pure Water would involve purification of cleaned wastewater from the Sanitation District's Warren Facility at the new AWP Facility to produce approximately 150 MGD, or nearly 155,000 acre-feet per year, of sustainable, high-quality water predominantly for indirect potable reuse (IPR) and direct potable reuse (DPR).

Proposed facilities to implement Pure Water include modifications to the existing Warren Facility, a new full-scale AWP Facility (which includes a pump station and ancillary facilities) located at the Warren Facility, and a Workforce Training Center (collectively referred to as the Joint Treatment Site improvements); a backbone pipeline; DPR treatment facilities, pipelines, pump stations; service connections and laterals; and groundwater recharge improvements. The proposed facilities would potentially extend from the City of Carson in Los Angeles County to as far north as the City of Azusa and as far east as the City of La Verne.

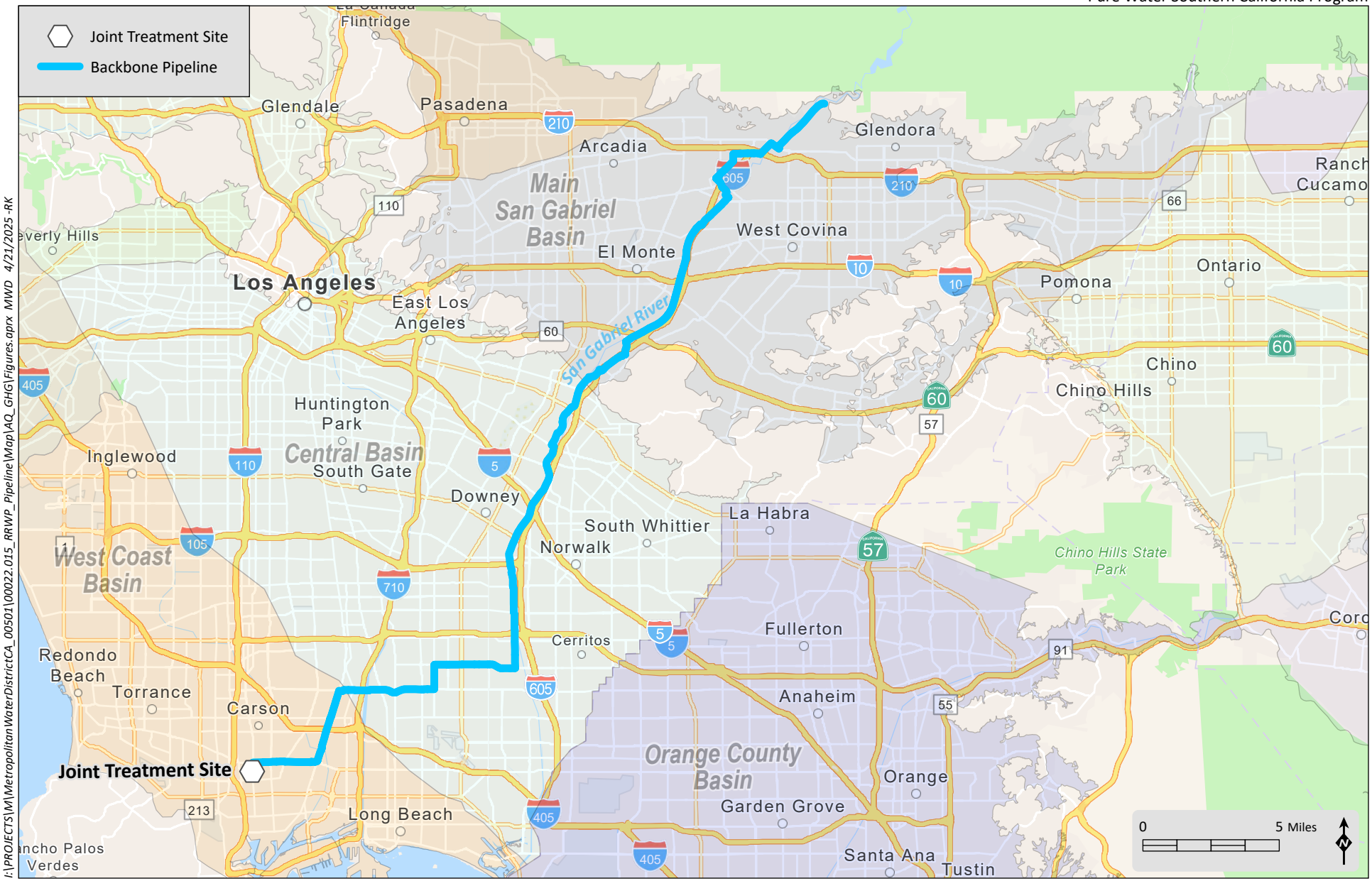
1.3 DESCRIPTION OF COMPONENTS

1.3.1 Joint Treatment Site Facilities

Pure Water would require construction and operation of various facilities at a new Joint Treatment Site. These would include modifications to the existing Warren Facility treatment facilities and construction of a new full-scale AWP Facility (including ancillary facilities and buildings to support operations), and a new Workforce Training Center (**Figure 2**). In addition, facilities to further treat purified water from the AWP Facility to DPR standards would be required. For the purposes of this analysis, DPR treatment is assumed to occur at a new facility constructed at the Joint Treatment Site. However, other potential locations for DPR treatment include Metropolitan's F.E. Weymouth (Weymouth) water treatment plant (WTP) in the City of La Verne or a potential satellite facility to be located between the Santa Fe Dam area and the Weymouth WTP.

In general, construction activities associated with these treatment facilities would include site clearing; excavation; installation, upgrade, or relocation of utilities; installation of equipment, paving, landscaping, and associated site improvements; construction of buildings and other facilities; and storage of materials and equipment. Operational activities associated with these treatment facilities would include operation and maintenance of facilities, structures, and equipment; storage of equipment and materials; delivery, storage, and management of treatment chemicals; and monitoring of water quality.

Proposed treatment facilities located at the Joint Treatment Site would be constructed on the Sanitation Districts' property bounded by West Lomita Boulevard to the south, South Main Street to the east, and developed portions of the Warren Facility to the north and west. In addition to the construction activities described above, construction activities at this site would include demolition of an existing Sanitation Districts' warehouse and maintenance basin; abandonment of existing oil wells; and



Source: Base Map Layer (Esri)

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HELIX Environmental Planning

Proposed Project Area

Figure 1

Source: Base Map Layer (Esri)

0 850 Feet

HELIX Environmental Planning

Joint Treatment Site

Figure 2

modifications to or construction of new biological treatment processes. Water residuals from each treatment process, except for reverse osmosis, would be routed back into the wastewater streams flowing into the Warren Facility. Concentrate from the reverse osmosis process would be discharged to the Pacific Ocean via the existing Warren Facility ocean outfall tunnels. No modifications to the existing outfall tunnels or their operations are proposed as part of Pure Water.

Proposed DPR treatment facilities at the Weymouth WTP would be located within the WTP boundaries south of Vera Cruz Street, west of Wheeler Avenue, north of Highland Drive, and east of Sedalia Avenue and Moreno Avenue in the City of La Verne.

1.3.2 Conveyance System

The conveyance system would be comprised of three pipelines – the backbone pipeline and two DPR pipelines – and at least six associated pump stations. The backbone pipeline would extend approximately 39 miles from the AWP Facility to the existing San Gabriel Canyon Spreading Grounds in the City of Azusa. The southern 25 miles would be 7-foot-diameter pipe and the northern 14 miles would be up to 9-foot-diameter pipe. The backbone pipeline would potentially pass through the cities of Carson, Long Beach, Lakewood, Cerritos, Bellflower, Norwalk, Downey, Santa Fe Springs, Whittier, Pico Rivera, Industry, El Monte, Baldwin Park, Irwindale, Duarte, and Azusa, as well as unincorporated portions of Los Angeles County. The pipeline would be buried under public roadways and in rights-of-way (ROW) situated along the San Gabriel River that currently are held by Southern California Edison (SCE), Los Angeles Department of Water and Power (LADWP), Los Angeles County Flood Control District (LACFCD), U.S. Army Corps of Engineers, and private parties.

The backbone pipeline would have the capacity to convey approximately 150 MGD (7-foot portion) to 300 MGD (9-foot portion) of purified water and would deliver some of this water at various locations along the way. Construction activities for the pipelines would be temporary in nature and would utilize a variety of methods based on the characteristics of each portion of the alignment. These methods would include trench excavation and backfill, as well as several different trenchless methods. Trenchless methods would be used where required to minimize impacts to the San Gabriel River, major drainage channels, the transportation system, sensitive resources, and areas with limited ROW.

Temporary construction staging and storage areas would be required along the alignments to support these construction activities. The staging and storage areas would have various uses but generally would include the installation of construction office trailers, temporary utility connections, equipment and materials storage, and construction employee parking. To the extent feasible, previously disturbed sites would be selected based on availability during the final design or at the time when construction is ready to proceed. Site preparation for the staging and storage areas would include clearing and grading, minor excavation for utility connections, fencing, and possible gravel placement.

Operational activities for the pipelines would be minimal and would include patrolling the pipeline, maintaining patrol roads and facilities, securing structures, periodically dewatering the pipeline for inspections/testing, and conducting repairs as needed.

Two separate DPR pipelines would convey purified water eastward from the Santa Fe Dam area or San Gabriel Canyon Spreading Grounds area to the Weymouth WTP or a satellite location. One pipeline would consist of the repurposed San Gabriel Valley Municipal Water District (SGVMWD)-owned Azusa Pipeline and the other would consist of a newly constructed pipeline. Planning for these DPR conveyance facilities has not yet been completed. As a result, they will only be addressed at the

program level in the current environmental review process and are not included in the analysis in this technical report.

A minimum of six pump stations would be required to pump water from the AWP Facility and along the backbone and DPR pipelines. Three of the proposed pump stations would pump water along the backbone pipeline from the AWP Facility to the San Gabriel Canyon Spreading Grounds. One pump station would be located on the same site as the AWP Facility; a second pump station would be located near Whittier Narrows in the City of Industry, City of Pico Rivera or Los Angeles County depending on site selection (Whitter Narrows Pump Station); and a third would be located near the Santa Fe Spreading Grounds in the City of Irwindale or City of Baldwin Park (Santa Fe Pump Station). Although the sites for the latter two pump stations have not yet been specifically identified, they would be located adjacent to the backbone pipeline (comprising the backbone conveyance system) and are addressed in this technical report at the project level. Two pump stations would be required to pump water along the Azusa Pipeline and one pump station would be required to pump water along the new DPR pipeline. The approximate locations and specifications of these three DPR pump stations have not been identified at this time. Therefore, the three pump stations along the DPR pipelines will not be further addressed in this technical report.

Construction of the backbone conveyance pump stations may include demolition if existing structures are present; excavation; site preparation; above-ground building construction; and paving. Operation of the pump stations would require a storage tank, approximately 25-foot-tall building, surge suppression system, perimeter security fencing, potentially an electrical substation, power poles, potentially a standby generator, and paved areas on sites ranging from approximately 4 to 10 acres, of which 4.2 acres is assumed to be disturbed. The pump stations would require pumps between 1,000 and 4,500 horsepower, depending on the location. Each pump station would require uninterrupted power supply, including potentially a standby generator onsite.

1.3.3 Groundwater Recharge and Service Connections

Metropolitan would provide metered service connections at various locations along the backbone and DPR pipelines to enable agencies to obtain water for industrial, groundwater recharge, and DPR uses.

Construction activities related to groundwater recharge are anticipated to include improvements to existing spreading facilities, construction of new spreading facilities, installation of new injection wells, relocation of existing production wells, and installation of service connections and lateral pipelines to these facilities. Construction activities associated with service connections for industrial and DPR uses would include installation of smaller distribution pipelines and ancillary facilities from the backbone and DPR pipelines.

Operational activities for these facilities would include releasing purified water into and maintaining spreading facilities, injecting purified water into groundwater basins, maintaining and operating injection and production wells, and inspecting, maintaining, and operating service connections and pipelines.

Planning for groundwater recharge facilities and service connections has not yet been completed. As a result, they will only be addressed at the program level in the current environmental review process and are not included in the analysis in this technical report.

1.4 PHASING

Construction and operation of Pure Water are expected to occur in two phases. To augment regional water supplies in the near term, an initial delivery component as part of Phase 1 is proposed to start construction in 2027 and be operational in 2033. During this initial delivery component, facilities to treat and pump up to 30 MGD at the Joint Treatment Site and approximately seven miles of the backbone pipeline through the City of Carson would be simultaneously constructed. Construction of this portion of the backbone pipeline would enable service connections to deliver purified water for industrial and groundwater recharge uses.

Upon completion of the initial delivery component, construction of Phase 1 would continue at the AWP Facility to produce approximately 115 MGD of purified water, and ongoing construction of the backbone pipeline and associated pump stations would also be completed. Phase 1 is anticipated to be complete by 2035.

Phase 2 would involve expansion of the AWP Facility to purify up to a total of 150 MGD. Phase 2 also would include construction of DPR treatment facilities at the AWP Facility, at a satellite DPR site, or at one or more WTPs, as well as the DPR pipeline that extends eastward from the backbone pipeline. Although the timing of this phase is uncertain, it is expected that construction would start in 2035 and that Pure Water would be complete and fully operational in 2040.

1.5 ENVIRONMENTAL COMMITMENTS

As part of the standard practices that Metropolitan employs for applicable projects, the following Environmental Commitments (ECs) will be implemented to reduce emissions and conserve energy.

AQ-EC-1 **Diesel Engine Idling.** Idling for a vehicle's primary diesel engine shall be restricted to five minutes or less at any location, except as allowed by California Air Resources Board (CARB) regulation: Title 13 California Code of Regulations (CCR), Division 3, Chapter 10, Section 2485.

AQ-EC-2 **Fugitive Dust Control.** The contractor shall comply with South Coast Air Quality Management District (SCAQMD) Rule 403 (Fugitive Dust), including implementing the Best Available Control Measures (BACM) listed in Table 1 of Rule 403 for all construction activities, the BACM listed in Table 2 of Rule 403 for large operations (50 or more acres of disturbed surface area or earth moving operations of 5,000 cubic yards/day for more than 3 days), and the Contingency Control Measures in Table 3 of Rule 403 when wind speeds, including instantaneous gusts, exceed 25 miles per hour.

GHG-EC-1 **Onsite Renewable Energy.** Metropolitan shall install photovoltaic solar panels with a total power rating of at least 1.5 megawatts at the Joint Treatment Site.

GHG-EC-2 **Electric Vehicle Charging.** Metropolitan shall install 100 Level 2 electric vehicle chargers at the Joint Treatment Site.

GHG-EC-3 **Energy Recovery.** Metropolitan shall install inter-stage pumps in the reverse osmosis system to reduce energy use. Metropolitan shall also install Energy Recovery Devices on the concentrate pumping systems to recover energy.

GHG-EC-4 **Biogenic Carbon Supplement.** Metropolitan shall add a biogenic carbon supplement, such as glycerin-based MicroC-2000 manufactured by Environmental Operating Solutions, Inc. (EOSi), to support both denitrification and biological phosphorous removal at the AWP Facility.

2.0 REGULATORY SETTING

2.1 AIR QUALITY

The Proposed Project is located within the South Coast Air Basin (SCAB). Air quality in the SCAB is regulated by the U.S. Environmental Protection Agency (USEPA) at the federal level, by CARB at the state level, and by the South Coast Air Quality Management District (SCAQMD) at the regional level.

2.1.1 Air Pollutants of Concern

2.1.1.1 Criteria Pollutants

Criteria pollutants are defined by state and federal law as a risk to the health and welfare of the general public. In general, criteria air pollutants include the following compounds:

- Ozone (O_3)
- Carbon monoxide (CO)
- Nitrogen dioxide (NO_2)
- Particulate matter (PM), which is further subdivided:
  - Respirable PM, 10 microns or less in diameter (PM_{10})
  - Fine PM, 2.5 microns or less in diameter ($PM_{2.5}$)
- Sulfur dioxide (SO_2)
- Lead (Pb)

Criteria pollutants can be emitted directly from sources (primary pollutants; e.g., CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead), or they may be formed through chemical and photochemical reactions of precursor pollutants in the atmosphere (secondary pollutants; e.g., ozone, NO_2, PM_{10}, and $PM_{2.5}$). PM_{10} and $PM_{2.5}$ can be both primary and secondary pollutants. The principal precursor pollutants of concern are reactive organic gases ([ROGs] also known as volatile organic compounds [VOCs])[1] and nitrogen oxides (NO_X).

Specific adverse health effects on individuals or population groups induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables such as cumulative concentrations, local meteorology and atmospheric conditions, and the characteristics of exposed individuals (e.g., age, gender). Criteria pollutant precursors (ROG and NO_X) affect air quality on a regional scale, typically after significant delay and distance from the pollutant source emissions. Health effects related to ozone and NO_2 are, therefore, the product of emissions generated by numerous sources

[1] CARB defines and uses the term ROGs while the USEPA defines and uses the term VOCs. The compounds included in the lists of ROGs and VOCs and the methods of calculation are slightly different. However, for the purposes of estimating criteria pollutant precursor emissions, the two terms are often used interchangeably.

throughout a region. Emissions of criteria pollutants from vehicles traveling to or from the project site (mobile emissions) are distributed nonuniformly in location and time throughout the region, wherever the vehicles may travel. As such, specific health effects from these criteria pollutant emissions cannot be meaningfully correlated to the incremental contribution from a project.

The following descriptions of health effects for each air pollutant associated with project construction and operation are based on information available through the USEPA (2023a) and CARB (2023a).

Ozone. Ozone is considered a photochemical oxidant, which is a chemical that is formed when VOCs and NO_X react in the presence of ultraviolet light. VOCs are compounds composed primarily of hydrogen and carbon atoms generated by fuel combustion or the evaporation of paints, solvents, and other household products. Ozone is considered a respiratory irritant and prolonged exposure can reduce lung function, aggravate asthma, and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from exposure to ozone.

Carbon Monoxide. CO is a product of fuel combustion. CO is an odorless, colorless gas. CO affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body's organs and tissues. CO can cause health effects to those with cardiovascular disease and can also affect mental alertness and vision.

Nitrogen Dioxide. NO_2 is also a by-product of fuel combustion and is formed both directly as a product of combustion and in the atmosphere through the reaction of nitrogen monoxide with oxygen. NO_2 is a respiratory irritant and may affect those with existing respiratory illness, including asthma. NO_2 can also increase the risk of respiratory illness.

Respirable Particulate Matter and Fine Particulate Matter. PM_{10} refers to particulate matter with an aerodynamic diameter of 10 microns or less. $PM_{2.5}$ refers to particulate matter with an aerodynamic diameter of 2.5 microns or less. Particulate matter in these size ranges has been determined to have the potential to lodge in the lungs and contribute to respiratory problems. PM_{10} and $PM_{2.5}$ arise from a variety of sources, including road dust, diesel exhaust, fuel combustion, tire and brake wear, construction operations, and windblown dust. PM_{10} and $PM_{2.5}$ can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases such as asthma and chronic bronchitis. $PM_{2.5}$ is considered to have the potential to lodge deeper in the lungs. Diesel particulate matter (DPM) is classified as a carcinogen by CARB.

Sulfur Dioxide. SO_2 is a colorless, reactive gas that is produced from the burning of sulfur-containing fuels such as coal and oil and by other industrial processes. Generally, the highest concentrations of SO_2 are found near large industrial sources. SO_2 is a respiratory irritant that can cause narrowing of the airways leading to wheezing and shortness of breath. Long-term exposure to SO_2 can cause respiratory illness and aggravate existing cardiovascular disease.

Lead. Lead in the atmosphere occurs as particulate matter. With the phase-out of leaded gasoline, major sources of lead in the air are ore and metals processing and piston-engine aircraft operating on leaded aviation fuel. Other sources include waste incinerators and lead-acid battery manufacturers. The highest air concentrations of lead are usually found near lead smelters. Lead has the potential to cause gastrointestinal, central nervous system, kidney, and blood diseases upon prolonged exposure. Lead is also classified as a probable human carcinogen.

2.1.1.2 Toxic Air Contaminants

The California Health and Safety Code (Section 39655, subd. (a)) defines a toxic air contaminant (TAC) as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the CAA (42 United States Code Section 7412[b]) is a TAC. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health. The treatment of wastewater results in evaporative emissions of TACs. Specifically, the processes proposed by the Project would emit chloroform, dichloroethane, acetonitrile, benzene, ethylbenzene, methyl tert-butyl ether, methylene chloride, tetrachloroethene, toluene, trichlorofluoromethane, and xylenes.

Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is referred to as DPM. Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is 2.5 microns or less in diameter (CARB 2023b). Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. In 1998, CARB identified DPM as a TAC based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM has a notable effect on California's population—it is estimated that about 70 percent of total known cancer risk related to air toxics in California is attributable to DPM (CARB 2023b).

2.1.2 Federal Air Quality Regulations

2.1.2.1 Federal Clean Air Act

Air quality is defined by ambient air concentrations of specific pollutants identified by the USEPA to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the CAA of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary standards, to protect human health, and secondary standards, for the protection of general welfare, for several criteria pollutants. **Table 1** shows the federal and state ambient air quality standards for these pollutants.

Table 1
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	Federal Standards Primary[1]	Federal Standards Secondary[2]
O_3	1 Hour	0.09 ppm (180 µg/m^3)	–	–
	8 Hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	Same as Primary
PM_{10}	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary
	AAM	20 µg/m^3	–	Same as Primary
$PM_{2.5}$	24 Hour	–	35 µg/m^3	Same as Primary
	AAM	12 µg/m^3	9.0 µg/m^3	15.0 µg/m^3
CO	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	–
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	–

Pollutant	Averaging Time	California Standards	Federal Standards Primary[1]	Federal Standards Secondary[2]
NO_2	1 Hour	0.18 ppm (339 µg/m^3)	0.100 ppm (188 µg/m^3)	–
	AAM	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary
SO_2	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	–
	3 Hour	–	–	0.5 ppm (1,300 µg/m^3)
	24 Hour	0.04 ppm (105 µg/m^3)	–	–
Lead	30-day Avg.	1.5 µg/m^3	–	–
	Calendar Quarter	–	1.5 µg/m^3	Same as Primary
	Rolling 3-month Avg.	–	0.15 µg/m^3	Same as Primary
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	**No Federal Standards**	**No Federal Standards**
Sulfates	24 Hour	25 µg/sm^3	**No Federal Standards**	**No Federal Standards**
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	**No Federal Standards**	**No Federal Standards**
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)	**No Federal Standards**	**No Federal Standards**

Source: CARB 2024

[1] National Primary Standards: The levels of air quality necessary, within an adequate margin of safety, to protect the public health.

[2] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

Note: More detailed information of the data presented in this table can be found at the CARB website (www.arb.ca.gov).
O_3: ozone; ppm: parts per million; µg/m^3: micrograms per cubic meter; PM_{10}: large particulate matter;
AAM: Annual Arithmetic Mean; $PM_{2.5}$: fine particulate matter; CO: carbon monoxide;
mg/m^3: milligrams per cubic meter; NO_2: nitrogen dioxide; SO_2: sulfur dioxide; km: kilometer; –: No Standard.

The USEPA has classified air basins (or portions thereof) as being in "attainment," "nonattainment," "maintenance," or "unclassified" for each criteria air pollutant, based on whether or not the NAAQS have been achieved. Upon attainment of a standard for which an area was previously designated nonattainment, the area will be classified as a maintenance area. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. The project site is located within the Los Angeles County portion of the SCAB and, as such, is in an area designated as a nonattainment area for certain pollutants that are regulated under the CAA. **Table 2** lists the federal and state attainment status of the SCAB for the criteria pollutants. With respect to federal air quality standards, the USEPA classifies the SCAB as in attainment for PM_{10}, CO, NO_2, SO_2, and lead, and in nonattainment for 8-hour ozone and $PM_{2.5}$.

Table 2
SOUTH COAST AIR BASIN ATTAINMENT STATUS

Criteria Pollutant	Federal Designation	State Designation
Ozone (O_3) (1-hour)	Nonattainment (Extreme)[1]	Nonattainment
Ozone (O_3) (8-hour)	Extreme Nonattainment	Nonattainment
CO (Carbon Monoxide (CO)	Attainment (Maintenance)	Attainment
Respirable Particulate Matter (PM_{10})	Attainment (Maintenance)	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Serious Nonattainment[2]	Nonattainment
Nitrogen Dioxide (NO_2)	Attainment (Maintenance)	Attainment
Sulfur Dioxide (SO_2)	Unclassifiable/Attainment	Unclassifiable/Attainment
Lead	Attainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen Sulfide	(No federal standard)	Attainment
Visibility Reducing Particles	(No federal standard)	Unclassifiable/Attainment

Source: SCAQMD 2016a

Note: State and Federal attainment designations may vary for the same pollutant for a variety of reasons including varying standards, averaging periods, and attainment classification requirements.

[1] 1-hour ozone standard (0.12 ppm) was revoked, effective June 15, 2005; however, SCAB has not attained this standard and is still subject to anti-backsliding requirements.

[2] The designation regarding the 2024 federal $PM_{2.5}$ NAAQS has not yet been determined.

2.1.3 California Air Quality Regulations

2.1.3.1 California Clean Air Act

The federal CAA allows states to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. CARB, a part of the CalEPA, is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the California Ambient Air Quality Standards (CAAQS). CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

In addition to primary and secondary ambient air quality standards, the state has established a set of episode criteria for ozone, CO, NO_2, SO_2, and PM (**Table 1**). These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health. **Table 2**, above, lists the state attainment status of the SCAB for the criteria pollutants. Under state designation, the SCAB is currently in attainment for CO, NO_2, SO_2, and lead; and in nonattainment for ozone, PM_{10}, and $PM_{2.5}$.

2.1.3.2 State Implementation Plan

The CAA requires areas with unhealthy levels of ozone, PM, CO, NO_2, and SO_2 to develop plans, known as State Implementation Plans (SIPs). SIPs are comprehensive plans that describe how an area will attain the NAAQS. The 1990 amendments to the CAA set deadlines for attainment based on the severity of an area's air pollution problem.

SIPs are not single documents—they are a compilation of new and previously submitted plans, programs (e.g., monitoring, modeling, permitting), district rules, state regulations, and federal controls. Many of California's SIPs rely on a core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations, and limits on emissions from consumer products. State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB forwards the SIP revisions to the USEPA for approval and publication in the Federal Register. The Code of Federal Regulations (CFR) Title 40, Chapter I, Part 52, Subpart F, Section 52.220 lists all of the items that are included in the California SIP (CARB 2023c). At any one time, several California submittals are pending USEPA approval.

2.1.3.3 Assembly Bill 617 – Community Air Protection Program

California's Assembly Bill (AB) 617 (Chapter 136, Statutes of 2017) directed CARB, in conjunction with local air districts, to establish the Community Air Protection Program (CAPP). Specifically, AB 617 directed CARB and the air districts to actively engage with members of heavily impacted communities, follow their guidance, and address local criteria air pollutant and toxic air contaminant sources of concern through a variety of strategies including incentives. On May 23, 2019, CARB approved the *Community Air Protection Incentives 2019 Guidelines* which contain criteria and eligibility for incentives supporting AB 617.

In 2018, the community of Wilmington, West Long Beach, and Carson was nominated by the SCAQMD and selected by CARB as an AB 617 monitoring community. The community is impacted by a variety of sources including freight, freeway traffic, port and rail operations, oil and gas production, and refineries. The community has a high cumulative air pollution exposure burden, a significant number of sensitive receptors, and includes census tracts that have been designated as disadvantaged communities. SCAQMD published the *AB 617 Community Air Monitoring Plan For the Wilmington, Carson, West Long Beach Community* in April 2019. The Community Air Monitoring Plan identifies areas of interest for AB 617 monitoring such as stationary and mobile sources, monitoring site locations, sampling schedules, and types of equipment and strategies. The plan was designed to obtain detailed air pollution levels through the community, determine areas in the community of highest risk, quantify sources of air pollution within the community, and to position the community to develop emissions reduction strategies and monitor the effectiveness of those strategies.

2.1.3.4 California Energy Code

California Code of Regulations (CCR) Title 24 Part 6, California's Energy Efficiency Standards for Residential and Nonresidential Buildings, were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Energy-efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and onsite fuel combustion (typically for space and water heating) results primarily in GHG emissions. The California Energy Code is discussed in further detail in Section 2.2.3, below.

2.1.4 Local Regulations

2.1.4.1 South Coast Air Quality Management District

Air quality in the SCAB portion of Los Angeles County is regulated by the SCAQMD. As a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), county

transportation commissions, and local governments and cooperates actively with all federal and state government agencies. The SCAQMD develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines, when necessary.

Air Quality Management Plan

The SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing a sequence of Air Quality Management Plans (AQMP).

On December 2, 2022, the SCAQMD adopted the 2022 AQMP, which is a regional and multi-agency effort (SCAQMD, CARB, SCAG, and USEPA). The 2022 AQMP represents a comprehensive analysis of emissions, meteorology, atmospheric chemistry, regional growth projections, and the impact of existing control measures. The plan seeks to achieve multiple goals in partnership with other entities promoting reductions in criteria pollutant, GHGs, and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. Included in the 2022 AQMP are updated strategies and control measures to address the designation of the SCAB as an “extreme” nonattainment area for the 2015 NAAQS 8-hour ozone standard. To meet the 2015 NAAQS ozone standard, an additional 67 percent reduction of NO_X will be required compared to the reductions forecast to occur by 2037 (as required by current adopted rules and regulations). Achieving the NO_X reductions will require extensive use of zero emission technologies across all stationary and mobile sources. The overwhelming majority of NO_X emissions are from heavy-duty trucks, ships, and other state and federally regulated mobile sources that are mostly beyond the SCAQMD’s control. The region will not meet the NAAQS ozone standard absent significant federal action. In addition to federal action, the 2022 AQMP requires substantial reliance on future deployment of advanced technologies to meet the NAAQS ozone standard (SCAQMD 2022a).

The AQMP, in combination with those from all other California nonattainment areas with a classification of serious, severe, or extreme, is submitted to CARB, which develops the California SIP. The SIP relies on the same information from SCAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin. The current federal and state attainment status for the SCAB is presented above, in **Table 2**.

Rules and Regulations

Rules and regulations promulgated by the SCAQMD that would be applicable to construction and/or operation of the project include, but are not limited to, the following.

Rule 201 – Permit to Construct: Requires written authorization from the SCAQMD’s Executive Officer for any person to build, erect, install, alter or replace any equipment or agricultural permit unit, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce or control the issuance of air contaminants (SCAQMD 2004a).

Rule 203 – Permit to Operate: Requires a written permit from the Executive Officer for any person to operate or use any equipment or agricultural permit unit, the use of which may cause the issuance of air contaminants, or the use of which may reduce or control the issuance of air contaminants (SCAQMD 2004b).

Rule 219 – Equipment not Requiring a Written Permit Pursuant to Regulation II: This rule's purpose is to exempt certain equipment, processes, or operations from the need for a written permit, unless they fall under specific exceptions outlined in the rule. Rule 219 covers a wide range of equipment, including mobile sources, internal combustion engines, external combustion equipment, and various other processes (SCAQMD 2023a).

Rule 222 – Filing Requirements for Specific Emission Sources not Requiring a Written Permit Pursuant to Regulation II: While some equipment is exempt from requiring a permit under Rule 219, it may still be subject to Rule 222, which outlines the filing requirements for specific emission sources not requiring a written permit (SCAQMD 2023b).

Regulation IX – Standards of Performance for New Stationary Sources: Sets standards on all new sources of air pollution and all modified or reconstructed sources of air pollution (SCAQMD 2019).

Rule 401 – Visible Emissions: Limits the allowable opacity of air contaminant emissions from any single source (SCAQMD 2001a).

Rule 402 – Nuisance: Prohibits the discharge of air contaminants, including odors, which cause injury, detriment, nuisance, or annoyance to any considerable number of persons (SCAQMD 1976).

Rule 403 – Fugitive Dust: Requires actions to prevent, reduce or mitigate anthropogenic fugitive dust emissions, including emissions from construction activities. Project construction would be required to implement all applicable fugitive dust best available control measures specified in Table 1 in the rule (SCAQMD 2005).

Rule 431.2 – Sulfur Content of Liquid Fuels: This rule limits the sulfur content in diesel and other liquid fuels for the purpose of both reducing the formation of sulfur oxides and particulates during combustion and to enable the use of add-on control devices for diesel fueled internal combustion engines (SCAQMD 2000).

Rule 1110.2 – Emissions from Gaseous and Liquid Fueled Engines – The purpose of Rule 1110.2 is to reduce NO_X, VOCs, and CO from engines. This rule applies to all stationary and portable engines over 50 rated brake horsepower (SCAQMD 2023c).

Rule 1113 – Architectural Coating: Establishes VOC limits for architectural coatings (e.g., paints, stains, coatings). Effective January 1, 2019, building interior and exterior paint is limited to a maximum VOC content of 50 grams per liter (SCAQMD 2016b).

Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil: This rule requires that an approved mitigation plan be obtained from SCAQMD prior to commencing excavation, grading, handling, storage, or treatment of VOC-contaminated soil (SCAQMD 2001b).

Rule 1171 – Solvent Cleaning Operations: The purpose of this rule is to reduce emissions of VOCs, TACs, and stratospheric ozone-depleting or global-warming compounds from the use, storage, and disposal of solvent and cleaning materials in solvent cleaning operations and activities (SCAQMD 2009a).

Rule 1179 – Publicly Owned Treatment Works Operations: The purpose of this rule is to reduce emissions of VOCs and odorous compounds from Publicly Owned Treatment Works Operations (SCAQMD 1992).

Regulation XIII – New Source Review: This regulation sets forth pre-construction review requirements for new, modified, or relocated facilities, to ensure that the operation of such facilities does not interfere with progress in attainment of the national ambient air quality standards, and that future economic growth within the SCAQMD is not unnecessarily restricted. The specific air quality goal of this regulation is to achieve no net increases from new or modified permitted sources of nonattainment air contaminants or their precursors (SCAQMD 2021a).

Rule 1401 – New Source Review of Toxic Air Contaminants: This rule specifies limits for maximum individual cancer risk (MICR), cancer burden, and noncancer acute and chronic hazard index (HI) from new permit units, relocations, or modifications to existing permit units which emit toxic air contaminants. The rule establishes allowable risks for permit units requiring new permits pursuant to Rules 201 or 203 (SCAQMD 2017).

Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities: This rule specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials. The requirements for demolition and renovation activities include asbestos surveying, notification, removal procedures and time schedules, material handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials (SCAQMD 2007).

Rule 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants: This rule applies to any owner or operator conducting earth-moving activities of soil with applicable TACs as defined in the rule that have been identified as contaminants of concern at a site. The provisions of the rule include ambient PM_{10} monitoring, dust control measures, notification, signage, and recordkeeping requirements (SCAQMD 2021b).

Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and other Compression Ignition Engines: This fuel specifies fuel additive and operational requirements to reduce emissions from stationary sources (SCAQMD 2021c).

Rule 1472 – Requirements for Facilities with Multiple Stationary Emergency Standby Diesel-Fueled Internal Combustion Engines: The purpose of this rule is to reduce DPM emissions from facilities with three or more stationary emergency standby diesel-fueled internal combustion engines (SCAQMD 2008).

Regulation XXX – Title V Permits: The Title V Permit system is the air pollution control permit system required to implement the federal Operating Permit Program as required by Title V of the federal CAA as amended in 1990 and to implement requirements for GHGs pursuant to 40 CFR Part 70. This regulation defines permit application and issuance procedures as well as compliance requirements associated with the program (SCAQMD 2020).

2.2 GREENHOUSE GASES

Global climate change refers to changes in average climatic conditions on Earth as a whole, including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by naturally occurring atmospheric gases. These gases are commonly referred to as GHGs because they function like a greenhouse by letting light in but preventing heat from escaping, thus warming the Earth's atmosphere.

GHGs are emitted by natural processes and human (anthropogenic) activities. Anthropogenic GHG emissions are primarily associated with (1) the burning of fossil fuels during motorized transport, electricity generation, natural gas consumption, industrial activity, manufacturing, and other activities; (2) deforestation; (3) agricultural activity; and (4) solid waste decomposition.

The temperature record shows a decades-long trend of warming, with the most recent 10-year period marking the warmest years on record since 1880 (National Aeronautics and Space Administration [NASA] 2024). The newest release in long-term warming trends announced 2023 ranked as the warmest year on record with an increase of 2.11 degrees Fahrenheit (°F) compared to the late 19th-century (1850-1900) average (NASA 2024). GHG emissions from human activities are the most significant driver of observed climate change since the mid-20th century (United Nations Intergovernmental Panel on Climate Change [IPCC] 2013). The IPCC constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The statistical models show a "high confidence" that temperature increase caused by anthropogenic GHG emissions could be kept to less than two degrees Celsius relative to pre-industrial levels if atmospheric concentrations are stabilized at about 450 parts per million (ppm) carbon dioxide equivalent (CO_2e) by the year 2100 (IPCC 2014).

2.2.1 Types of Greenhouse Gases

The anthropogenic GHGs, as defined under California's AB 32, include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Although water vapor is the most abundant and variable GHG in the atmosphere, it is not considered a pollutant; it maintains a climate necessary for life.

Carbon Dioxide. CO_2 is the most important and common anthropogenic GHG. CO_2 is an odorless, colorless GHG. Natural sources include the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungi; evaporation from oceans; and volcanic outgassing. Anthropogenic sources of CO_2 include burning fuels, such as coal, oil, natural gas, and wood. Data from ice cores indicate that CO_2 concentrations remained steady prior to the current period for approximately 10,000 years. The atmospheric CO_2 concentration in 2010 was 390 ppm, 39 percent above the concentration at the start of the Industrial Revolution (approximately 280 ppm in 1750). In February 2024, the CO_2 concentration was 425 ppm, a 52 percent increase since 1750 (National Oceanic and Atmospheric Administration [NOAA] 2024).

Methane. CH_4 is a gas and is the main component of natural gas used in homes. A natural source of methane is from the decay of organic matter. Geological deposits known as natural gas fields contain methane, which is extracted for fuel. Other sources are from decay of organic material in landfills, fermentation of manure, and cattle digestion.

Nitrous Oxide. N_2O is produced by both natural and human-related sources. N_2O is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic (fatty) acid production, and nitric acid production.

Fluorocarbons. Fluorocarbons are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. Chlorofluorocarbons (CFCs) are nontoxic, nonflammable, insoluble, and chemically nonreactive in the troposphere (the level of air at Earth's

surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone; therefore, their production was stopped as required by the Montreal Protocol.

Sulfur Hexafluoride. SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.

GHGs have long atmospheric lifetimes that range from one year to several thousand years. Long atmospheric lifetimes allow for GHG emissions to disperse around the globe. Because GHG emissions vary widely in the power of their climatic effects, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO_2. For example, because methane and N_2O are approximately 25 and 298 times more powerful than CO_2, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 25 and 298, respectively (CO_2 has a GWP of 1). CO_2e is a quantity that enables all GHGs to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO_2e.

Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (SAR). In 2007, IPCC updated the GWP values based on the latest science at the time in its Fourth Assessment Report (AR4). The updated GWPs in the IPCC AR4 have begun to be used in recent GHG emissions inventories. In 2013, IPCC again updated the GWP values based on the latest science in its Fifth Assessment Report (AR5) (IPCC 2013). However, United Nations Framework Convention on Climate Change (UNFCCC) reporting guidelines for national inventories require the use of GWP values from the AR4. To comply with international reporting standards under the UNFCCC, official emission estimates for California and the U.S. are reported using AR4 GWP values. Therefore, statewide and national GHG emission inventories have not yet updated their GWP values to the AR5 values. By applying the GWP ratios, project-related CO_2e emissions can be tabulated in metric tons (MT) per year. Typically, the GWP ratio corresponding to the warming potential of CO_2 over a 100-year period is used as a baseline. The atmospheric lifetime and GWP of selected GHGs are summarized in **Table 3**.

Table 3
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES

Greenhouse Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO_2)	50-200	1
Methane (CH_4)	12	25
Nitrous Oxide (N_2O)	114	298
HFC-134a	14	1,430
PFC: Tetraflouromethane (CF_4)	50,000	7,390
PFC: Hexafluoroethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

Source: IPCC 2007
HFC: hydrofluorocarbon; PFC: perfluorocarbon

2.2.2 Federal Greenhouse Gas Regulations

2.2.2.1 Federal Clean Air Act

The U.S. Supreme Court ruled on April 2, 2007, in *Massachusetts v. U.S. Environmental Protection Agency* that CO_2 is an air pollutant, as defined under the CAA, and that the USEPA has the authority to regulate emissions of GHGs. The USEPA announced that GHGs (including CO_2, CH_4, N_2O, HFC, PFC, and SF_6) threaten the public health and welfare of the American people. This action was a prerequisite to finalizing the USEPA's GHG emissions standards for light-duty vehicles, which were jointly proposed by the USEPA and the United States Department of Transportation's National Highway Traffic Safety Administration (NHTSA). The standards were established on April 1, 2010 for 2012 through 2016 model year vehicles and on October 15, 2012 for 2017 through 2025 model year vehicles (USEPA 2022a; USEPA and NHTSA 2012).

On June 30, 2022, the U.S. Supreme Court decision published in *West Virginia v. U.S. Environmental Protection Agency* overturned the USEPA's Clean Power Plan rule which cited Section 111(d) of the CAA for authority to set limits on CO_2 emissions from existing coal- and natural-gas-fired power plants. The June 30, 2022 decision does not overturn the April 2, 2007 decision; however, it may limit the USEPA's authority to develop rules limiting GHG emissions without clear congressional authorization.

2.2.2.2 Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards

The USEPA and the NHTSA worked together on developing a national program of regulations to reduce GHG emissions and to improve fuel economy of light-duty vehicles. The USEPA established the first-ever national GHG emissions standards under the CAA, and the NHTSA established Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. On April 1, 2010, the USEPA and NHTSA announced a joint Final Rulemaking that established standards for 2012 through 2016 model year vehicles. This was followed up on October 15, 2012, when the agencies issued a Final Rulemaking with standards for model years 2017 through 2025.

In December 2021, USEPA issued a new rule formally adopting standards previously proposed in August 2021 for model years 2023 and 2024 and finalizing more stringent standards than previously proposed for model years 2025 and 2026. The rule assumes a 17 percent electric vehicle market penetration by 2026. Although this is a departure from the NHTSA CAFE standards, USEPA did coordinate with NHTSA during development of the new standards. On March 20, 2024, USEPA announced new, more ambitious final standards to further reduce harmful air pollutant emissions from light-duty and medium-duty vehicles starting with model year 2027. The final standards build upon USEPA's final standards for federal GHG emissions standards for passenger cars and light trucks for model years 2023 through 2026 and leverages advances in clean car technology to result in benefits to Americans ranging from reducing climate pollution, to improving public health, to saving drivers money through reduced fuel and maintenance costs. The standards will phase in over model years 2027 through 2032.

2.2.3 State Greenhouse Gas Regulations

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, renewable energy and energy procurement, building energy, mobile sources, solid waste, water, and other state regulations and goals. The following text describes executive orders (EOs),

legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

2.2.3.1 State Climate Change Targets

Executive Order S-3-05

On June 1, 2005, EO S-3-05 proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. In an effort to avoid or reduce climate change impacts, EO S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. EOs are not laws and can only provide the governor's direction to state agencies to act within their authority. Legislation is required to enact the goals of EO S-3-05 and establish a framework for statewide implementation. AB 32, described below, mandates the 2020 GHG emissions reduction goals of EO S-3-05. The 2050 GHG emissions reduction goal of EO S-3-05 has not been enacted by any legislation and remains only a goal of the EO.

Assembly Bill 32 – Global Warming Solution Act of 2006

The California Global Warming Solutions Act of 2006 (Assembly Bill 32 and Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599), widely known as AB 32, requires that CARB develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 enacts the goals of EO S-3-05.

Executive Order B-30-15

On April 29, 2015, EO B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of leading international governments, including the 28-nation European Union. The emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal established by EO S-3-05 of reducing emissions 80 percent under 1990 levels by 2050. Senate Bill (SB) 32, described below, mandates the 2030 GHG emission reduction goals of EO B-30-15.

Senate Bill 32

SB 32 (Amendments to the California Global Warming Solutions Action of 2006) extends California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the state's continuing efforts to pursue the long-term target expressed in EO B-30-15 of 80 percent below 1990 emissions levels by 2050.

Assembly Bill 1279

Approved by Governor Newsom on September 16, 2022, AB 1279, *The California Climate Crisis Act*, declares the policy of the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels. AB 1279 anticipates achieving these policies through direct GHG emissions reductions, removal of CO_2 from the atmosphere (carbon capture), and almost complete transition away from fossil fuels.

Senate Bill 905

Approved by Governor Newsom on September 16, 2022, SB 905, *Carbon sequestration: Carbon Capture, Removal, Utilization, and Storage Program*, requires CARB to establish a Carbon Capture, Removal, Utilization, and Storage Program to evaluate the efficacy, safety, and viability of carbon capture, utilization, or storage technologies and CO_2 removal technologies and facilitate the capture and sequestration of CO_2 from those technologies, where appropriate. SB 905 is an integral part of achieving the state policies mandated in AB 1279.

California Air Resources Board Scoping Plan

The Scoping Plan is a strategy CARB develops and updates at least one every five years, as required by AB 32. It lays out the transformations needed across our society and economy to reduce emissions and reach our climate targets. The current 2022 Scoping Plan is the third update to the original plan that was adopted in 2008. The initial 2008 Scoping Plan laid out a path to achieve the AB 32 mandate of returning to 1990 levels of GHG emissions by 2020, a reduction of approximately 15 percent below business as usual. The 2008 Scoping Plan included a mix of incentives, regulations, and carbon pricing, laying out the portfolio approach to addressing climate change and clearly making the case for using multiple tools to meet California's GHG emissions targets. The 2013 Scoping Plan assessed progress toward achieving the 2020 mandate and made the case for addressing short-lived climate pollutants. The 2017 Scoping Plan also assessed the progress toward achieving the 2020 limit and provided a technologically feasible and cost-effective path to achieving the SB 32 mandate of reducing GHGs by at least 40 percent below 1990 levels by 2030. On December 15, 2022, CARB approved the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan). The 2022 Scoping Plan lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279. The actions and outcomes in the plan will achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels; further reductions in short-lived climate pollutants; support for sustainable development; increased action on natural and working lands to reduce emissions and sequester carbon; and the capture and storage of carbon (CARB 2022a).

2.2.3.2 Renewable Energy and Energy Procurement

SB 1078

SB 1078 (Sher) (September 2002) established the Renewable Portfolio Standard (RPS) program, which required an annual increase in renewable generation by the utilities equivalent to at least 1 percent of sales, with an aggregate goal of 20 percent by 2017. This goal was subsequently revised as described below.

SB 1368

SB 1368 (September 2006) required the California Energy Commission (CEC) to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the California Public Utilities Commission.

AB 1109

Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general-purpose lighting, to reduce electricity consumption 50 percent for indoor residential lighting and 25 percent for indoor commercial lighting.

EO S-14-08

EO S-14-08 (November 2008) focused on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. This EO required that all retail suppliers of electricity in California serve 33 percent of their load with renewable energy by 2020. Furthermore, the EO directed state agencies to take appropriate actions to facilitate reaching this target. The California Natural Resources Agency (CNRA), through collaboration with the CEC and California Department of Fish and Wildlife (formerly the California Department of Fish and Game), was directed to lead this effort.

EO S-21-09 and SBX1-2

EO S-21-09 (September 2009) directed CARB to adopt a regulation consistent with the goal of EO S-14-08 by July 31, 2010. CARB was further directed to work with the California Public Utilities Commission and CEC to ensure that the regulation builds upon the RPS program and was applicable to investor-owned utilities, publicly owned utilities, direct access providers, and community choice providers. Under this order, CARB was to give the highest priority to those renewable resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health and can be developed the most quickly in support of reliable, efficient, cost-effective electricity system operations. On September 23, 2010, CARB initially approved regulations to implement a Renewable Electricity Standard. However, this regulation was not finalized because of subsequent legislation (SB X1-2, Simitian, statutes of 2011) signed by Governor Brown in April 2011.

SB X1-2 expanded the RPS by establishing a renewable energy target of 20 percent of the total electricity sold to retail customers in California per year by December 31, 2013, and 33 percent by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation (30 megawatts or less), digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location.

SB X1-2 applies to all electricity retailers in the state including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must meet the renewable energy goals previously listed.

SB 350

SB 350 (October 2015, Clean Energy and Pollution Reduction Act) further expanded the RPS by establishing a goal of 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 included the goal to double the energy efficiency savings in electricity and natural gas final end uses (e.g., heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the California Public Utilities Commission, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. Regarding mobile sources, as one of its elements, SB 350 establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state's 2030 and 2050 reduction targets (see California Public Utilities Code Section 740.12).

SB 100

SB 100 (2018) increased the standards set forth in SB 350 establishing that 44 percent of the total electricity sold to retail customers in California per year by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100 percent of the retail sales of electricity to California. This bill requires that the achievement of 100 percent zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the goal not be realized through resource shuffling.

Senate Bill 1020

SB 1020 (September 2022) revises the standards from SB 100, requiring the following percentage of retail sales of electricity to California end-use customers come from eligible renewable energy resources and zero-carbon resources:

- 90 percent by December 31, 2035;
- 95 percent by December 31, 2040; and
- 100 percent by December 31, 2045.

2.2.3.3 Building Energy

California Code of Regulations, Title 24, Part 6

California Code of Regulations (CCR) Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Energy-efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and onsite fuel combustion (typically for water heating) results in GHG emissions.

The Title 24 standards are updated approximately every three years to allow consideration and possible incorporation of new energy efficiency technologies and methods. The latest update to the Title 24 standards occurred in 2022 and went into effect on January 1, 2023. The Building Energy Efficiency

Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. While all energy codes are moving toward a goal of net zero energy consumption buildings, California is aiming for the more aggressive target date of 2030 for commercial projects. Specifically, the Title 24 code's goal is for all new commercial construction, and 50 percent of commercial buildings retrofits, to achieve net zero energy consumption by 2030 (the state building target is 2025). To achieve incremental movement toward this goal, changes in the 2022 code are numerous and aggressive. For example, new buildings must comply with the new Solar Access Roof Area (SARA) requirements and all buildings required to have a photovoltaic system, must also have a properly sized battery system. The standards are divided into three basic sets. First, there is a basic set of mandatory requirements that apply to all buildings. Second, there is a set of performance standards–the energy budgets–that vary by climate zone (of which there are 16 in California) and building type; thus, the standards are tailored to local conditions. Finally, the third set constitutes an alternative to the performance standards, which is a set of prescriptive packages that are basically a recipe or a checklist compliance approach (CEC 2022).

California Green Building Standards Code

The California Green Building Standards Code (CALGreen; CCR Title 24, Part 11) is a code with mandatory requirements for new residential and nonresidential buildings (including industrial buildings) throughout California. The code is Part 11 of the California Building Standards Code in Title 24 of the CCR. The current 2022 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings went into effect on January 1, 2023 (California Building Standards Commission [CBSC] 2022).

The development of CALGreen is intended to (1) cause a reduction in GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. In short, the code is established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impact during and after construction.

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

2.2.3.4 Mobile Sources

Assembly Bill 1493 and Advanced Clean Cars

AB 1493 (Pavley) requires that CARB develop and adopt regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the state." On September 24, 2009, CARB adopted amendments to the Pavley regulations that intend to reduce GHG emissions in new passenger vehicles from 2009 through 2016. The amendments bind California's enforcement of AB 1493 (starting in 2009), while providing vehicle manufacturers with new compliance

flexibility. The amendments also prepared California to merge its rules with the federal CAFE rules for passenger vehicles (CARB 2013).

In January 2012, CARB approved Advanced Clean Cars I, a new emissions-control program for model years 2017 through 2025 including low emissions vehicle and zero-emissions vehicle criteria. The Advanced Clean Cars II regulations were adopted in 2022, imposing the next level of low-emission and zero-emission vehicle standards for model years 2026 through 2035 that contribute to meeting federal ambient air quality ozone standards and California's carbon neutrality targets.

By 2035 all new passenger cars, trucks, and SUVs sold in California will be zero emissions. The Advanced Clean Cars II regulations take the state's already growing zero-emission vehicle market and robust motor vehicle emission control rules and augments them to meet more aggressive tailpipe emissions standards and ramp up to 100 percent zero-emission vehicles.

On-Road Heavy-Duty Vehicles

On-road heavy-duty vehicles include a wide range of vocational and drayage trucks, as well as buses. Emissions from these vehicles are major contributors to air pollution and affect the health of all Californians. CARB works closely with partner agencies, vehicle manufactures, and community stakeholders to reduce the health and climate impacts of these vehicles.

CARB approved the advanced clean trucks regulation in 2020 to ensure sufficient supply of zero-emission vehicles. Starting with the 2024 vehicle model year, manufacturers of vehicles with a gross vehicle weight rating of 8,500 pounds or greater must sell zero-emission vehicles as a percentage of total sales increasing to 100 percent starting in 2036.

On January 13, 2025, CARB withdrew its request for a waiver and authorization for the addition of the Advanced Clean Fleets Regulation to its emissions control program, which sought to achieve a fully zero-emission medium and heavy-duty vehicle fleet in California by 2045. CARB is currently evaluating next steps. CARB is not enforcing the existing portions of the Advanced Clean Fleets Regulation that require a federal waiver or authorization, such as the portions that apply to high priority and drayage fleets. However, not all elements of the Regulation require a federal waiver or authorization. The state and local government fleets portion remains unaffected.

The Heavy-Duty Engine and Vehicle Omnibus Regulation was adopted on September 9, 2021, and became effective on December 22, 2021, to drastically cut smog-forming NO_X from conventional heavy-duty engines. The Omnibus Regulation will significantly increase the stringency of NO_X emissions standards and will also lengthen the useful life and emissions warranty of heavy-duty diesel engines for use in vehicles with a gross vehicle weight rating greater than 10,000 pounds. The more stringent NO_X emission standards begin with the 2024 model year engines and become more stringent with 2027 and subsequent model year engines.

Off-Road Vehicles and Equipment

CARB first approved the In-Use Off-Road Diesel-Fueled Fleets Regulation (Off-Road Regulation) for adoption in 2007, and it became effective in 2008. The Off-Road Regulation has been amended multiple times since adoption, most recently in November 2022. The goal of the Off-Road Regulation is to reduce PM and NO_X emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. The regulation covers a wide scope of vehicle types used in, but not limited to, industries as diverse as

construction, air travel, manufacturing, landscaping, and ski resorts. It imposes limits on idling, requires all vehicles be reported to CARB, restricts adding older vehicles into existing fleets, requires fleets reduce emissions by retiring, replacing, or repowering older engines, requires the phase-out of the oldest and dirtiest engines, requires the procurement and use of renewable diesel starting January 2024, and requires contracting entities to obtain valid Certificates of Reported Compliance.

Executive Order S-01-07

This EO, signed by Governor Schwarzenegger on January 18, 2007, directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by the year 2020. It orders that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California and directs the CARB to determine whether a LCFS can be adopted as a discrete early action measure pursuant to AB 32. CARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in April 2010. Although challenged in 2011, the Ninth Circuit Court of Appeals reversed the District Court's opinion and rejected arguments that implementing LCFS violates the interstate commerce clause in September 2013. CARB, therefore, is continuing to implement the LCFS statewide.

Executive Order N-79-20

EO N-79-20, signed by Governor Newsom on September 23, 2020, establishes three goals for implementation of zero emissions vehicles in California: first, 100 percent of in-state sales of new passenger cars and trucks will be zero-emissions by 2035; second, 100 percent of medium- and heavy-duty vehicles in the state will be zero-emissions vehicles by 2045 for all operations where feasible, and by 2035 for drayage trucks; and third, 100 percent of off-road vehicles and equipment will be zero emissions by 2035 where feasible.

2.2.3.5 Solid Waste

Assembly Bill 939

In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code, Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board to oversee a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25 percent by 1995 and 50 percent by the year 2000.

Assembly Bill 341

The state legislature enacted AB 341 (California Public Resource Code Section 42649.2), amending the Integrated Waste Management Act to include a provision declaring that it is the policy goal of the state that not less than 75 percent of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle conducted several general stakeholder workshops and several focused workshops and in August 2015 published a discussion document titled AB 341 Report to the Legislature, which identified

five priority strategies to assist the state in reaching and maintaining the 75 percent goal, legislative and regulatory recommendations, and an evaluation of program effectiveness (CalRecycle 2019).

Assembly Bill 1826

AB 1826 (Chapter 727, Statutes of 2014, effective 2016) requires businesses to recycle their organic waste (i.e., food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste) depending on the amount of waste they generate per week. This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. The minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

Senate Bill 1383

SB 1383 (Chapter 395, Statutes of 2016) establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. CalRecycle was granted the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025 (CalRecycle 2019).

2.2.3.6 Other State Actions

SB 97

SB 97 (Dutton) (August 2007) directed the Governor's Office of Planning and Research to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, the Governor's Office of Planning and Research (OPR) issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (OPR 2008). The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The CNRA adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4(a)). The Guidelines require a lead agency to consider the extent to which the Project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)). The Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or offsite measures. The adopted amendments do not establish a GHG emission threshold, instead allowing a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. The CNRA also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions (CNRA 2009).

With respect to GHG emissions, the CEQA Guidelines state in Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance-based standards" (14 CCR 15064.4(a)). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

EO S-13-08

EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009, and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014. To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: Agriculture, Biodiversity and Habitat, Emergency Management, Energy, Forestry, Ocean and Coastal Ecosystems and Resources, Public Health, Transportation, and Water. Issuance of the Safeguarding California: Implementation Action Plans followed in March 2016. In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that state government should take to build climate change resiliency.

2.2.4 Local Greenhouse Gas Regulations

2.2.4.1 Southern California Association of Governments

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, the economy, community development, and the environment. SCAG coordinates with various air quality and transportation stakeholders in Southern California to ensure compliance with the federal and state air quality requirements. Pursuant to California Health and Safety Code Section 40460, SCAG has the responsibility of preparing and approving the portions of the AQMP relating to the regional demographic projections and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. SCAG is required by law to ensure that transportation activities "conform" to, and are supportive of, the goals of regional and state air quality plans to attain the NAAQS. The RTP/SCS includes transportation programs, measures, and strategies generally designed to reduce vehicle miles traveled (VMT), which are contained in the AQMP. The SCAQMD combines its portion of the AQMP with those prepared by SCAG. On September 3, 2020, SCAG's Regional Council adopted the 2020-2045 RTP/SCS. On October 30, 2020, CARB accepted SCAG's determination that the SCS meets the applicable state GHG emissions targets.

2.2.4.2 Metropolitan Water District of Southern California Climate Action Plan

On May 10, 2022, Metropolitan's Board of Directors approved The Metropolitan Water District of Southern California Climate Action Plan (CAP). The CAP identifies actions to reduce Metropolitan's

carbon footprint in the face of climate change, increasing its climate resiliency and energy independence while supporting California's GHG reduction goals. The CAP will help Metropolitan reach California's aggressive goals to cut GHG emissions by 40 percent from 1990 levels by 2030 and achieve complete carbon neutrality by 2045. The plan sets targets and strategies for reducing GHG emissions from Metropolitan's operations, including the conveyance, storage, treatment, and delivery of water throughout its 5,200 square-mile Southern California service area. Strategies include phasing out natural gas combustion at Metropolitan facilities, transitioning to a zero-emissions vehicle fleet, utilizing carbon-free electricity, improving energy efficiency, increasing waste diversion to achieve zero waste, increasing water conservation and local supplies, and evaluating carbon capture and sequestration opportunities.

Pure Water was analyzed and included in the CAP as the Regional Recycled Water Program (RRWP) through CAP Measure WC-6, which calls for the implementation of advanced technology systems to increase Metropolitan-owned recycled and groundwater recovery systems to maintain local water supply. Specifically, the CAP analyzed the RRWP as including construction and operation of an Advanced Water Treatment Plant (synonymous with the AWP Facility described herein), approximately 40 miles of pipelines, three pumping stations, and groundwater injection sites. Construction and operational emissions estimated for the RRWP are presented in Tables 28 through 31 of Appendix B to the CAP. These tables have been reproduced below as **Tables 4** through **7**.

Table 4
TOTAL CONSTRUCTION EMISSIONS FOR RRWP REPORTED WITHIN THE CAP

System	Absolute Emissions (MT CO_2e)
Advanced Water Treatment	10,895
Pipelines	70,506
Pump Stations	633
Well Facilities	383
Total	**82,417**
6 Year Annual	13,736

Source: Metropolitan CAP Appendix B Table 28

Table 5
PROCESS OPERATIONAL EMISSIONS FOR RRWP REPORTED WITHIN THE CAP

System	Process Emissions (MT CO_2e)
Process N_2O	5,340 (non-biogenic)
MicroC-2000	22,271 (biogenic)

Source: Metropolitan CAP Appendix B Table 29

Table 6
ELECTRICITY EMISSIONS OVER TIME FOR RRWP OPERATIONS REPORTED WITHIN THE CAP

Year	Emissions (MT CO_2e)
2031	84,090
2035	60,064
2040	30,032
2045	-

Source: Metropolitan CAP Appendix B Table 30

Table 7
OVERALL ESTIMATED RRWP EMISSIONS REPORTED WITHIN THE CAP

Year	Emissions (MT CO_2e)
2025 (construction)	13,736
2030 (construction)	13,736
2035 (operational)	87,675
2040 (operational)	57,643
2045 (operational)	27,611

Source: Metropolitan CAP Appendix B Table 31

2.3 ENERGY

Energy consumption is a significant source of GHG emissions. Regulations to address energy also address GHGs, resulting in some overlap in the discussions in the following text and Section 2.2, *Greenhouse Gases*, above. In addition to the federal, state, and local regulations directed at reducing GHG emissions through increased efficiencies presented in Section 2.2 (i.e., EO S-3-05, EO B-30-15, EO S-01-07, AB 32, the CARB Scoping Plan, SCAG's RTP/SCS), energy efficiency regulations that have the potential to influence the program are discussed below.

2.3.1 Federal Energy Regulations

2.3.1.1 Energy Independence and Security Act of 2007

House of Representatives Bill 6 (HR 6), the federal Energy Independence and Security Act of 2007, established new standards for a few equipment types not already subjected to a standard, and updated some existing standards. Perhaps the most substantial new standard that HR 6 established is for general service lighting that is being deployed in two phases. First, phased in between 2012 through 2014, common light bulbs were required to use about 20 to 30 percent less energy than previous incandescent bulbs. Second, by 2020, light bulbs were required to consume 60 percent less energy than previous incandescent bulbs; this requirement will effectively phase out the incandescent light bulb.

2.3.1.2 Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. In 2012, new fuel economy standards for passenger cars and light trucks were approved for model years 2017 through 2021 (77 FR 62624–63200). Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States.

2.3.2 State Energy Regulations

2.3.2.1 Renewable Energy Programs and Mandates

Section 2.2.3.2, above, details recent legislative initiatives at the state. These initiatives focused on increasing the generation of electricity via renewable energy sources and promoting a shift away from fossil- or carbon-based fuels as a key strategy to reduce GHG emissions, air pollution, and water use associated with the energy sector.

2.3.2.2 California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the fewest environmental and energy costs. To further this policy, the plan identifies a number of strategies, including providing assistance to public agencies and fleet operators.

2.3.2.3 CEQA Guidelines – Appendix F, Energy Conservation

CEQA Guidelines Appendix F, Energy Conservation, provides guidance for environmental impact reports regarding potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing the inefficient, wasteful, and unnecessary consumption of energy. In addition, though not described as thresholds for determining the significance of impacts, Appendix F seeks inclusion of information in the environmental impact report addressing the following topics:

- The project's energy requirements and its energy-use efficiencies by amount and fuel type for each stage of the project, including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
- The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- The effects of the project on peak and base period demands for electricity and other forms of energy.
- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

3.0 EXISTING CONDITIONS

3.1 CLIMATE AND METEOROLOGY

The Proposed Project occurs within the SCAB, which consists of all or part of four counties: Los Angeles, San Bernardino, Riverside, and Orange. The distinctive climate of the SCAB is determined by its terrain and geographic location. The SCAB is a coastal plain composed of low hills connected by broad valleys. It is bound by the Pacific Ocean to the southwest and high mountains around the rest of its perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds.

The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds. Winds in the project area are usually driven by the dominant land/ sea breeze circulation system. Regional wind patterns are dominated by daytime onshore sea breezes. At night, the wind generally slows and reverses direction traveling toward the sea. Local canyons can also alter wind direction, with wind tending to flow parallel to the canyons. The vertical dispersion of air pollutants in the SCAB is hampered by the presence of persistent temperature inversions. High pressure systems, such as the semi-permanent high-pressure zone in which the SCAB is located, are characterized by an upper layer of dry air that warms as it descends, restricting the mobility of cooler marine-influenced air near the ground surface, and resulting in the formation of subsidence inversions. Such inversions restrict the vertical dispersion of air pollutants released into the marine layer and, together with strong sunlight, can produce worst-case conditions for the formation of photochemical smog. The basin-wide occurrence of inversions at 3,500 feet above mean sea level or less averages 191 days per year (SCAQMD 1993).

Local meteorology is monitored through a network of stations throughout the SCAB. The local meteorological station with data representative of the Project area is located approximately 7 miles east in Long Beach. The predominant wind direction in the vicinity of the Proposed Project site, as measured at the Long Beach Airport, is from the west and south and the average wind speed is approximately 5.8 mph (Iowa Environmental Mesonet [IEM] 2023). The annual average maximum temperature in the area, as measured at the Long Beach climatic station, is approximately 74°F, and the annual average minimum temperature is approximately 55°F. Total precipitation in the area averages approximately 12 inches annually. Precipitation occurs mostly during the winter and relatively infrequently during the summer (Western Regional Climate Center [WRCC] 2023).

3.2 CRITERIA POLLUTANTS

3.2.1 Attainment Designations

Attainment designations are discussed in Section 2.1 and **Table 2**. With regard to the NAAQS, the SCAB is classified as an extreme nonattainment area for 8-hour ozone and serious nonattainment for $PM_{2.5}$. The SCAB is currently classified as a nonattainment area under the CAAQS for ozone, PM_{10}, and $PM_{2.5}$. The SCAB is an attainment area for all other criteria pollutants.

3.2.2 Monitored Air Quality

The SCAQMD maintains monitoring stations to measure ambient concentrations of pollutants in the SCAB. **Table 8** presents a summary of the ambient pollutant concentrations during the most recent three years (2021 through 2023) for which the SCAQMD has reported data as monitored at the South Long Beach and Long Beach – Signal Hill monitoring stations, both located approximately 6 miles east of the Warren Facility.

As shown in **Table 8**, the 1- and 8-hour ozone, PM_{10}, and $PM_{2.5}$ standards were exceeded multiple times throughout the sample period. Data for NO_2 showed no exceedances.

Table 8
AIR QUALITY MONITORING DATA

Pollutant	2021	2022	2023
Ozone (O_3)			
Maximum 1-hour concentration (ppm)	0.086	0.108	0.089
Days above 1-hour state standard (>0.09 ppm)	0	1	0
Maximum 8-hour concentration (ppm)	0.065	0.077	0.065
Days above 8-hour state/federal standard (>0.070 ppm)	0	1	0
Respirable Particulate Matter (PM_{10})			
Maximum 24-hour concentration (µg/m^3)	49.7	50.3	-
Days above state standard (>50 µg/m^3)	0	0	-
Days above federal standard (>150 µg/m^3)	0	0	-
Fine Particulate Matter ($PM_{2.5}$)			
Maximum 24-hour concentration (µg/m^3)	51.3	26.6	-
Days above federal standard (>35 µg/m^3)	4	0	-
Nitrogen Dioxide (NO_2)			
Maximum 1-hour concentration (ppm)	0.059	0.058	0.056
Days above state 1-hour standard (0.18 ppm)	0	0	0

Source: CARB 2025
ppm = parts per million, µg/m^3 = micrograms per cubic meter

3.2.3 Community Health Risks

The SCAQMD has conducted studies on carcinogenic risk from exposure to air toxics in the SCAB. The most recent is the Multiple Air Toxics Exposure Study V (MATES V). According to the MATES Data Visualization interactive tool, the existing cumulative cancer risk from TACs in the Pure Water area ranges from 465 in 1 million (Zip Code 91741 in the City of Glendora) to 635 in 1 million (Zip Code 90810 in the City of Long Beach). For comparison purposes, the SCAB-wide average is 455 in 1 million. The largest contributor to the existing cumulative cancer risk from toxic air contaminants is from DPM (SCAQMD 2022b).

3.3 GREENHOUSE GASES

In an effort to evaluate and reduce the potential adverse impact of global climate change, international, state, and local organizations have conducted GHG inventories to estimate their levels of GHG emissions and removals. The following summarizes the results of these global, national, state, and local GHG inventories.

3.3.1 Worldwide and National Greenhouse Gas Inventories

In 2022, total anthropogenic GHG emissions worldwide were estimated at 49,400 million metric tons (MMT) of CO_2e emissions (Climate Watch 2024). The five largest emitting countries and the European Union (EU-27), together account for about 63 percent of total global GHG emissions: China (29 percent), the United States (13 percent), the European Union (about 7 percent), India (7 percent), the Russian Federation (4.1 percent) and Japan (2.4 percent). These countries also have the highest CO_2 emission levels (Climate Watch 2024).

Per USEPA Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2022, total United States GHG emissions were approximately 6,341 MMT CO_2e in 2022 (USEPA 2024b). The primary GHG emitted by human activities in the United States was CO_2, which represented approximately 79.8 percent of total GHG emissions (5,057 MMT CO_2e). The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 92.7 percent of CO_2 emissions in 2022 (4,690 MMT CO_2e). Relative to 1990, gross United States GHG emissions in 2022 were lower by 3.1 percent, down from a high of 15.2 percent above 1990 levels in 2007. Gross emissions increased from 2021 to 2022 by 0.3 percent (16.4 MMT CO_2e). Net emissions (i.e., including sinks) were 5,487 MMT CO_2e in 2022. Overall, net emissions increased by 1.3 percent from 2021 to 2022 and decreased by 16.6 percent from 2005 levels. Between 2021 and 2022, the increase in total GHG emissions was driven largely by an increase in CO_2 emissions from fossil fuel combustion across most end-use sectors due in part to increased energy use from the continued rebound of economic activity after the height of the COVID-19 pandemic (USEPA 2024).

3.3.2 State Greenhouse Gas Inventory

CARB performed statewide inventories for the years 1990 to 2020, as shown in **Table 9**. The inventory is divided into six broad sectors of economic activity: agriculture, commercial, electricity generation, industrial, residential, and transportation. Emissions are quantified in MMT CO_2e. As shown in **Table 9**, statewide GHG source emissions totaled 431 MMT CO_2e in 1990, 462 MMT CO_2e in 2000, 442 MMT CO_2e in 2010, and 369 MMT CO_2e in 2020. Transportation-related emissions consistently contribute the most GHG emissions, followed by electricity generation and industrial emissions (CARB 2007 and CARB 2022b).

Table 9
CALIFORNIA STATE GREENHOUSE GAS EMISSIONS BY SECTOR (MMT CO_2e)

Sector	1990	2000	2010	2020
Agriculture and Forestry	18.9 (4%)	30.8 (7%)	33.6 (8%)	31.6 (9%)
Commercial	14.4 (3%)	14.6 (3%)	20.1 (5%)	22.0 (6%)
Electricity Generation	110.5 (26%)	105.2 (23%)	90.6 (20%)	59.8 (16%)
Industrial	105.3 (24%)	101.2 (22%)	97.9 (22%)	85.3 (23%)
Residential	29.7 (7%)	31.5 (7%)	32.1 (7%)	30.7 (8%)
Transportation	150.6 (35%)	178.5 (39%)	168.0 (38%)	139.9 (38%)
Unspecified Remaining	1.3 (<1%)	0.0 (0%)	0.0 (0%)	0.0 (0%)
TOTAL	**430.7**	**461.8**	**442.3**	**369.3**

Source: CARB 2007 and CARB 2022b
MMT = million metric tons; CO_2e = carbon dioxide equivalent

3.3.3 Metropolitan Water District of Southern California Greenhouse Gas Inventory

As part of Metropolitan's ongoing CAP implementation and monitoring efforts, regular GHG inventory updates are maintained. **Table 10** provides the results of the latest year for which a complete inventory is available (Metropolitan 2024). In 2022, Metropolitan's GHG emissions totaled 336,560 MT of CO_2e.

Table 10
METROPOLITAN 2022 GREENHOUSE GAS EMISSIONS BY SCOPE

Scope	Sector	2017 MT CO_2e [1]
Scope 1	Mobile Emissions	6,315 (2%)
	Stationary Emissions	1,324 (<1%)
	SF_6/HFC Emissions	53 (<1%)
Scope 2	Electricity	312,206 (93%)
	T&D Losses	5,922 (2%)
Scope 3	All other Indirect Emissions	10,740 (3%)
	TOTAL	**336,560**

Source: Metropolitan 2024
[1] Percentages may not total 100 due to rounding.
MT = metric tons; CO_2e = carbon dioxide equivalent

3.4 ENERGY

3.4.1 State Energy Supply

3.4.1.1 Electricity

California's electricity needs are satisfied by a variety of entities, including investor-owned utilities, publicly owned utilities, and electric service providers. As of 2023, California electricity demand totaled 281,140 gigawatt hours (GWh). In-state generating facilities accounted for about 215,623 GWh, or approximately 77 percent of the total electric power used in the state, with the remaining electricity coming from out-of-state imports (CEC 2025a).

3.4.1.2 Natural Gas

Natural gas continues to play an important and varied role in California. Natural gas is used for everything from generating electricity to cooking and space heating to an alternative transportation fuel. In 2012, total natural gas demand in California for industrial, residential, commercial, and electric power generation was 2,313 billion cubic feet per year. At that time, nearly 45 percent of the natural gas burned in California was used for electricity generation, and the remainder was consumed in the residential (21 percent), industrial (25 percent), and commercial (9 percent) sectors (CEC 2025b).

3.4.1.3 Transportation Fuels

Most automobiles and trucks consume gasoline and diesel fuel, which are nonrenewable energy products derived from crude oil. In addition to energy consumption associated with on-road vehicle use, energy is consumed in connection with construction and maintenance of transportation infrastructure.

Passenger cars and light-duty trucks are by far the largest consumers of transportation fuel. Retail sales of transportation fuel in California totaled 13.6 billion gallons of gasoline and 3 billion gallons of diesel in 2023 (CEC 2025c).

3.4.2 Regional Energy Supply

The primary provider of electricity in the Pure Water area is SCE. SCE is a regulated public utility that provides energy service to 15 million people across a 50,000-square-mile service area in all or part of 15 counties. In 2023, SCE delivered more than 79,000 GWh of electricity to residential, commercial, industrial, and agricultural customers (SCE 2024a). SCE's power mix in 2023 was made up of approximately 37.6 percent eligible renewable resources (SCE 2024b).

The primary provider of natural gas in the Pure Water area is Southern California Gas Company (SoCalGas). SoCalGas is the nation's largest natural gas distribution company, delivering natural gas to over 21 million consumers across a 24,000-square-mile service area that spans Central and Southern California. SoCalGas delivers 1 trillion cubic feet of natural gas annually (SoCalGas 2025).

3.4.3 Metropolitan's Energy Use and Supplies

Metropolitan's energy use is primarily driven by the transportation and treatment of water, with the transport of water via the CRA and the SWP accounting for the majority of energy costs and consumption. From 2013 to 2018, 93 percent of Metropolitan's electricity costs were associated with these systems, with the remaining 7 percent supporting water treatment plants and other facilities. The energy required for CRA operations benefits from low-cost federal hydropower, while the SWP's higher energy intensity (approximately 3,300 kWh/acre-foot compared to 2,000 kWh/acre-foot for the CRA) and absence of federal hydropower result in higher costs (Metropolitan 2020).

3.4.3.1 Federal Hydropower and Wholesale Energy Contracts

Metropolitan's CRA operations rely heavily on hydropower from Hoover and Parker dams, secured through long-term contracts. Metropolitan is entitled to 27 percent of Hoover Dam energy and 50 percent of Parker Dam energy, which together provide zero-GHG electricity for 50 to 85 percent of CRA energy needs (Metropolitan 2020). When hydropower is insufficient to meet demand, Metropolitan procures additional electricity through the California Independent System Operator (CAISO) and other suppliers (Metropolitan 2020).

3.4.3.2 Renewable and Green Energy Sources

Metropolitan integrates renewable energy into its operations to offset energy demand and reduce GHG emissions. Among its renewable energy sources are 15 small hydroelectric plants with a total capacity of approximately 130 MW. These facilities generate between 138 and 525 GWh annually and are designated as renewable under California law. As renewable resources, the electricity generated comes with Renewable Energy Credits (RECs), which can be sold to third parties (e.g., electric utilities) to help them meet their own clean energy goals. Currently, Metropolitan sells the generated hydropower (with associated RECs), and it is therefore not currently used to offset Metropolitan's energy demand (Metropolitan 2020).

In addition to hydropower, Metropolitan operates four solar facilities with a combined capacity of 5.5 MW. These installations are located at key sites, including Diamond Valley Lake and various WTPs, where they generate electricity to lower retail energy costs and reduce GHG emissions. Collectively, the solar facilities contribute to an annual reduction of approximately 2,000 metric tons of CO_2. Excess solar energy generated at these sites is managed through net metering and renewable energy self-generation programs, further enhancing their sustainability benefits (Metropolitan 2020).

3.4.3.3 Energy-Intensive Nature of Water Management

Water treatment and conveyance are inherently energy-intensive processes due to the physical challenges of moving large volumes of water across long distances and elevation changes. For example, pumping an acre-foot of water through the CRA requires 2 MWh of electricity. Advanced wastewater treatment and redistribution—core elements of Pure Water—also involve high energy demand, particularly when treated water must be conveyed to higher elevations (Metropolitan 2020).

To ensure uninterrupted operations, Metropolitan maintains diesel emergency generators at critical facilities, including treatment plants and pumping stations. These systems provide backup power during grid outages, safeguarding essential water supply infrastructure (Metropolitan 2020).

4.0 METHODOLOGY AND SIGNIFICANCE CRITERIA

4.1 METHODOLOGY AND ASSUMPTIONS

The Proposed Project would result in criteria pollutant and GHG emissions and the consumption of energy during both construction and operations. Emissions and energy consumed were calculated using Project-specific information provided by Metropolitan and appropriate models and emission factors for the given sources as discussed below. All modeling files are included in Appendix A.

4.1.1 Construction

4.1.1.1 Backbone Conveyance System

As described in Section 1.3.2, the backbone conveyance system comprises the backbone pipeline and two associated pump stations along the alignment (the pump station located at the AWP Facility is analyzed below as part of the Joint Treatment Site).

Backbone Pipeline

Construction Schedule and Activities

The backbone pipeline would extend approximately 39 miles from the AWP Facility to the existing San Gabriel Canyon Spreading Grounds in the City of Azusa. The southern 25 miles would be 7-foot-diameter pipe and the northern 14 miles would be 9-foot-diameter pipe. The alignment is divided into eight individual reaches; the alignment of each reach is shown in **Figure 3**. Construction of the backbone pipeline would require the use of multiple construction methods, including both open trench and trenchless approaches. Each construction method would also employ a variety of construction activities as work progresses.

Trenching

Trenching (Roadways Construction Method [CM]; SCE Easement CM; and LAFCD Easement CM) is anticipated to be the primary construction method used along the majority of the backbone alignment. The open trenching construction method involves excavation within existing roadways and easements, with the open air trench used to accommodate the installation of the pipe. Excavated soils would be stockpiled and backfilled/recompacted after the pipe is installed. Easement trenching is more often located in areas that are generally unpaved. Additional details are provided in Appendix A.

Pipe Jacking

Pipe jacking (Pipe Jacking CM [7-foot] and Pipe Jacking CM [9-foot]) would be used where the backbone pipeline would traverse beneath certain obstacles such as roadways or waterways. Pipe jacking involves the excavation of pits on each end of the obstacle which would be used to install the pipeline. Additional details are provided in Appendix A.

Tunneling

Tunneling using microtunneling (Microtunneling CM), traditional tunneling (Traditional Tunneling CM [7-foot] and Traditional Tunneling CM [9-foot]), or shield tunneling (Shield Tunneling CM) techniques would be required for long stretches of pipeline where trenching or pipe jacking cannot occur. Tunneling would require the excavation of a large pit, within which tunneling equipment would be lowered. Additional details are provided in Appendix A.

Schedule

For modeling purposes, the backbone pipeline was assumed to be constructed between October 2026 through October 2032 with multiple methods and activities occurring at any given time. The quantity, duration, and intensity of construction activity influence the amount of construction emissions and related pollutant concentrations that occur at any one time. As such, the emission forecasts provided herein reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction activity is occurring in a relatively intensive manner. Because of this conservative assumption, actual emissions could be less than those forecasted. If construction is delayed or occurs over a longer time period, emissions could be reduced because of: (1) a more modern and cleaner-burning construction equipment fleet mix than assumed; and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval). **Table 11** presents the assumed construction schedule and methods by reach.

Table 11
CONVEYANCE CONSTRUCTION SCHEDULE AND METHODS BY REACH

Reach	Start Date	End Date	Construction Methods Employed
Reach 1	10/6/2026	6/26/2028	Roadways CM; Pipe Jacking CM (7-foot); Microtunneling CM
Reach 2	10/6/2026	1/30/2030	Roadways CM; Pipe Jacking CM (7-foot); Microtunneling CM
Reach 3	8/28/2029	3/31/2031	Roadways CM; SCE Easement CM; LAFCD Easement CM; Pipe Jacking CM (7-foot); Microtunneling CM

Reach	Start Date	End Date	Construction Methods Employed
Reach 4	11/25/2027	10/20/2032	Roadways CM; LAFCD Easement CM; Microtunneling CM; Traditional Tunneling CM (7-foot)
Reach 5	7/26/2029	4/23/2031	Roadways CM; SCE Easement CM; Pipe Jacking CM (7-foot); Microtunneling CM; Traditional Tunneling CM (7-foot)
Reach 6	7/11/2028	6/19/2031	Traditional Tunneling CM (9-foot)
Reach 7	2/7/2030	2/25/2032	Roadways CM; SCE Easement CM; Traditional Tunneling CM (9-foot); Shield Tunneling CM
Reach 8	2/7/2030	4/2/2031	Roadways CM; SCE Easement CM; LAFCD Easement CM; Pipe Jacking CM (9-foot); Shield Tunneling CM

Note: Further details regarding construction schedule and activities are provided in Appendix A.

Off-Road Equipment Exhaust

Emissions that would be generated by off-road equipment (e.g., excavators, loaders, cranes) were estimated using CARB's Offroad emissions inventory database (OFFROAD2021 v1.0.2). OFFROAD2021 was used to develop air basin-specific equipment emission factors for each piece of off-road equipment. Emissions are calculated as follows:

$$E = n \times H \times EF$$

Where:
- E = emissions
- n = number of pieces of equipment in a specified equipment category
- H = hours per day of equipment operation
- EF = the off-road mobile source emission factor by equipment category and horsepower

Construction equipment would be used at multiple locations along each of the eight reaches of the pipeline alignment and would vary by method, activity, and location. Individual methods are described above. The SCE Easement CM and LAFCD Easement CM would not vary in equipment operations as the only difference between the two methods is the jurisdiction of the easement. A detailed list of the equipment requirements for each construction method and activity is provided in Appendix A.

On-Road Trips

Emissions from worker commute, haul truck, and vendor delivery motor vehicles were calculated by multiplying the emission factors that were compiled running CARB's EMFAC2021 v1.0.2 model by the estimated vehicle trips and VMT for each type of vehicle estimated to be used during the Proposed Project. Details on the on-road Project emissions calculations and model input and output are provided in Appendix A.

Pump Stations

Construction of two pump stations along the backbone alignment (in addition to a pump station constructed at the Joint Treatment Site, as addressed in Section 4.1.1.2) would be required. The exact locations are not fully known at the time of this analysis. However, the pump stations would require a

site that would be up to 10 acres in size. It is assumed that up to 4.2 acres of the site would be disturbed and result in 2.5 acres of impervious surface once operational.

Construction period emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2022.1. CalEEMod is a computer model used to estimate air emissions resulting from land development projects throughout the state of California. CalEEMod was developed by the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air quality management and pollution control districts (CAPCOA 2022). Construction would potentially require demolition, excavation, site preparation, above-ground building construction, and paving. For modeling purposes, it was assumed the Whittier Narrows Pump Station would be constructed between November 2029 and March 2032 while the Santa Fe Pump Station would be constructed between November 2029 and April 2032. Construction would require the use of heavy off-road equipment. Construction equipment estimates are based on CalEEMod default values. **Table 12** lists the phasing and equipment assumed per pump station for modeling purposes.

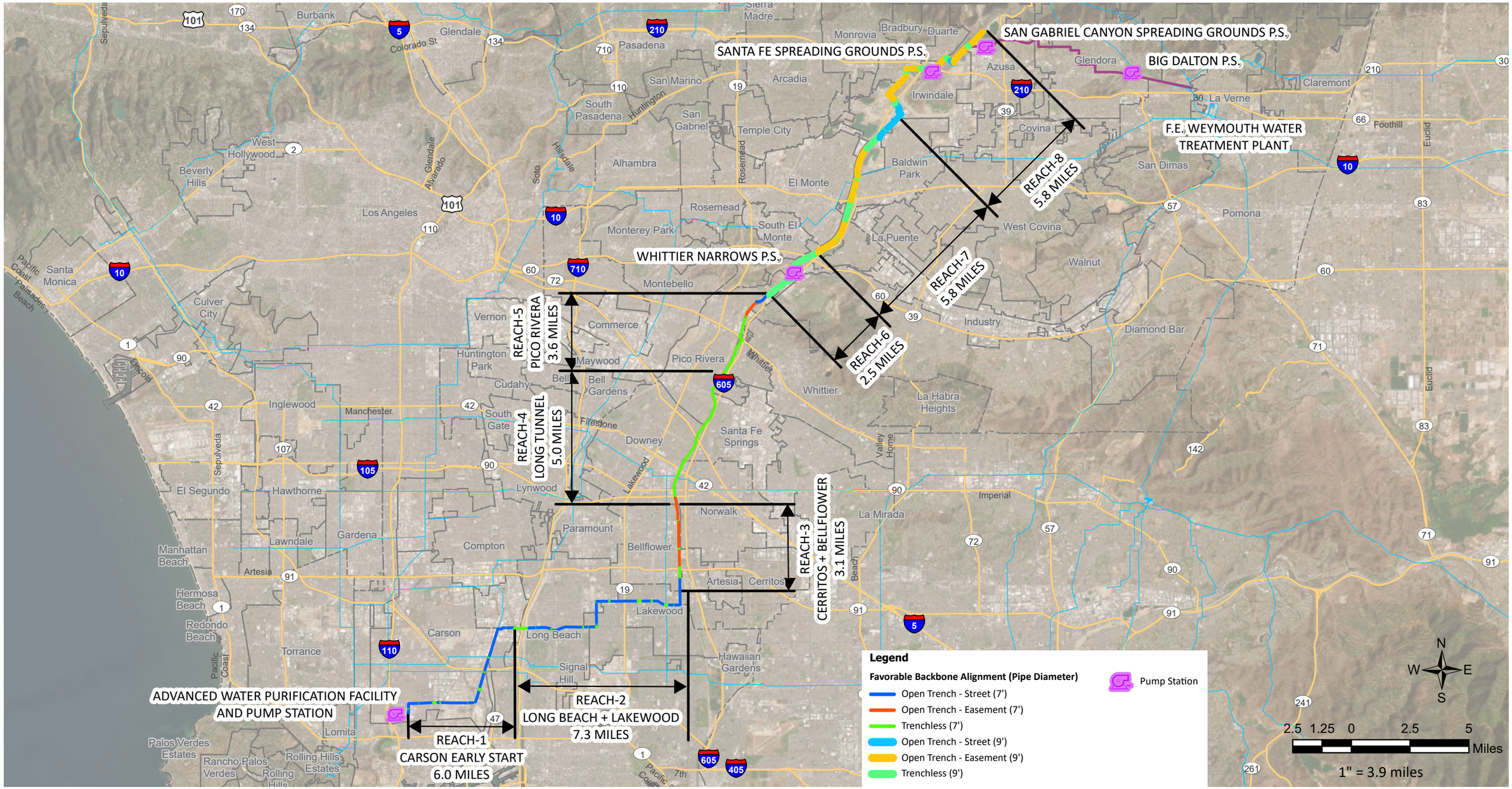
Table 12
PUMP STATION CONSTRUCTION ASSUMPTIONS

Construction Activity	Duration	Equipment	Quantity
Demolition	1 month	Concrete/Industrial Saw	1
		Excavator	3
		Rubber Tired Dozer	2
Site Preparation	1 month	Rubber Tired Dozer	3
		Tractor/Loader/Backhoe	4
Grading	4 months	Excavator	1
		Grader	1
		Rubber Tired Dozer	1
		Tractor/Loader/Backhoe	3
Building Construction	19 months	Crane	1
		Forklift	3
		Generator Set	1
		Tractor/Loader/Backhoe	3
		Welder	1
Paving	2 months	Cement and Mortar Mixer	2
		Paver	1
		Paving Equipment	2
		Roller	2
		Tractor/Loader/Backhoe	1
Architectural Coatings	1 month	Air Compressor	1

Note: Further details regarding construction equipment and activities are provided in Appendix A

4.1.1.2 Joint Treatment Site

Construction would require the use of equipment throughout the Joint Treatment Site for the full term of construction. Construction would be completed in two phases, generally encompassing clearing, hazardous soils removal, excavation, above-grade construction, and paving. Clearing and demolition would result in approximately 53,705 cubic yards of debris to be hauled away. The volume of mass excavation would be approximately 552,000 cubic yards of soil for Phase 1 and approximately 154,000 cubic yards for Phase 2. It is assumed that 20 percent of the soil excavated would be classified as



Source: Black & Veatch 2023

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HELIX Environmental Planning

Conveyance System

Figure 3

hazardous and require export for disposal at a Class II landfill. The rest of the excavated soil would be reused onsite. Emissions generated by construction of the Joint Treatment Site were modeled using CalEEMod. **Table 13** lists the construction equipment and schedule by activity. Additional details are provided in Appendix A.

Table 13
JOINT TREATMENT SITE CONSTRUCTION ASSUMPTIONS

Construction Activity	Start Date	End Date	Equipment
Phase 1: 30 MGD (Initial Delivery)			
Clear & Grub, Utility Relocation, Demo & Waste Haul Off	12/15/2025	5/15/2026	Excavators, Rubber Tired Loaders, Skid Steer Loaders, Crawler Tractors
Hazardous Soils Removal	3/3/2026	8/27/2026	Rollers, Tractors/Loaders/Backhoes, Graders, Off-Highway Trucks
Mass Excavation & Haul Off	5/12/2026	12/11/2026	3 Excavators, 2 Scrapers, 2 Rubber-Tired Loaders, 4 Off-Highway Trucks
Structural Excavation & Foundation Prep	10/29/2026	8/18/2027	Rollers, Tractors/Loaders/Backhoes, Graders, Off-Highway Trucks
Yard Piping	6/9/2027	3/7/2028	Excavators, Rubber Tired Loaders, 2 Dumpers/Tenders
Above Grade Facilities, Equipment, and Site Improvements	6/9/2027	12/31/2029	Excavators, 2 Rubber Tired Loaders, 4 Dumpers/Tenders, 2 Rollers, Tractors/ Loaders/Backhoes, 3 Forklifts, Cranes, Crawler Tractors, Off-Highway Trucks
Roofing & Exterior Cladding	12/31/2027	2/22/2029	Cranes, Forklifts
Paving & Striping	10/2/2029	3/18/2030	Pavers, 2 Rollers, Graders, Dumpers/ Tenders, Off-Highway Trucks
Phase 1: Additional 85 MGD (115 MGD Total)			
Above Grade Facilities, Equipment, and Site Improvements	3/22/2029	3/31/2031	Excavators, 2 Rubber Tired Loaders, 4 Dumpers/Tenders, 2 Rollers, Tractors/Loaders/Backhoes, 3 Forklifts, Cranes, Crawler Tractors, 4 Off-Highway Trucks
Roofing & Exterior Cladding	2/23/2029	7/13/2029	Cranes, Forklifts
Paving & Striping	4/22/2030	6/14/2030	Graders, Pavers, 2 Rollers, Dumpers/Tenders, Off-Highway Trucks
Storm Drain Culvert	3/18/2031	7/20/2032	Skid Steer Loaders
Phase 2: Additional 35 MGD (150 MGD Total)			
Hazardous Soils Removal	11/2/2032	1/24/2033	Rollers, Tractors/Loaders/Backhoes, Graders, Off-Highway Trucks
Structural Excavation, Haul Off, and Foundation Prep	2/8/2033	9/26/2033	Rollers, Tractors/Loaders/Backhoes, Graders, Off-Highway Trucks
Yard Piping	7/12/2033	1/23/2034	Excavators, Rubber Tired Loaders, Dumpers/Tenders
Process Equipment and Above Grade Process Piping Installation	7/12/2033	2/7/2036	Excavators, Rubber Tired Loaders, 2 Dumpers/Tenders, Rollers, Tractors/Loaders/Backhoes, Forklifts, Cranes, Off-Highway Trucks
Roofing & Exterior Cladding	3/1/2034	5/23/2034	Cranes, Forklifts

Construction Activity	Start Date	End Date	Equipment
Paving	9/13/2034	10/10/2034	Graders, Pavers, 2 Rollers, Dumpers/Tenders, Off-Highway Trucks

Note: Further details regarding construction equipment and activities are provided in Appendix A
MGD = million gallons per day

4.1.2 Operation

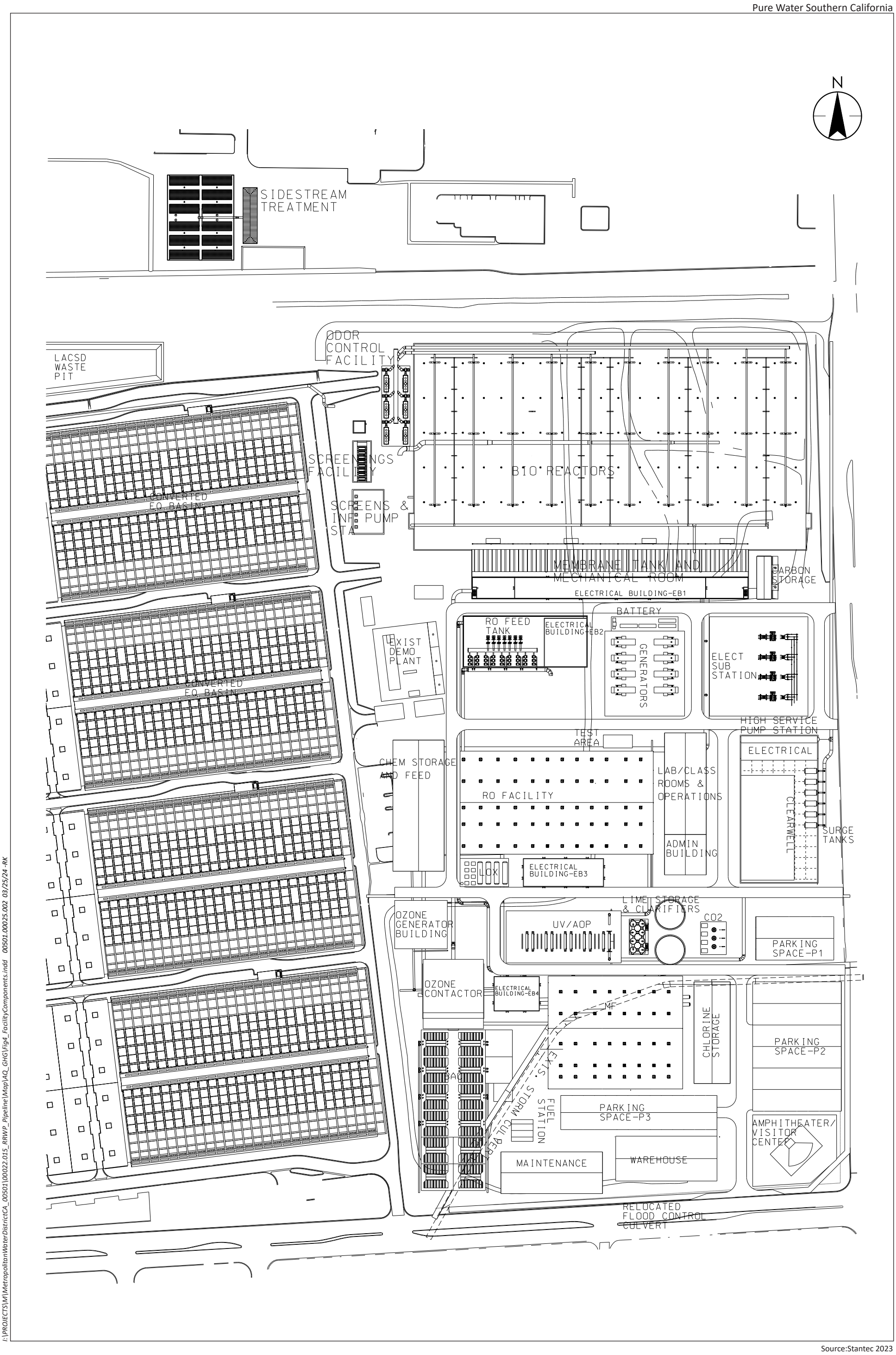
4.1.2.1 Backbone Conveyance System

Following construction, the backbone pipeline would not generate emissions or consume energy. There would be some minimal operations and ongoing maintenance activities associated with the pipeline, but emissions or energy consumed would be negligible.

Operation of the pump stations would require a storage tank, approximately 25-foot-tall building, surge suppression system, perimeter security fencing, potentially an electrical substation, power poles, potentially a standby generator, and paved areas on sites ranging from approximately 4 acres to 10 acres, depending on the pump station capacity. The pump stations would require pumps between 1,000 and 4,500 horsepower, depending on the location. Each pump station would require uninterrupted power supply, including potentially a standby generator onsite. Locations, layouts, and site plans are not known at this time and will be developed in the future. Emissions would be generated by the regular testing of the standby generators. Energy would be consumed in the form of diesel fuel by each of the generators and electricity by each of the pumps. Emissions associated with operation of the standby generators were estimated using USEPA Tier 4 emission factors assuming each generator would have a power rating of 175 kilowatts and be tested for one hour per day up to 30 days per year. GHG emissions from the consumption of electricity were estimated using GHG intensity factors for SCE available in Appendix G of the CalEEMod User's Guide (CAPCOA 2022). Additional details are provided in Appendix A.

4.1.2.2 Joint Treatment Site

The Joint Treatment Site would contain multiple components throughout the site. Those which were modeled as resulting in emissions of criteria pollutants, precursors, and GHGs include the influent pump station, ultraviolet/advanced oxidation process (UV/AOP) system, membrane bioreactor (MBR), odor control facility for MBR and influent pump station, sidestream centrate treatment system, ozone facility, the biological activated carbon (BAC) facility,the reverse osmosis facility, and product water pump station. The configuration of these facilities within the overall Joint Treatment Site is shown in **Figure 4**. Operational equipment would include pumps, mixers, and blowers within the MBR, which would be located indoors. The ozone facility would require a generator and pumps, and the BAC would contain outdoor pumps and blowers. The reverse osmosis facility involves multiple pumps on a large site in the center of the AWP Facility. Six large effluent pumps, with up to five operating at a given time, were assumed to be required for the pump station, which would be located at the clearwell. Emission sources are described by source type below. Source types include stationary sources, mobile sources, process nitrogen, and electricity consumption. Additional details are provided in Appendix A.



Source:Stantec 2023

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Advanced Water Purification Facility Components

Figure 4

Stationary

Stationary sources located at the Joint Treatment Site would include diesel backup generators and process emissions from the MBR and sidestream centrate treatment system. The AWP Facility would include the installation of eight diesel backup generators with an electrical generation rating of 4,000 kilowatts each. Each of the generators is anticipated to be operated for testing/maintenance no more than 1 hour in any single day and up to 30 hours per year. Calculations of emissions for the proposed emergency generators were based on these usage rates and USEPA Tier 4 emissions factors. Detailed emissions quantification is provided in Appendix A. The MBR and sidestream centrate treatment system would result in evaporative emissions of VOCs. Emission estimates were taken from the health risk assessment (HRA) described in more detail in Section 4.1.5, below, and included as Appendix B to this report.

Mobile

Emissions from worker/visitor commute and vendor delivery motor vehicles were calculated by multiplying the emission factors that were compiled running CARB's EMFAC2021 v1.0.2 model by the estimated vehicle trips and VMT for each type of vehicle estimated to be used during the Proposed Project. Details on the on-road Project emissions calculations and model input and output are provided in Appendix A.

Nitrification/Denitrification

N_2O is generated as a by-product of nitrification, or as an intermediate product of denitrification, during the treatment of wastewater. There are many factors affecting N_2O emissions from wastewater treatment systems such as the temperature and dissolved oxygen concentration of the wastewater, and the specific operational conditions. The Proposed Project would utilize biological nitrogen removal for nitrogen management. Chemical supplementation may be necessary though process development is being pursued to reduce this requirement. The Sanitation Districts' Wastewater Research Section measured emissions from the Pure Water Southern California Demonstration Facility MBR during nitrification-only tertiary-MBR and nitrification-denitrification secondary-MBR operations to estimate emission factors based on load and flow (Sanitation Districts 2023). These emission factors were applied to the load and maximum flow of the Proposed Project to estimate annual N_2O emissions.

The Proposed Project is also expected to reduce the nitrogen load discharged to the ocean and the associated N_2O emissions. Inclusion of the ocean discharge component is consistent with CEQA Guidelines sections 15064(d), in general, and 15064.4(a), specifically, to fully consider and account for the Proposed Project's GHG impact. The Sanitation Districts conducted an analysis of the Proposed Project's impacts on nitrogen discharged to the ocean and associated N_2O emissions as well as emissions associated with the non-biological nitrogen removal processes (Sanitation Districts 2025).

The Proposed Project would also augment the biological nitrogen management process with a glycerin-based carbon source, such as MicroC-2000 manufactured by EOSi, which supports both denitrification and biological phosphorus removal. The oxidation of the glycerin would result in the release of CO_2. Several carbon source manufacturers, including EOSi, have obtained the BioPreferred® certification from the United States Department of Agriculture. Biogenic testing was performed to demonstrate that the carbon is 100 percent biogenic. Therefore, the CO_2 emissions resulting from carbon addition do not

need to be included in the Scope 1 emission reporting in accordance with IPCC Guidelines (Jacobs 2024). As such, emissions associated with use of supplemental carbon are not included in the Project totals.

Electricity Consumption

The Proposed Project would use electricity for the operation of equipment and facilities at the Joint Treatment Site. Electricity generation typically entails the combustion of fossil fuels, including natural gas and coal, which are then stored and transported to end users. A project's electricity use is thus associated with the offsite or indirect emission of GHGs at the source of electricity generation (power plant). Offsite GHG emissions resulting from the Proposed Project's energy use were estimated using intensity factors for SCE provided in the CalEEMod users Guide, Appendix D (CAPCOA 2022).

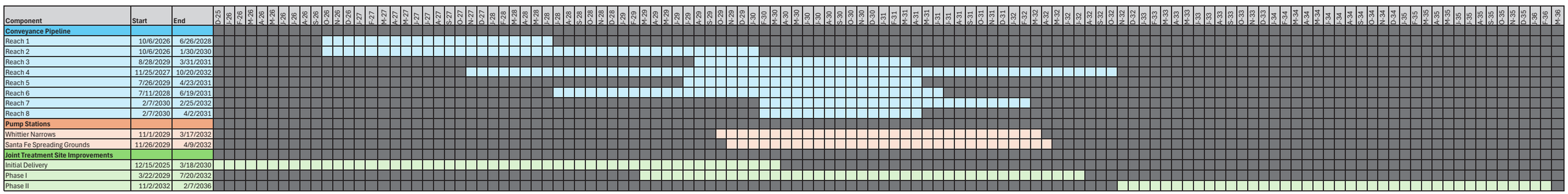
4.1.3 Concurrent Construction and Operational Emissions

As detailed in Section 1.4 and illustrated in **Figure 5**, construction and operation of Proposed Project are expected to occur in two phases. An initial delivery component as part of Phase 1 is proposed to be operational in 2030. Upon completion of the initial delivery component, construction of Phase 1 would continue at the AWP Facility to produce approximately 115 MGD of purified water, and the remainder of the backbone pipeline and associated pump stations would also be completed. Phase 1 is anticipated to be complete by late 2032. Upon completion of Phase 1, construction of Phase 2 would continue involving the expansion of the AWP Facility to purify up to a total of 150 MGD. Due to this anticipated phasing, it is anticipated that operation of the initial delivery component of Phase 1 may occur concurrently with construction of the remainder of Phase 1 and that operation of Phase 1 may occur concurrently with construction of Phase 2. The analysis sums the concurrent construction and operational emissions during these periods of overlap for comparison with the SCAQMD daily thresholds for operations, which are more restrictive than the construction period thresholds, and therefore more conservative.

4.1.4 Localized Significance Threshold Methodology

As part of the SCAQMD's environmental justice program, more attention has been focused on localized air quality effects. Also, while regional impact analysis is based on attaining or maintaining regional emissions standards, localized impact analysis compares the concentration of a pollutant at a receptor site to a health-based standard.

SCAQMD has developed a localized significance threshold (LST) methodology and mass rate look-up tables by source receptor area (SRA) that can be used by public agencies to determine whether a project may generate significant adverse localized air quality impacts. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard; they are developed based on the ambient concentrations of that pollutant for each SRA (SCAQMD 2009b). The LST methodology translates the concentration standards into emissions thresholds that are a function of project site area, source to receptor distance, and the location within the SCAB. The LST methodology is recommended to be limited to projects of 5 acres or less and to avoid the need for complex dispersion modeling. For projects that exceed 5 acres, the 5-acre LST look-up values can be used as a screening tool to determine which pollutants require detailed analysis. This approach is conservative as it assumes that all onsite emissions would occur within a 5-acre area and over-predicts potential localized impacts (i.e., more pollutant emissions occurring within a smaller area and within closer proximity to potential sensitive receptors). If a project



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Pure Water Construction Phasing

Figure 5

exceeds the LST look up values, then the SCAQMD recommends that project specific localized air quality modeling be performed.

As illustrated in **Figure 6**, the approximately 39-mile backbone pipeline would pass through SRAs 4, 5, 9, and 11 and portions would be adjacent to existing sensitive receptors. Therefore, the most conservative LSTs for project sites of 2 acres with receptors located within 25 meters (82 feet) in SRAs 4, 5, 9, and 11 are used for determining localized significance of backbone pipeline construction emissions. The AWP Facility would be located on a 56-acre site in SRA 4 with single-family homes located approximately 130 feet to the south across Lomita Boulevard. Therefore, the LSTs in SRA 4 for project sites of 5 acres with receptors located within 50 meters are used for determining localized significance of AWP Facility construction emissions. The Whittier Narrows Pump Station would be located on an approximately 4.2-acre disturbed site in SRA 11. Because the exact site has not been selected, the pump station's proximity to sensitive receptors is not known. Therefore, LSTs in SRA 11 for project sites of less than 5 acres with receptors located within 25 meters (82 feet) are used for determining localized significance of the Whittier Narrows Pump Station construction emissions. The Santa Fe Pump Station would be located on an approximately 4.2-acre disturbed site in SRA 9. Therefore, the LSTs in SRA 9 for project sites of less than 5 acres with receptors located within 25 meters (82 feet) are used for determining localized significance of the Santa Fe Pump Station construction emissions.

4.1.5 Health Risk Assessment

The Sanitation Districts contracted with Ramboll Americas Engineering Solutions, Inc. (Ramboll) to conduct a HRA of the Warren Facility and Joint Treatment Site (Ramboll 2024). The HRA, provided in its entirety as Appendix B to this report, analyzed multiple scenarios for operations at the Warren Facility and Joint Treatment Site, including the net change in health risks attributable to the Proposed Project. New sources of emissions modeled as part of the Proposed Project include the bioreactors, emergency generators, sidestream centrate treatment, and onsite truck travel and idling. The Hotspots Analysis and Reporting Program (HARP) Air Dispersion Modeling Risk Tool (ADMRT Version 22118) with built-in AERMOD developed by CARB was used to estimate ambient air concentrations and evaluate the health risks associated with the operational TAC emissions at offsite receptors. Details related to source parameters, meteorological data, topographic information, and receptor parameters are provided in Ramboll's report, included as Appendix B to this report.

4.2 SIGNIFICANCE CRITERIA

4.2.1 Air Quality

According to Appendix G of the State CEQA Guidelines, a project would have a significant air quality environmental impact if it would:

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

2. 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;

3. Expose sensitive receptors (i.e., day care centers, schools, retirement homes, and hospitals or medical patients in residential homes which could be impacted by air pollutants) to substantial pollutant concentrations; or

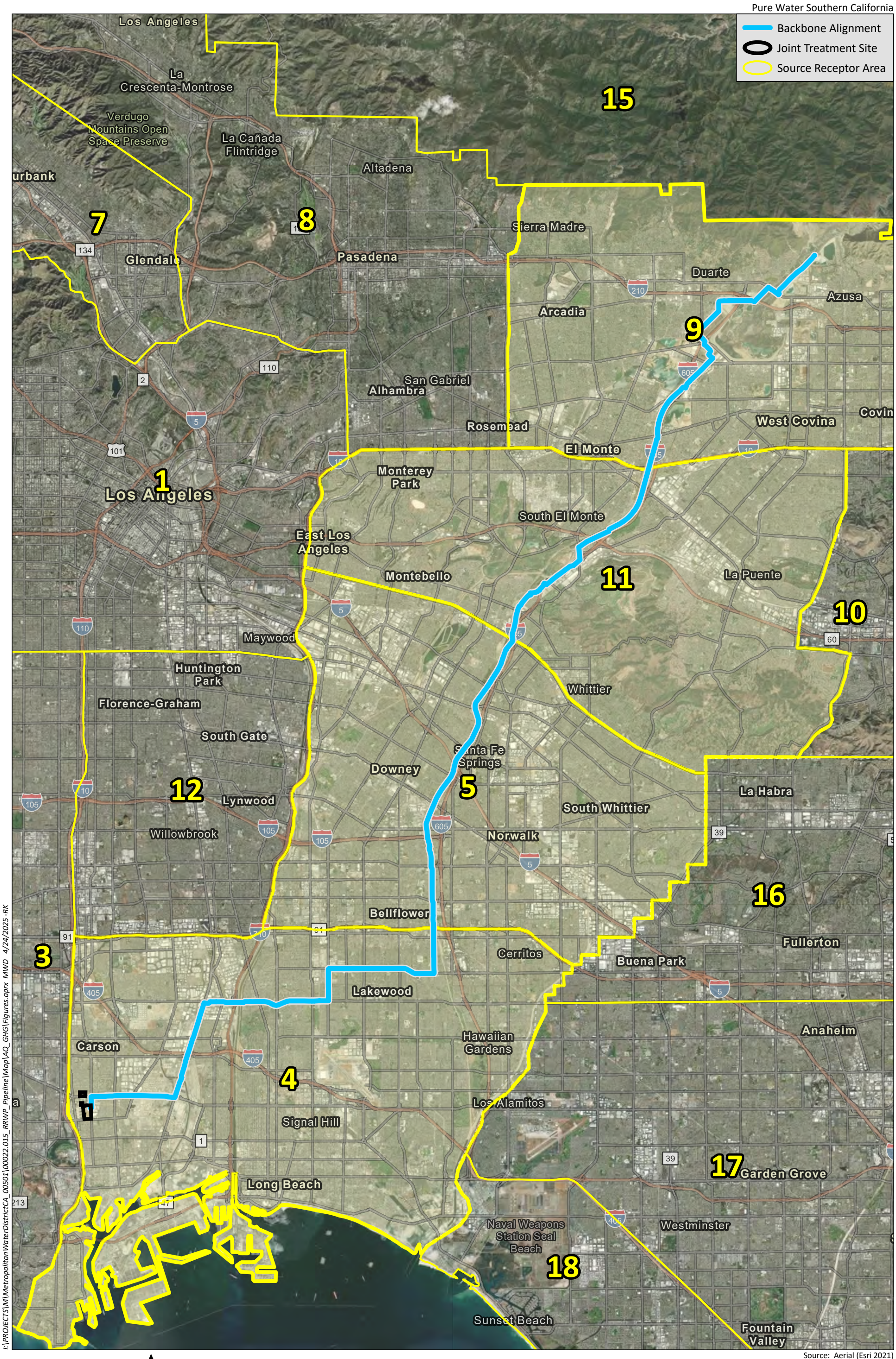
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Appendix G of the State CEQA Guidelines states that the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. The SCAQMD has established significance thresholds to assess the regional and localized impacts of project-related air pollutant emissions. The significance thresholds are updated, as needed, to appropriately represent the most current technical information and attainment status in the SCAB. **Table 14** presents the most current significance thresholds, including regional daily thresholds for short-term construction and long-term operational emissions; maximum incremental cancer risk and hazard indices for TACs; and maximum ambient concentrations for exposure of sensitive receptors to localized pollutants. A project with daily emission rates, risk values, or concentrations below these thresholds is generally considered to have a less than significant effect on air quality.

Table 14
SCAQMD THRESHOLDS OF SIGNIFICANCE

Pollutant	Construction	Operation
Mass Daily Thresholds (pounds per day)		
VOC	75	55
NO_X	100	55
CO	550	550
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_X	150	150
Lead	3	3
Toxic Air Contaminants		
TACs	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	
Ambient Air Quality for Criteria Pollutants		
NO_2	1-hour average ≥ 0.18 ppm Annual average ≥ 0.03 ppm	
CO	1-hour average ≥ 20.0 ppm (state) 8-hour average ≥ 9.0 ppm (state/federal)	
PM_{10}	24-hour average ≥ 10.4 µg/m^3 (construction) 24-hour average ≥ 2.5 µg/m^3 (operation) Annual average ≥ 1.0 µg/m^3	
$PM_{2.5}$	24-hour average ≥ 10.4 µg/m^3 (construction) 24-hour average ≥ 2.5 µg/m^3 (operation)	
SO_2	1-hour average ≥ 0.075 ppm 24-hour average ≥ 0.04 ppm	

Source: SCAQMD 2023d
VOC = volatile organic compound; NO_X = nitrogen oxides; CO = carbon monoxide; PM_{10} = respirable particulate matter with a diameter of 10 microns or less; $PM_{2.5}$ = fine particulate matter with a diameter of 2.5 microns or less; SO_X = sulfur oxides; TACs = toxic air contaminants; GHG = greenhouse gas; MT/yr = metric tons per year; CO_2e = carbon dioxide equivalent; NO_2 = nitrogen dioxide; ppm = parts per million; µg/m^3 = micrograms per cubic meter



Source: Aerial (Esri 2021)

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Source Receptor Areas (SRA)

Figure 6

4.2.2 Greenhouse Gases

Given the relatively small levels of emissions generated by a typical project in relationship to the total amount of GHG emissions generated on a national or global basis, individual projects are not expected to result in significant, direct impacts with respect to climate change. However, given the magnitude of the impact of GHG emissions on the global climate, GHG emissions from individual projects could result in significant, cumulative impacts with respect to climate change.

According to Appendix G of the State CEQA Guidelines, a project would have a significant environmental impact if it would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

The determination of significance is governed by CEQA Guidelines 15064.4, entitled “Determining the Significance of Impacts from Greenhouse Gas Emissions.” CEQA Guidelines 15064.4(a) states, “[t]he determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should 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. A lead agency shall have discretion to determine, in the context of a particular project, whether to … [use a quantitative model or qualitative model]” (emphasis added). In turn, CEQA Guidelines 15064.4(b) clarifies that a lead agency should consider “Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.”

CEQA Guidelines Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, such as CAPCOA, as long as any threshold chosen is supported by substantial evidence (CEOA Guidelines Section 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (CEQA Guidelines Section 15130). It is noted that the CEQA Guidelines were amended in March of 2010 in response to SB 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact less than significant.

Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas

emissions." Put another way, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of a less-than-significant impact for cumulative GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

Metropolitan's CAP, adopted May 10, 2022, is a qualified GHG reduction plan consistent with CEQA Guidelines Section 15183.5. Projects consistent with an applicable local qualified GHG reduction plan are eligible for streamlined GHG analysis. The CAP identifies actions to reduce Metropolitan's carbon footprint in accordance with California's goals to cut GHG emissions by 40 percent from 1990 levels by 2030 and achieve complete carbon neutrality by 2045. Projects which are consistent with the CAP would therefore be consistent with statewide GHG reduction goals for 2030 and 2045. Therefore, this analysis determines the significance of GHG impacts based on consistency with Metropolitan's CAP.

CEQA Guidelines Section 15064.4(a) states 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 GHG emissions resulting from a project. Therefore, GHG emissions are estimated using the methods described in Section 4.1 and assumptions described in Section 4.2, above, and are provided for informational purposes.

4.2.3 Energy

According to Appendix G of the State CEQA Guidelines, a project would have a significant environmental impact if it would:

1. Result in the wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or

2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.2.4 General Conformity

Metropolitan is seeking financing from the federal grant sources and is expected to require various federal approvals; therefore, the Proposed Project requires compliance not only with the CEQA, but also with the federal CAA. As such, the air quality analysis has been conducted to satisfy General Conformity requirements.

The USEPA General Conformity Rule applies to federal actions occurring in nonattainment or maintenance areas when the total direct and indirect emissions of nonattainment pollutants (or their precursors) exceed specified thresholds. The emissions thresholds that trigger requirements for a conformity analysis are called *de minimis* levels. *De minimis* levels (in tons per year) vary by pollutant and also depend on the severity of the nonattainment status for the air quality management area in question.

A conformity applicability analysis is the first step of a conformity evaluation and assesses if a federal action must be supported by a conformity determination. This is typically done by quantifying applicable direct and indirect emissions that are expected to result from implementation of the federal action. If the total emissions would not exceed the *de minimis* levels, then the federal action is screened out as not being subject to additional requirements of general conformity and the conformity evaluation process is completed. *De minimis* emissions thresholds are presented in **Table 15**. The thresholds used for the general conformity analysis for this Project are 10 tons per year for VOCs and NO_X, as the SCAB is

classified as an extreme nonattainment area for the 8-hour NAAQS for ozone, and 70 tons per year for $PM_{2.5}$, as the SCAB is classified as a serious nonattainment area for $PM_{2.5}$.

Table 15
GENERAL CONFORMITY DE MINIMIS LEVELS

Pollutant	Area Type	Tons per Year
Ozone (VOCs or NO_X)	Extreme nonattainment area	10
$PM_{2.5}$	Serious nonattainment area	70

Source: 40 CFR 93.153(b)
VOCs = volatile organic compounds; NO_X = nitrogen oxides; $PM_{2.5}$ = fine particulate matter with a diameter of 2.5 microns or less

5.0 AIR QUALITY IMPACTS

This section evaluates potential impacts of the Proposed Project related to consistency with air quality plans, a cumulatively considerable net increase of nonattainment criteria pollutants, sensitive receptors, and odors.

5.1 CONSISTENCY WITH AIR QUALITY PLANS

The SCAQMD is required, pursuant to the federal CAA, to reduce emissions of criteria pollutants for which the SCAB is in nonattainment. Strategies to achieve these emissions reductions are developed in the AQMP, prepared by the SCAQMD for the region. SCAG has prepared the RTP/SCS, a long-range transportation plan that uses growth forecasts to project trends out over a 20 -year period to identify regional transportation strategies to address mobility needs. These growth forecasts form the basis for the land use and transportation control portions of the AQMP. These documents are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. Both the RTP/SCS and AQMP are based, in part, on projections originating with County and City General Plans.[2]

Projects that are consistent with the land use designation for their project site are generally consistent with the population and growth assumptions used in the AQMP. The Proposed Project does not have a residential component and would not result in regional population growth. The proposed improvements would provide a local source of water to the region, serving the existing and planned populations. The Proposed Project would not result in population or employment increases and, therefore, would not exceed the growth projection assumptions in the AQMP. Workers for the Proposed Project would be recruited from the local pool of labor and would not create employment growth exceeding growth estimates for the area. The proposed improvements would serve existing and planned development and would not create conditions for the creation of new housing, which would thereby induce population growth.

Because the Proposed Project would not generate population and employment growth beyond the levels assumed for the region, pursuant to SCAQMD guidelines, the Proposed Project is considered consistent with the region's AQMP. As such, Proposed Project-related emissions are accounted for in the AQMP, which is crafted to bring the basin into attainment for all criteria pollutants. Furthermore, as described in Section 6.2, below, construction and operational period emissions of pollutants for which

[2] SCAG serves as the federally designated metropolitan planning organization for the southern California region.

the SCAB is in nonattainment (ozone precursors VOC and NO_X, PM_{10}, and $PM_{2.5}$) would be below SCAQMD thresholds with implementation of mitigation. Accordingly, the Proposed Project would be consistent with the emissions projections in the AQMP, thus resulting in a less-than-significant impact.

5.2 CUMULATIVELY CONSIDERABLE NET INCREASE OF NONATTAINMENT CRITERIA POLLUTANTS

The Proposed Project would generate criteria pollutants during construction and operation. To determine whether a project would result in a cumulatively considerable net increase in criteria pollutant emissions that would violate an air quality standard or contribute substantially to an existing or projected air quality violation, a project's emissions are evaluated based on the quantitative emission thresholds established by the SCAQMD (as shown in **Table 14**). The Proposed Project's emissions were estimated using the methods and assumptions described in Section 4.1. Project-specific input was based on information provided by the Pure Water engineering team. Additional details of phasing, selection of construction equipment, and other modeled parameters are included in Appendix A.

5.2.1 Construction Emissions

As discussed in Section 4.1.1, the Proposed Project includes the construction of multiple components occurring between December 2025 and February 2036. Individual components include the backbone pipeline, the Whittier Narrows Pump Station, the Santa Fe Pump Station, and the Joint Treatment Site improvements. Construction of individual components of the Proposed Project is anticipated to overlap to various degrees throughout the construction period as shown in Figure 5. The following discussion provides results of the construction period analysis for each of the components individually before considering the potential overlap of activities and emissions. Peak daily construction emissions and a comparison with SCAQMD thresholds is provided in Section 5.2.1.3, Summary, following presentation of the results of individual components.

5.2.1.1 Backbone Conveyance System

Backbone Pipeline

Construction of the backbone pipeline would result in temporary increases in air pollutant emissions. These emissions would be generated from both offroad equipment operating onsite and onroad vehicles traveling offsite. The results of the calculations for backbone pipeline offroad construction equipment by construction method are shown in **Table 16**. The data are presented as the maximum anticipated daily emissions for each method prior to the implementation of mitigation measures.

Table 16
UNMITIGATED BACKBONE PIPELINE OFFROAD CONSTRUCTION EMISSIONS BY CONSTRUCTION METHOD

Construction Method	Pollutant Emissions (pounds/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Roadways CM	8.55	60.00	75.06	0.20	2.49	2.29
SCE Easement CM	8.65	56.99	73.00	0.20	2.45	2.25
LAFCD Easement CM	8.65	56.99	73.00	0.20	2.45	2.25
Pipe Jacking CM (7-foot)	4.40	23.88	34.38	0.12	1.15	1.06
Microtunneling CM	5.46	49.21	39.96	0.15	1.50	1.38
Traditional Tunneling CM (7-foot)	4.24	23.35	32.36	0.10	1.14	1.05
Pipe Jacking CM (9-foot)	4.37	24.82	35.22	0.12	1.14	1.05
Shield Tunneling CM	4.21	23.16	33.83	0.11	1.11	1.02
Traditional Tunneling CM (9-foot)	4.21	23.44	32.18	0.10	1.13	1.04

Note: Modeling data are provided in Appendix A

Onroad emissions would vary not only by construction method, but also by reach due to the varying length of each reach, soil and debris hauling requirements, and worker requirements. The results of the calculations for backbone pipeline onroad construction trips by reach and construction method are shown in **Table 17**. The data are presented as the maximum anticipated daily emissions for each method.

Table 17
UNMITIGATED BACKBONE PIPELINE ONROAD CONSTRUCTION EMISSIONS BY REACH AND METHOD

Reach	Construction Method	Pollutant Emissions (pounds/day)					
		ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Reach 1	Roadways CM	0.89	14.66	14.14	0.15	1.72	0.67
	Pipe Jacking CM (7-foot)	0.23	1.78	5.96	0.03	0.28	0.11
	Microtunneling CM	0.14	1.04	3.57	0.02	0.17	0.06
Reach 2	Roadways CM	0.70	11.51	11.11	0.12	1.34	0.53
	Pipe Jacking CM (7-foot)	0.03	0.17	0.60	0.00	0.03	0.01
	Microtunneling CM	0.31	1.74	8.15	0.04	0.31	0.12
Reach 3	Roadways CM	0.38	7.08	5.19	0.07	0.86	0.32
	SCE Easement CM	0.38	7.08	5.19	0.07	0.86	0.32
	LAFCD Easement CM	0.38	7.08	5.19	0.07	0.86	0.32
	Pipe Jacking CM (7-foot)	0.08	0.56	1.93	0.01	0.09	0.03
	Microtunneling CM	0.09	0.51	2.10	0.01	0.09	0.03
Reach 4	Roadways CM	0.15	2.51	2.31	0.03	0.37	0.13
	LAFCD Easement CM	0.15	2.51	2.31	0.03	0.37	0.13
	Microtunneling CM	0.02	0.10	0.43	0.00	0.02	0.01
	Traditional Tunneling CM (7-foot)	0.08	0.62	2.04	0.01	0.10	0.04
Reach 5	Roadways CM	0.77	13.09	11.81	0.13	1.54	0.60
	SCE Easement CM	0.77	13.09	11.81	0.13	1.54	0.60
	Pipe Jacking CM (7-foot)	0.07	0.51	1.74	0.01	0.08	0.03
	Microtunneling CM	0.11	0.77	2.81	0.01	0.12	0.05
	Traditional Tunneling CM (7-foot)	0.09	0.64	2.20	0.01	0.10	0.04

Reach	Construction Method	Pollutant Emissions (pounds/day)					
		ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Reach 6	Traditional Tunneling CM (9-foot)	0.23	1.95	5.77	0.03	0.31	0.12
Reach 7	Roadways CM	0.64	11.14	9.31	0.11	1.31	0.51
	SCE Easement CM	0.64	11.14	9.31	0.11	1.31	0.51
	Shield Tunneling CM	0.17	1.14	4.30	0.02	0.19	0.07
	Traditional Tunneling CM (9-foot)	0.26	1.76	6.77	0.03	0.30	0.11
Reach 8	Roadways CM	0.90	11.55	11.91	0.11	1.24	0.48
	SCE Easement CM	0.90	11.55	11.91	0.11	1.24	0.48
	LAFCD Easement CM	0.90	11.55	11.91	0.11	1.24	0.48
	Pipe Jacking CM (9-foot)	0.57	3.76	14.84	0.07	0.64	0.24
	Shield Tunneling CM	0.19	0.88	5.00	0.02	0.17	0.06

Note: Modeling data are provided in Appendix A

Pump Stations

The results of the calculations for construction of the Santa Fe Spreading Grounds and Whittier Narrows pump stations are shown in **Table 18**. The data are presented as the maximum anticipated daily emissions by construction activity.

Table 18
UNMITIGATED PUMP STATION CONSTRUCTION EMISSIONS

Construction Activity	Pollutant Emissions (pounds/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Santa Fe Pump Station						
Demolition	2.25	23.48	21.02	0.06	5.57	1.62
Site Preparation	3.05	27.61	29.49	0.06	9.39	5.12
Grading	1.58	16.40	19.56	0.05	4.45	2.15
Building Construction	0.94	8.39	12.88	0.02	0.26	0.24
Paving	0.77	5.45	9.50	0.01	0.43	0.22
Architectural Coatings	0.09	0.77	1.10	0.00	0.01	0.01
Whittier Narrows Pump Station						
Demolition	2.26	23.94	21.20	0.06	6.01	1.70
Site Preparation	3.05	27.61	29.49	0.06	9.39	5.12
Grading	1.58	16.40	19.56	0.05	4.45	2.15
Building Construction	0.94	8.39	12.88	0.02	0.26	0.24
Paving	0.77	5.45	9.50	0.01	0.43	0.22
Architectural Coatings	0.09	0.77	1.10	0.00	0.01	0.01

Note: Modeling data are provided in Appendix A

5.2.1.2 Joint Treatment Site

The results of the calculations for construction of facilities at the Joint Treatment Site are shown in **Table 19**. The data are presented as the maximum anticipated daily emissions by construction activity.

Table 19
UNMITIGATED JOINT TREATMENT SITE CONSTRUCTION EMISSIONS

Construction Activity	Pollutant Emissions (pounds/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 1: 30 MGD (Initial Delivery)						
Clear & Grub, Utility Relocation, Demo & Waste Haul Off	1.98	18.65	13.87	0.05	8.55	2.04
Hazardous Soils Removal	1.07	15.28	13.59	0.06	2.52	0.92
Mass Excavation & Haul Off	3.53	26.19	31.89	0.09	2.20	1.11
Structural Excavation and Foundation Prep	0.79	6.26	9.34	0.02	0.63	0.32
Yard Piping	0.67	4.26	6.78	0.02	0.30	0.19
Above Grade Facilities, Equipment, and Site Improvements	3.39	32.36	29.12	0.07	1.25	1.15
Roofing & Exterior Cladding	0.33	3.04	2.79	0.01	0.13	0.12
Paving & Striping	1.25	8.27	11.85	0.03	0.85	0.43
Phase 1: Additional 85 MGD (115 MGD Total)						
Above Grade Facilities, Equipment, and Site Improvements	3.77	31.82	32.07	0.09	1.21	1.11
Roofing & Exterior Cladding	0.32	2.71	2.76	0.01	0.12	0.11
Paving & Striping	0.92	7.77	11.14	0.03	0.64	0.37
Storm Drain Culvert Relocation	0.11	0.99	1.82	0.00	0.06	0.04
Phase 2: Additional 35 MGD (150 MGD Total)						
Hazardous Soils Removal	0.82	5.17	10.24	0.02	0.57	0.25
Structural Excavation and Foundation Prep	0.64	4.32	9.11	0.02	0.51	0.21
Yard Piping	0.54	2.66	6.09	0.02	0.21	0.13
Process Equipment and Above Grade Process Piping Installation	1.21	7.78	13.56	0.03	0.30	0.28
Roofing & Exterior Cladding	0.16	1.11	1.88	0.01	0.05	0.05
Paving	0.83	5.62	10.53	0.03	0.23	0.21

Note: Modeling data are provided in Appendix A

5.2.1.3 Summary of Construction Emissions

As discussed in Section 4.1.1, the backbone pipeline was assumed to be constructed between October 2026 through April 2031, the Whittier Narrows Pump Station was assumed to be constructed between November 2029 and March 2032, the Santa Fe Pump Station was assumed to be constructed between November 2029 and April 2032, and the Joint Treatment Site improvements were assumed to be completed between December 2025 and February 2036. As such, construction of individual components of the Proposed Project is anticipated to overlap to various degrees throughout the construction period. The results of the calculations for overlapping construction activities are shown in **Table 20**. The data are presented as the maximum anticipated daily emissions by year for comparison with SCAQMD thresholds. The peak daily construction emissions would occur in 2030 when 12 different sites across 6 reaches of the 39-mile backbone pipeline alignment are assumed to be active, concurrent with construction activities at the Whittier Narrows Pump Station, the Santa Fe Pump Station, and the Joint Treatment Site.

Table 20
UNMITIGATED PEAK DAILY CONSTRUCTION EMISSIONS

Year	Pollutant Emissions (pounds/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2025	1.98	18.65	13.87	0.05	8.55	2.03
2026	25.21	204.88	234.65	0.86	21.28	9.81
2027	41.37	300.82	373.25	1.26	15.68	12.07
2028	40.92	297.03	366.57	1.25	15.16	11.85
2029	60.89	455.05	520.40	1.66	36.93	25.25
2030	93.07	534.79	660.68	2.35	38.89	26.72
2031	55.89	318.37	413.54	1.41	15.75	12.63
2032	15.52	91.00	138.24	0.41	5.23	3.96
2033	2.39	14.75	28.77	0.06	1.02	0.62
2034	2.02	13.06	24.05	0.06	0.51	0.47
2035	1.17	7.14	13.48	0.03	0.26	0.24
2036	1.14	6.86	13.45	0.03	0.24	0.23
Maximum Daily Emissions	**93.07**	**534.79**	**660.68**	**2.35**	**38.89**	**26.72**
SCAQMD Significance Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Potentially Significant Impact?	***Yes***	***Yes***	***Yes***	***No***	***No***	***No***

Note: Modeling data are provided in Appendix A

As shown in **Table 20**, maximum daily emissions associated with construction of the Proposed Project would exceed the SCAQMD daily significance thresholds for VOC, NO_X, and CO. Construction of the Proposed Project would therefore result in a potentially significant impact.

5.2.2 Operational Emissions

5.2.2.1 Backbone Conveyance System

Backbone Pipeline

Following construction, the backbone pipeline would not generate emissions or consume energy. There would be some minimal operations and ongoing maintenance activities associated with the pipeline, but emissions or energy consumed would be negligible.

Pump Stations

Operation of the Santa Fe Spreading Grounds and Whittier Narrows pump stations would require a concrete tank, 25-foot-tall building, surrounding walls, power poles, a standby generator, and paved areas on approximately 4.2-acre disturbed sites. Criteria pollutant emissions would be generated by the regular testing of the standby generators. Operational emissions generated by the pump stations are shown in **Table 21**. The data are presented as the maximum anticipated daily emissions by source type. It should be noted there would be occasional trips made by workers visiting the pump station sites for ongoing operations and maintenance; however, these trips would be minimal, thereby resulting in negligible daily emissions.

Table 21
BACKBONE PUMP STATION OPERATIONAL EMISSIONS

Source	Pollutant Emissions (pounds/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Stationary – Standby Generators	0.06	0.13	1.17	<0.01	0.01	0.01

Note: Modeling data are provided in Appendix A

5.2.2.2 Joint Treatment Site

Stationary sources located at the Joint Treatment Site would include the eight diesel backup generators and process emissions from the MBR and sidestream centrate treatment. The regular operations for testing/maintenance of the generators would result in exhaust emissions. The MBR process and sidestream centrate treatment would result in evaporative emissions of VOCs. Mobile source emissions would be generated by worker/visitor commute and vendor delivery motor vehicle trips. Operational emissions generated at the Joint Treatment Site are shown in **Table 22**. The data are presented as the maximum anticipated daily emissions by source type.

Table 22
JOINT TREATMENT SITE OPERATIONAL EMISSIONS

Source	Pollutant Emissions (pounds/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Stationary - Generators	0.97	3.45	17.94	0.03	0.15	0.15
Stationary – Process VOCs	5.26	-	-	-	-	-
Mobile	0.41	2.26	6.77	0.06	0.50	0.18
Total	**6.63**	**5.71**	**24.71**	**0.10**	**0.65**	**0.33**

Note: Modeling data are provided in Appendix A

5.2.2.3 Summary of Operational Emissions

Combined total operational emissions generated by the Proposed Project are shown in **Table 23**. The data are presented as the maximum anticipated daily emissions by source type.

Table 23
PROPOSED PROJECT OPERATIONAL EMISSIONS

Source	Pollutant Emissions (pounds/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Conveyance Pump Station Stationary	0.06	0.13	1.17	<0.01	0.01	0.01
Joint Treatment Site Stationary	6.22	3.45	17.94	0.03	0.15	0.15
Mobile	0.41	2.26	6.77	0.06	0.50	0.18
Total Operational Emissions	**6.69**	**5.84**	**25.88**	**0.10**	**0.66**	**0.33**
SCAQMD Significance Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Potentially Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***

Note: Modeling data are provided in Appendix A

As shown in **Table 23**, maximum daily emissions associated with operation of the Proposed Project would not exceed any of the SCAQMD daily significance thresholds. Operation of the Proposed Project would therefore result in a less-than-significant impact.

5.2.3 Concurrent Construction and Operational Emissions

As discussed previously, due to the phasing of the Proposed Project, it is anticipated that operation of the initial delivery component of Phase 1 may occur concurrently with construction of the remainder of Phase 1 and that operation of Phase 1 may occur concurrently with construction of Phase 2. The following discussion presents the concurrent construction and operational emissions during these periods of overlap for comparison with the SCAQMD daily thresholds for operations, which are more restrictive than the construction period thresholds, and therefore more conservative.

5.2.3.1 Concurrent Initial Delivery Operations and Phase 1 Construction

Combined total initial delivery operational emissions and ongoing Phase 1 construction emissions for calendar year 2031 (the year that initial delivery operations commence and occur concurrently with Phase 1 construction) are shown in **Table 24**. The data are presented as the maximum anticipated daily emissions by source type.

Table 24
CONCURRENT INITIAL DELIVERY OPERATIONS AND PHASE 1 CONSTRUCTION EMISSIONS

Source	Pollutant Emissions (pounds/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Initial Delivery Operations						
Joint Treatment Site Stationary	6.22	3.45	17.94	0.03	0.15	0.15
Backbone Pump Station Stationary	-	-	-	-	-	-
Mobile	0.13	0.67	2.13	0.02	0.11	0.04
Subtotal Operations	6.35	4.12	20.07	0.05	0.26	0.19
Phase 1 Ongoing Construction	55.89	318.37	413.54	1.41	15.75	12.63
TOTAL	**62.24**	**322.49**	**433.61**	**1.46**	**16.01**	**12.82**
SCAQMD Significance Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Potentially Significant Impact?	***Yes***	***Yes***	***No***	***No***	***No***	***No***

Note: Modeling data are provided in Appendix A

As shown in **Table 24**, maximum daily emissions associated with concurrent initial delivery operations and Phase 1 ongoing construction would exceed the SCAQMD daily significance thresholds for VOC and NO_X. Concurrent emissions would therefore result in a potentially significant impact.

5.2.3.2 Concurrent Phase 1 Operations and Phase 2 Construction

Combined total Phase 1 operational emissions and Phase 2 ongoing construction emissions for calendar year 2032 (the year that Phase 1 operations commence and occur concurrently with Phase 2 construction) are shown in **Table 25**. The data are presented as the maximum anticipated daily emissions by source type.

Table 25
CONCURRENT PHASE 1 OPERATIONS AND ONGOING CONSTRUCTION EMISSIONS

Source	Pollutant Emissions (pounds/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 1 Operations						
Joint Treatment Site Stationary	6.22	3.45	17.94	0.03	0.15	0.15
Backbone Pump Station Stationary	0.06	0.13	1.17	0.00	0.01	0.01
Mobile	0.34	1.77	5.38	0.05	0.32	0.12
Subtotal Operations	6.62	5.36	24.49	0.08	0.48	0.27
Phase 2 Ongoing Construction	15.52	91.00	138.24	0.41	5.23	3.96
TOTAL	**22.14**	**96.36**	**162.73**	**0.50**	**5.70**	**4.23**
SCAQMD Significance Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Potentially Significant Impact?	***No***	***Yes***	***No***	***No***	***No***	***No***

Note: Modeling data are provided in Appendix A

As shown in **Table 25**, maximum daily emissions associated with concurrent Phase 1 operations and Phase 2 ongoing construction would exceed the SCAQMD daily significance threshold for NO_X. Concurrent emissions would therefore result in a potentially significant impact.

5.2.4 Mitigation Measures

Impacts related to temporary construction and concurrent construction and operational emissions of criteria pollutants and precursors would be potentially significant. Therefore, the following mitigation measures are prescribed to reduce emissions.

AQ-MM-1 **Tier 4 Final Off-Road Construction Equipment.** All diesel-fired construction equipment, equal to or greater than 50 horsepower shall meet USEPA Tier 4 Final standards at a minimum. Where feasible, on- and off-road vehicles and equipment shall be electrically powered or utilize other alternative fuels.

AQ-MM-2 **Alternative Fuel Construction Equipment.** As practical, on- and off-road vehicles and equipment shall be electrically powered or utilize other alternative fuels.

AQ-MM-3 **On-site Power Sources.** The contractor shall use existing onsite power sources (e.g., power poles) rather than portable generators when feasible; or renewable fuel generators will be used rather than diesel generators when feasible.

AQ-MM-4 **Install Electric Vehicle Charging Stations.** Prior to completion of Pure Water construction activities, the Sanitation Districts shall install a minimum of 12 electric vehicle charging stations at the existing compressed natural gas fueling station owned and operated by the Sanitation Districts at the Warren Facility.

5.2.5 Significance After Mitigation

Impacts related to temporary construction and concurrent construction and operational emissions of criteria pollutants and precursors would be potentially significant, requiring the implementation of mitigation. The mitigation prescribed aims to reduce emissions from both construction and operations because impacts would occur during concurrent activity.

Measure AQ-MM-1 would reduce emissions of VOC, NO_X, PM_{10}, and $PM_{2.5}$ associated with construction equipment exhaust. Where emissions were estimated using CalEEMod, the reductions associated with measure AQ-MM-1 were quantified using CalEEMod's option to implement use of Tier 4 Final compliant equipment. Where emissions were estimated using CARB's OFFROAD2021, reductions associated with measure AQ-MM-1 were quantified using SCAQMD's Off-Road Engines Mitigation Measure Tables (SCAQMD 2024).

Measures AQ-MM-2 and AQ-MM-3 would reduce emissions of all pollutants generated by construction equipment exhaust. However, the extent to which these measures would be feasible to implement at the time of construction is unknown at this time. Therefore, this measure is not quantified in the analysis that follows.

Measure AQ-MM-4 would reduce emissions associated with onroad vehicles powered by fossil fuels. Though this measure would provide infrastructure to allow for the increased use of electric vehicles, it would be too speculative to estimate the usage of said infrastructure. Therefore, this measure is not quantified in the analysis that follows.

5.2.5.1 Construction

Implementation of mitigation measure AQ-MM-1 would reduce the Proposed Project's construction period emissions. The results of the calculations for overlapping construction activities with mitigation are shown in **Table 26**. The data are presented as the maximum anticipated daily emissions by year for comparison with SCAQMD thresholds.

Table 26
MITIGATED PEAK DAILY CONSTRUCTION EMISSIONS

Year	Pollutant Emissions (pounds/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2025	0.39	4.51	19.48	0.05	7.79	1.34
2026	12.94	51.83	265.14	0.86	14.87	3.94
2027	22.97	53.28	391.72	1.26	5.37	2.60
2028	22.85	52.81	384.54	1.25	5.01	2.53
2029	30.86	75.50	557.30	1.66	21.94	11.16
2030	41.99	94.52	683.92	2.35	20.79	10.10
2031	26.30	50.45	435.83	1.41	4.67	2.46
2032	8.58	12.99	144.38	0.41	1.70	0.73
2033	0.86	4.76	41.03	0.06	0.62	0.25
2034	0.76	4.38	35.68	0.06	0.25	0.17
2035	0.45	2.64	20.36	0.03	0.10	0.10
2036	0.45	2.64	20.36	0.03	0.10	0.10
Maximum Daily Emissions	**41.99**	**94.52**	**683.92**	**2.35**	**21.94**	**11.16**
SCAQMD Significance Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Potentially Significant Impact?	***No***	***No***	***Yes***	***No***	***No***	***No***

Note: Modeling data are provided in Appendix A

As shown in **Table 26**, maximum daily emissions of VOC and NO_X would be reduced to a level less than the SCAQMD daily significance thresholds. However, maximum daily emissions of CO would remain in exceedance of the SCAQMD daily significance threshold. There is no feasible mitigation available for the

reduction of CO emissions associated with Proposed Project construction activities. Therefore, construction of the Proposed Project would result in a significant and unavoidable impact related to regional CO emissions.

5.2.5.2 Concurrent Initial Delivery Operations and Phase 1 Construction

Combined total initial delivery operational emissions and mitigated ongoing Phase 1 construction emissions are shown in **Table 27**. The data are presented as the maximum anticipated daily emissions by source type.

Table 27
CONCURRENT INITIAL DELIVERY OPERATIONS AND MITIGATED ONGOING PHASE 1 CONSTRUCTION EMISSIONS

Source	Pollutant Emissions (pounds/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Initial Delivery Operations						
Joint Treatment Site Stationary	6.22	3.45	17.94	0.03	0.15	0.15
Backbone Pump Station Stationary	-	-	-	-	-	-
Mobile	0.13	0.67	2.13	0.02	0.11	0.04
Subtotal Operations	6.35	4.12	20.07	0.05	0.26	0.19
Phase 1 Ongoing Construction with Mitigation	26.30	50.45	435.83	1.41	4.67	2.46
TOTAL	**32.65**	**54.58**	**455.90**	**1.46**	**4.93**	**2.65**
SCAQMD Significance Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Potentially Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***

Note: Modeling data are provided in Appendix A

As shown in **Table 27**, maximum daily emissions associated with concurrent initial delivery operations and mitigated ongoing Phase 1 construction would not exceed the SCAQMD daily significance thresholds. Concurrent emissions would therefore result in a less-than-significant impact with mitigation.

5.2.5.3 Concurrent Phase 1 Operations and Phase 2 Construction

Combined total Phase 1 operational emissions and mitigated Phase 2 construction emissions are shown in **Table 28**. The data are presented as the maximum anticipated daily emissions by source type.

Table 28
CONCURRENT PHASE 1 OPERATIONS AND MITIGATED PHASE 2 CONSTRUCTION EMISSIONS

Source	Pollutant Emissions (pounds/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 1 Operations						
Joint Treatment Site Stationary	6.22	3.45	17.94	0.03	0.15	0.15
Conveyance Pump Station Stationary	0.06	0.13	1.17	0.00	0.01	0.01
Mobile	0.34	1.77	5.38	0.05	0.32	0.12
Subtotal Operations	6.62	5.36	24.49	0.08	0.48	0.27
Phase 2 Ongoing Construction with Mitigation	8.58	12.99	144.38	0.41	1.70	0.73
TOTAL	**15.20**	**18.35**	**168.87**	**0.50**	**2.18**	**1.00**
SCAQMD Significance Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Potentially Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***

Note: Modeling data are provided in Appendix A

As shown in **Table 28**, maximum daily emissions associated with concurrent Phase 1 operations and ongoing Phase 2 construction would not exceed the SCAQMD daily significance thresholds. Concurrent emissions would therefore result in a less-than-significant impact with mitigation.

5.3 IMPACTS TO SENSITIVE RECEPTORS

5.3.1 Construction Activities

5.3.1.1 Criteria Pollutants

The localized effects from the onsite portion of daily construction emissions were evaluated at sensitive receptor locations potentially impacted by the Proposed Project according to the SCAQMD's LST method, described in Section 4.1.4 above. When quantifying mass emissions for localized analysis, only emissions that occur onsite are considered. Emissions related to offsite delivery/haul truck activity and construction worker trips are not considered in the evaluation of construction-related localized impacts, as these do not contribute to emissions generated on a project site.

Backbone Pipeline

As described previously, construction of the backbone pipeline would occur concurrently at multiple sites across the 39-mile alignment; however, it is unlikely that a single sensitive receptor would be exposed to emissions from more than one site. The backbone pipeline would pass through SRAs 4, 5, 9, and 11 and portions would likely be adjacent to existing sensitive receptors. Therefore, the most conservative LSTs for project sites of up to 2 acres with receptors located within 25 meters (82 feet) in SRAs 4, 5, 9, and 11 are used for determining localized significance of backbone pipeline construction emissions. The results of the calculations for backbone pipeline onsite construction emissions by construction method are shown in **Table 29**. The data are presented as the maximum anticipated daily construction emissions for each method for comparison with the SCAQMD's LST levels.

Table 29
UNMITIGATED BACKBONE PIPELINE ONSITE CONSTRUCTION EMISSIONS BY CONSTRUCTION METHOD

Construction Method	Pollutant Emissions (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Roadways CM	60.00	75.06	2.49	2.29
SCE Easement CM	56.99	73.00	2.45	2.25
LAFCD Easement CM	56.99	73.00	2.45	2.25
Pipe Jacking CM (7-foot)	23.88	34.38	1.15	1.06
Microtunneling CM	49.21	39.96	1.50	1.38
Traditional Tunneling CM (7-foot)	23.35	32.36	1.14	1.05
Pipe Jacking CM (9-foot)	24.82	35.22	1.14	1.05
Shield Tunneling CM	23.16	33.83	1.11	1.02
Traditional Tunneling CM (9-foot)	23.44	32.18	1.13	1.04
Maximum Daily Emissions	**60.00**	**75.06**	**2.49**	**2.29**
SCAQMD LST Thresholds	82	842	7	4
Exceed LST?	**No**	**No**	**No**	**No**

Note: Modeling data are provided in Appendix A

As shown in **Table 29**, localized emissions for all criteria pollutants would remain below their respective SCAQMD LSTs. Therefore, construction of the backbone pipeline would not result in exposure of sensitive receptors to substantial localized concentrations of criteria pollutants and precursors.

Pump Stations

The Whittier Narrows Pump Station would be located on an approximately 4.2-acre disturbed site in SRA 11. The Santa Fe Pump Station would be located on an approximately 4.2-acre disturbed site in SRA 9. Because the exact sites have not been selected, the pump stations' proximity to sensitive receptors is not known. Therefore, LSTs in SRA 11 for project sites of less than 5 acres with receptors located within 25 meters (82 feet) are used for determining localized significance of the Whittier Narrows Pump Station construction emissions and LSTs in SRA 9 for project sites of less than 5 acres with receptors located within 25 meters (82 feet) are used for determining localized significance of the Santa Fe Pump Station construction emissions. The results of the calculations for onsite pump station construction emissions are shown in **Table 30**. The data are presented as the maximum anticipated daily emissions by construction activity for comparison with the SCAQMD's LST levels.

Table 30
UNMITIGATED ONSITE PUMP STATION CONSTRUCTION EMISSIONS

Construction Activity	Pollutant Emissions (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Santa Fe Pump Station				
Demolition	18.59	18.47	4.15	1.19
Site Preparation	25.93	28.43	8.76	4.94
Grading	12.62	17.34	3.28	1.81
Building Construction	8.39	12.88	0.26	0.24
Paving	5.40	8.77	0.17	0.16
Architectural Coatings	0.77	1.10	0.01	0.01
Maximum Daily Onsite Emissions	**25.93**	**28.43**	**8.76**	**4.94**
SCAQMD LST Thresholds	203	1,733	14	8
Exceed LST?	**No**	**No**	**No**	**No**
Whittier Narrows Pump Station				
Demolition	18.59	18.47	4.47	1.24
Site Preparation	25.93	28.08	8.76	4.94
Grading	12.62	17.34	3.28	1.81
Building Construction	8.39	12.88	0.26	0.24
Paving	5.49	8.78	0.18	0.16
Architectural Coatings	0.77	1.10	0.01	0.01
Maximum Daily Onsite Emissions	**25.93**	**28.08**	**8.76**	**4.94**
SCAQMD LST Thresholds	183	1,814	12	9
Exceed LST?	**No**	**No**	**No**	**No**

Note: Modeling data are provided in Appendix A

As shown in Table 30, localized emissions for all criteria pollutants would remain below their respective SCAQMD LSTs. Therefore, construction of the pump stations would not result in exposure of sensitive receptors to substantial localized concentrations of criteria pollutants and precursors.

Joint Treatment Site

The Joint Treatment Site would be located on a 56-acre site in SRA 4 with single-family homes located approximately 130 feet to the south across Lomita Boulevard. Therefore, the LSTs in SRA 4 for project sites of 5 acres with receptors located within 50 meters of the Project site boundary are used for determining localized significance of Joint Treatment Site construction emissions. The results of the calculations for onsite emissions generated during construction of the Joint Treatment Site improvements are shown in **Table 31**. The data are presented as the maximum anticipated daily onsite construction emissions by year.

Table 31
UNMITIGATED ONSITE JOINT TREATMENT SITE CONSTRUCTION EMISSIONS

Year	Pollutant Emissions (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
2025	15.77	12.21	7.79	1.81
2026	54.45	60.90	10.70	3.43
2027	45.41	46.79	2.02	1.69
2028	38.61	38.05	1.50	1.38

Year	Pollutant Emissions (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
2029	70.84	74.01	2.75	2.53
2030	37.06	42.49	1.45	1.34
2031	30.25	33.58	1.18	1.08
2032	6.13	11.58	0.47	0.25
2033	19.66	37.90	1.27	0.78
2034	16.66	31.69	0.66	0.61
2035	7.14	13.48	0.26	0.24
2036	6.86	13.45	0.25	0.23
Maximum Daily Onsite Emissions	**70.84**	**74.01**	**10.70**	**3.43**
SCAQMD LST Thresholds	118	1,982	42	10
Exceed LST?	**No**	**No**	**No**	**No**

Note: Modeling data are provided in Appendix A

As shown in **Table 31**, localized emissions for all criteria pollutants would remain below their respective SCAQMD LSTs. Therefore, construction of the Joint Treatment Site would not result in exposure of sensitive receptors to substantial localized concentrations of criteria pollutants and precursors.

5.3.1.2 Exposure to Toxic Air Contaminants

Implementation of the Proposed Project would result in the use of heavy-duty construction equipment, haul trucks, onsite generators, and construction worker vehicles. These vehicles and equipment could generate the TAC DPM. Generation of DPM from construction projects typically occurs in a localized area (e.g., at the project site) for a short period of time. Because construction activities and subsequent emissions vary depending on the phase of construction (e.g., grading, building construction), the construction-related emissions to which nearby receptors are exposed to would also vary throughout the construction period. During some equipment-intensive phases such as grading, construction-related emissions would be higher than other less equipment-intensive phases such as building construction. Concentrations of mobile-source DPM emissions are typically reduced by 70 percent at approximately 500 feet (CARB 2005).

The dose (of TAC) to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance in the environment and the extent of exposure a person has to the substance; a longer exposure period to a fixed quantity of emissions would result in higher health risks. Current models and methodologies for conducting cancer health risk assessments are associated with longer-term exposure periods (typically 30 years for individual residents based on guidance from the Office of Environmental Health Hazard Assessment [OEHHA]) and are best suited for evaluation of long duration TAC emissions with predictable schedules and locations. These assessment models and methodologies do not correlate well with the temporary and highly variable nature of construction activities. Cancer potency factors are based on animal lifetime studies or worker studies where there is consistent long-term exposure to the carcinogenic agent. There is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime (OEHHA 2015).

In addition to the lack of specific guidance on addressing construction period health risks from potential exposure to TACs, it is important to note that construction activities would occur at various locations and varying intensities along the 39-mile backbone pipeline alignment. Construction of the pump stations would be completed over an approximately 28-month period with only 6 months assumed for

the most intensive activities of demolition, site preparation, and grading. Similarly, construction of the backbone pipeline would occur for short durations at various locations along the 39-mile alignment such that a single sensitive receptor would not be exposed to pollutants for extended periods of time.

Construction at the Joint Treatment Site would occur on a single 56-acre site over approximately 11 years; however, construction period TAC emissions generated would be less than those generated during Joint Treatment Site operations. Operational sources of TACs at the Joint Treatment Site include the MBR, sidestream centrate treatment, onsite idling and travel of chemical delivery trucks, and the eight 4-MW diesel-powered generators. The DPM released by the eight generators alone would exceed the DPM released during construction at the Joint Treatment Site. The operational period HRA accounted for 1.21 pounds of DPM per day from the eight emergency generators combined. The maximum daily DPM generated during construction has been estimated to be 0.53 pound per day. Furthermore, the construction period estimate includes both onsite construction equipment and offsite truck travel. The majority of construction period DPM is generated by offsite truck travel with emissions occurring a substantial distance from the site such that their emissions would not cumulatively affect a receptor near the Joint Treatment Site and would therefore be excluded from the HRA. As such, the construction estimate is conservative. Nevertheless, a construction period HRA would yield results that are less than those for the operational period given the lower emission rates and reduced exposure period. As detailed below, an operational HRA was conducted, and impacts were found to be less than significant.

Considering this information, the highly dispersive nature of DPM, and the fact that construction activities would occur at various locations and varying intensities throughout the project site, it is not anticipated that construction of the project would expose sensitive receptors to substantial DPM concentrations.

5.3.2 Operational Activities

5.3.2.1 Criteria Pollutants

As discussed in Section 4.1.4, SCAQMD has developed the LST methodology that can be used by public agencies to determine whether a project may generate significant adverse localized air quality impacts from onsite emissions of NO_X, CO, PM_{10}, and $PM_{2.5}$. The backup emergency generators would be the Proposed Project's only onsite emissions sources of these pollutants. As shown previously in **Table 23**, stationary source NO_X emissions would be 3.45 pounds per day at the Joint Treatment Site and 0.13 pounds per day at the pump stations. Emissions of these rates are substantially less than the LSTs ranging from 123 to 203 pounds of NO_X per day for the applicable SRAs. Stationary source CO emissions would be 17.94 pounds per day at the Joint Treatment Site and 1.17 pounds per day at the pump stations. Emissions of these rates are substantially less than the LSTs ranging from 1,480 to 1,814 pounds of CO per day for the applicable SRAs. Operational PM_{10} and $PM_{2.5}$ emissions from stationary sources would be less than one pound per day (see Table 23). Therefore, operation of the Proposed Project would not result in exposure of sensitive receptors to substantial localized concentrations of criteria pollutants and precursors.

5.3.2.2 Carbon Monoxide Hot Spots

Vehicle exhaust is the primary source of CO. In an urban setting, the highest CO concentrations are generally found in close proximity to congested intersections. Under typical meteorological conditions,

CO concentrations tend to decrease as distance from the emissions source (e.g., congested intersection) increases. Project-generated traffic has the potential of contributing to localized "hotspots" of CO offsite. Because CO is a byproduct of incomplete combustion, exhaust emissions are worse when fossil fueled vehicles are operated inefficiently, such as in stop-and-go traffic or through heavily congested intersections. Because CO disperses rapidly, hotpots are most likely to occur in areas with limited vertical mixing such as tunnels, long underpasses, or below-grade roadways.

Based on data provided by the Pure Water engineering team, the Proposed Project would result in an increase of 266 average daily trips (ADT) expressed as roundtrips. The roadway network surrounding the Joint Treatment Site, including Lomita Boulevard, Main Street, and Sepulveda Boulevard, currently have traffic volumes ranging from 16,770 to 24,799 ADT (Kalibrate Technologies 2018). 266 ADT represents approximately one percent of the existing ADT. The addition of 266 ADT would not be substantial enough to affect the flow of any local intersections, which could potentially cause CO hotspots. Therefore, the Proposed Project would not expose sensitive receptors to substantial concentrations of CO.

5.3.2.3 Exposure to Toxic Air Contaminants

The Proposed Project would result in the emissions of TACs from the treatment of water through the MBR and the sidestream centrate treatment processes, operations of the emergency generators, and exhaust of diesel trucks traveling and idling onsite. As part of a facility-wide HRA, Ramboll estimated the cancer risk and chronic and acute hazard indices for the Proposed Project (Ramboll 2024). As shown in **Table 32**, health risks at the maximum exposed individual resident (MEIR) and the maximum exposed individual worker (MEIW) would be below SCAQMD significance thresholds. Therefore, the Proposed Project would not expose sensitive receptors to substantial concentrations of TACs.

Table 32
HEALTH RISK ASSESSMENT RESULTS

Receptor	Cancer (per million)	Chronic HI	8-Hour Chronic HI	Acute HI
Maximum Exposed Individual Resident	0.96	0.0002	0.0001	0.002
Maximum Exposed Individual Worker	1.0	0.04	0.04	0.027
SCAQMD Significance Thresholds	*10*	*1*	*1*	*1*
Potentially Significant Impact?	***No***	***No***	***No***	***No***

Note: Ramboll's report is provided in Appendix B

5.4 ODORS

Implementation of the Proposed Project would have the potential to generate objectionable odors through construction activities and during operations, as discussed below.

5.4.1 Construction

CARB's Air Quality and Land Use Handbook includes a list of the most common sources of odor complaints received by local air districts. Typical sources of odor complaints include facilities such as sewage treatment plants, landfills, recycling facilities, petroleum refineries, and livestock operations. Construction activities are not a typical source of nuisance odors, although construction could result in minor amounts of odorous compounds associated with diesel heavy equipment exhaust or evaporation

of volatile compounds within paint or other coatings. The smell of diesel exhaust is due in most part to the presence of sulfur and the creation of hydrocarbons during combustion (Nett Technologies 2020). As shown in **Table 20**, construction emissions would not result in significant emissions of sulfur oxides. Additionally, construction equipment associated with the Proposed Project would be operating at various locations throughout the Joint Treatment Site and along the 39-mile pipeline alignment and would not take place all at once. Odorous emissions would dissipate beyond the emissions sources and would only affect receptors in the immediate vicinity of the construction site. Construction activities would also be temporary in nature and would cease at the completion of construction. Therefore, construction activities would not result in nuisance odors. Odor impacts associated with construction would be less than significant.

5.4.2 Operation

Future development of the Joint Treatment Site would include covers for tanks with the potential for odor. Air ducts would be connected to these covered tanks and blowers would move odorous air from the tanks to air treatment units to include bio trickling and activated carbon scrubbers. This process would eliminate the potential for odors to be generated through the operations of the Proposed Project.

The Proposed Project would not result in significant objectionable odors and impacts would be less than significant.

6.0 GREENHOUSE GAS IMPACTS

Emissions of GHGs are presented in MT CO_2e, which is a metric used to compare the emissions from various GHGs based on their global warming potential. The CO_2e of a gas is determined by multiplying the tons of that gas by its global warming potential.

6.1 GREENHOUSE GAS EMISSIONS

The Proposed Project would generate GHG emissions during construction and operation. CEQA Guidelines Section 15064.4(a) states 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 GHG emissions resulting from a project. Therefore, GHG emissions are estimated using the methods and assumptions described in Section 4.1, above, and are provided below.

6.1.1 Construction Emissions

6.1.1.1 Backbone Conveyance System

Backbone Pipeline

Construction of the backbone pipeline would result in temporary increases in GHG emissions. These emissions would be generated from both offroad equipment operating onsite and onroad vehicles traveling offsite. The results of the calculations for backbone pipeline construction by year are shown in **Table 33**. The data are presented as the total anticipated emissions for each year.

Table 33
BACKBONE PIPELINE CONSTRUCTION GHG EMISSIONS BY YEAR

Year	Emissions (MT CO_2e)
2026	1,995
2027	11,060
2028	13,304
2029	12,773
2030	19,220
2031	8,411
2032	2,496
Total Construction Emissions	**69,259**

Note: Modeling data are provided in Appendix A

Pump Stations

The results of the calculations for construction of pump stations other than the one at the Joint Treatment Site are shown in **Table 34**. The data are presented as the total anticipated emissions by construction activity.

Table 34
PUMP STATION CONSTRUCTION GHG EMISSIONS

Construction Activity	Emissions (MT CO_2e)
Santa Fe Pump Station	
Demolition	82
Site Preparation	67
Grading	254
Building Construction	454
Paving	32
Architectural Coatings	2
Whittier Narrows Pump Station	
Demolition	78
Site Preparation	69
Grading	254
Building Construction	459
Paving	32
Architectural Coatings	2
Total Construction Emissions	**1,784**

Note: Modeling data are provided in Appendix A

6.1.1.2 Joint Treatment Site

The results of the calculations for construction at the Joint Treatment Site are shown in **Table 35**. The data are presented as the total anticipated emissions by construction activity.

Table 35
JOINT TREATMENT SITE CONSTRUCTION GHG EMISSIONS

Construction Activity	Emissions (MT CO_2e)
Phase 1: 30 MGD (Initial Delivery)	
Clear & Grub, Utility Relocation, Shop Demo & Waste Haul Off	283
Hazardous Soils Removal	528
Mass Excavation & Haul Off	718
Structural Excavation and Foundation Prep	175
Yard Piping	162
Above Grade Facilities, Equipment, and Site Improvements	2,369
Roofing & Exterior Cladding	95
Paving & Striping	219
Phase 1: Additional 85 MGD (150 MGD Total)	
Above Grade Facilities, Equipment, and Site Improvements	2,255
Paving & Striping	69
Storm Drain Culvert	46
Roofing & Exterior Cladding	50
Phase 2: Additional 35 MGD (150 MGD Total)	
Hazardous Soils Removal	64
Structural Excavation, Haul Off, and Foundation prep	137
Yard Piping	109
Process Equipment Set and A/G Process Piping Installation	1,099
Roofing & Exterior Cladding	13
Paving	24
Total Construction Emissions	**8,415**

Note: Modeling data are provided in Appendix A

6.1.1.3 Summary of Construction Emissions

The combined results of the GHG calculations for the Proposed Project's construction activities are shown in **Table 36**.

Table 36
CONSTRUCTION GHG EMISSIONS

Project Component	Emissions (MT CO_2e)
Backbone Pipeline (Table 32)	69,259
Pump Stations (Table 33)	1,784
Joint Treatment Site (Table 34)	8,415
Total Construction Emissions	**79,458**

Note: Modeling data are provided in Appendix A

6.1.2 Operational Emissions

6.1.2.1 Backbone Conveyance System

Backbone Pipeline

Following construction, the backbone pipeline would be located underground and would be a passive vessel for conveying water. There would be some minimal operations and ongoing maintenance activities associated with the pipeline, but emissions or energy consumed would be negligible.

Pump Stations

Operation of the pump stations would require a concrete tank, 25-foot-tall building, surrounding walls, power poles, a standby generator, and paved areas on approximately 4.2-acre disturbed sites. GHG emissions would be generated by the regular testing of the standby generators and electricity consumed by the pumps. Operational emissions generated by the pump stations are shown in **Table 37**. The data are presented as the annual emissions for the 2036 buildout year by source type. It should be noted there would be occasional trips made by workers visiting the pump station sites for ongoing operations and maintenance; however, these trips would be minimal, thereby resulting in negligible emissions.

Table 37
PUMP STATION 2036 ANNUAL OPERATIONAL GHG EMISSIONS

Source	Emissions (MT CO_2e)
Conveyance Pump Station Stationary	10
Conveyance Pump Station Electricity Consumption	17,440

Note: Modeling data are provided in Appendix A

6.1.2.2 Joint Treatment Site

Operational emissions generated by full buildout at the Joint Treatment Site are shown in **Table 38**. The data are presented as annual emissions for the year 2036 by source type.

Table 38
JOINT TREATMENT SITE 2036 ANNUAL OPERATIONAL GHG EMISSIONS

Source	Emissions (MT CO_2e)
Electricity Consumption	55,338
Nitrification/Denitrification	41,668
Mobile	1,012
Stationary	393
Supplemental carbon (biogenic)[1]	15,717

Note: Modeling data are provided in Appendix A; nitrification/denitrification estimate provided by Sanitation Districts 2025; supplemental carbon estimate provided in Jacobs 2024.

[1] Biogenic carbon estimate provided for informational purposes and not included in total.

6.1.2.3 Summary of Operational Emissions

The combined results of the GHG calculations for the Proposed Project's 2036 opening year operational activities are shown in **Table 39**. It is worth noting that the emissions inventory presented below represents emissions for the first full operational year of 2036. These emissions would lessen over time. For example, emissions associated with electricity consumption would be reduced as SCE's renewables portfolio increases to 100 percent renewable by 2045 per the requirements of SB 100. Additionally, mobile source emissions would be reduced over time as cleaner-burning vehicles, or zero-emission vehicles, are added to the fleet mix. Supplemental carbon emissions are not included in the operational emissions total because they are biogenic and therefore do not need to be included in the Scope 1 emission reporting in accordance with IPCC Guidelines.

Table 39
OPERATIONAL GHG EMISSIONS

Source	Emissions (MT CO_2e)
Conveyance Pump Station Stationary	10
Conveyance Pump Station Electricity Consumption	17,440
Joint Treatment Site Electricity Consumption	55,338
Nitrification/Denitrification	41,668
Mobile	1,012
Joint Treatment Site Stationary	393
Total Operational Emissions	**115,861**

Note: Totals may not add due to rounding. Modeling data are provided in Appendix A

6.2 CONSISTENCY WITH LOCAL PLANS ADOPTED FOR THE PURPOSE OF REDUCING GHG EMISSIONS

Metropolitan's CAP, adopted May 10, 2022, is an approved plan pursuant to CEQA Guidelines Section 15064(h)(3). The CAP identifies actions to reduce Metropolitan's carbon footprint in accordance with California's goals to cut GHG emissions by 40 percent from 1990 levels by 2030 per SB 32 and achieve complete carbon neutrality by 2045 per AB 1279. Therefore, this analysis determines the significance of GHG impacts based on consistency with Metropolitan's CAP.

Pure Water was analyzed and included in the CAP as the RRWP. Components of the Proposed Project remain largely unchanged from what was included in the CAP. Specifically, the CAP analyzed the RRWP as including construction and operation of an Advanced Water Treatment Plant (synonymous with the AWP Facility described herein), approximately 40 miles of pipelines, three pumping stations, and groundwater injection sites. A comparison summary of estimated emissions from all construction activities and the first full operational year from the Proposed Project and the RRWP as analyzed in the CAP are included in **Table 40**. Some of the categories are aggregated for clarity and ease of comparison (i.e., Electricity [all sources] and Other).

Table 40
SUMMARY OF PURE WATER EMISSIONS ESTIMATES AND DIFFERENCES

Source	Pure Water as Proposed (MT CO_2e)	CAP RRWP GHG Emissions (MT CO_2e)	Difference in GHG Emissions Totals (MT CO_2e)
Construction			
Backbone Pipeline	69,259	70,506	-1,247
Pump Stations	1,784	633	1,151
Well Facilities	N/A	383	-383
Joint Treatment Site	8,415	10,895	-2,480
Construction Total	79,458	82,417	-2,959
Operation			
Electricity (all sources)[1]	72,778	84,090	-11,312
Nitrification/Denitrification	41,668	5,340	36,328
Other[2]	1,415	N/A	1,415
Annual Operations Total (1st Full Operational Year)	115,861	89,430	26,431

Notes: Totals may not add due to rounding.

[1] Electricity sources include the Joint Treatment Site electricity consumption and Conveyance Pump Station electricity consumption.

[2] Other includes Mobile, Joint Treatment Site Stationary Combustion, and Conveyance Pump Station Stationary Combustion

As shown in Table 40, emissions estimated for the Proposed Project vary from what was included in the CAP. This is primarily due to refined assumptions that were not previously available. For example, with the pipeline alignment now known, plus the refined schedule and construction methods, construction emissions are now estimated to total 79,458 MT CO_2e, which is less than the 82,417 MT CO_2e previously forecasted. Likewise with source testing data available from the Pure Water Southern California Demonstration Facility MBR, estimates of emissions generated during the nitrification/denitrification process are now able to rely on site-specific nitrogen concentrations and more recent and comprehensive literature values as compiled by IPCC to generate emission factors, resulting in refined process emissions. Where the CAP estimated the RRWP would result in 5,340 MT CO_2e per year, the Proposed Project is now estimated to result in 41,668 MT CO_2e from nitrification/denitrification.

As part of the ongoing implementation and monitoring efforts, Metropolitan assessed the impact of the updated project-level Pure Water GHG emissions estimates on Metropolitan's carbon budget for consistency with the 2020 CAP (Rincon 2024).[3] The assessment considered three scenarios for the carbon budget GHG emissions forecast based on Metropolitan's 2020 Urban Water Management Plan water demand forecast. The forecasted annual and cumulative emissions across all Metropolitan operations for each of the three future scenarios was revised. The three scenarios are intended to capture the full range of potential future emissions. The scenarios include: a high emission scenario where there are multiple-dry years and high operational emissions; an average emission scenario which assumes a single dry year demand level and average operational emissions; and a low emission scenario associated with an average demand year and low operational emissions. The forecast was further adjusted to incorporate SB 100 (mandating 100 percent carbon-free electricity by 2045), which will reduce GHG emissions associated with electricity consumption over time. The cumulative impact on the carbon budget was then evaluated to determine if Metropolitan can reach its emissions targets using its

[3] Pure Water's project-level GHG emissions estimates have been refined since completion of Rincon's 2024 report. The refined emissions estimates are lower than what was considered; therefore, the analysis and conclusions in Rincon's 2024 report remain applicable.

established CAP GHG reduction measures, or if additional GHG mitigation measures are required. This analysis included actual emissions for Metropolitan-wide GHG emissions for the years 2021 and 2022, which were forecasted in the CAP but for which Metropolitan now has actual data.

The starting year for the CAP's carbon budget is 2005 as it is the first year for which Metropolitan has an annual GHG inventory; annual inventories are required to track the carbon budget accurately. Metropolitan was below its milestone budget for the 2005-2022 period. During this period, Metropolitan emitted approximately 5,408,096 MT CO_2e, representing just over half (55 percent) of the maximum emissions budgeted through 2022. The overall carbon budget has 9,252,380 MT CO_2e remaining for the 2023-2045 period. This puts Metropolitan on track to achieve its 2030 GHG emissions reduction target.

It was determined that, with the updated estimates for Pure Water, Metropolitan would remain within its allocated carbon budget through 2030 for all three scenarios. By 2045, Metropolitan would remain under the carbon budget for both the low and average scenarios. As originally found in the CAP, Metropolitan would exceed the carbon budget by 2045 under the highest-emissions scenario without implementing GHG reduction strategies. As listed in the CAP, Metropolitan has strategies to reduce overall GHG emissions by 2,003,695 MT CO_2e using Phase 1 actions under the high emissions scenario. Therefore, the forecasted carbon budget exceedance of 1,522,195 MT CO_2e under the high emissions scenario can be addressed by implementation of the 2020 CAP and Pure Water would be consistent with the CAP through both 2030 and 2045 (Rincon 2024).

In summary, the key takeaways from the comparison of forecasted emissions and impacts of Pure Water on the carbon budget included:

- Before CAP implementation, Metropolitan is projected to reach its 2030 targets under all three emissions forecast scenarios (low, average, and high) analyzed and reach its 2045 targets under both the low and average emissions forecast scenarios.

- With CAP implementation, Metropolitan is projected to reach its 2030 and 2045 targets under all three emission forecast scenarios. That is, implementation of the measures required by the CAP would enable Metropolitan to reach its 2045 targets even under the high emissions forecast scenario.

- As such, while the updated Pure Water GHG emissions estimates are higher than those in the CAP, they are not high enough to affect Metropolitan's ability to achieve its GHG emission reduction targets; therefore, the CAP accommodates Pure Water and its associated project-level GHG emissions. In addition, Pure Water's GHG emissions would be tracked as part of Metropolitan's overall carbon budget with organization-wide CAP measures implemented to reduce Metropolitan's GHG emissions over time such that GHG emissions remain within the carbon budget.

Therefore, Pure Water's project-level components would be consistent with Metropolitan's qualified CAP. Pursuant to CEQA Guidelines Section 15064.4 and 15183.5, Pure Water would not directly or indirectly generate GHG emissions that may have a significant impact on the environment.

The CAP also includes a number of strategies and measures. Those strategies and measures specific to Pure Water and how the Proposed Project complies are described below:

Strategy 3: Use alternative fuels to bridge the technology gap to zero emission vehicles and equipment.

As detailed in Section 1.3.5, Environmental Commitments, the Proposed Project would include installation of 100 electric vehicle charging stations and 1.5 megawatts of onsite solar panels. Additionally, mitigation measure AQ-MM-2 requires the use of alternative fueled construction equipment where feasible. Therefore, the Proposed Project would be consistent with CAP Strategy 3 calling for the use of alternative fuels.

Measure EE-5: If the proposed RRWP is ultimately constructed, install an inter-stage pumping system on the reverse osmosis brine stream to reduce energy use.

In accordance with GHG-EC-3, the reverse osmosis system includes inter-stage pumps between the first and second stages as well as between second and third stages. These pumps would be deployed to balance the flux between the stages for improved operational performance. Energy Recovery Devices (ERD) would also be installed on the concentrate pumping systems to recover energy from the residual concentrate pressure and have been included in the conceptual design as well for the facilities plan. As such, the Proposed Project would be consistent with CAP Measure EE-5.

Measure WC-6: Implement advanced technology systems to increase Metropolitan-owned recycled and groundwater recovery systems to maintain local water supply (e.g., proposed RRWP).

CAP Measure Water Conservation-6 calls for Metropolitan's implementation of advanced technology systems to increase recycled and groundwater recovery systems. Pure Water would utilize an AWP system, which is an advanced technology system, to substantially increase the amount of local water available, including through groundwater recharge and recovery.

Metropolitan has also committed to emission reduction measures to incentivize more sustainable commutes in its CAP. The Proposed Project would be consistent with the following Strategy 6 measures:

Measure EC-1: Expand subsidized transit commute program to reduce employee commute miles.

Measure EC-2: Expand employee use of carbon- free and low carbon transportation by providing education programs on the benefits of commute options including public transportation, EV/ZEV options, and vanpools.

Measure EC-4: Continue to offer benefits to employees who use alternative modes of transportation (e.g., public transportation, bikes).

Given the aforementioned, implementation of the Proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Impacts related to GHG would be less than significant.

7.0 ENERGY

7.1 RESULT IN WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY RESOURCES

7.1.1 Construction Energy Use

7.1.1.1 Backbone Conveyance System

Construction of the backbone pipeline would include open trenching and tunneling methods, which would generally involve site preparation, excavation, pipe installation, backfilling, and repaving (where required). For the pump stations, development of the Whittier Narrows Pump Station and Santa Fe Pump Station would involve the purchase of properties. If the properties include existing development, demolition of the structures would be required as the initial construction activity. Subsequent construction activities at the pump station sites would include site preparation, structural excavation, trenching for pipes, grading, structure construction, paving, and architectural coatings. Construction would also involve the installation of offsite pipelines to connect the pump station facilities to the backbone pipeline. Similarly, if the electrical substation is located offsite from the pump station, installation of electrical utilities, likely through new easements, would be required to connect the substation to the pump station facilities.

Electricity Consumption

Off-road construction equipment would primarily be diesel-powered and is discussed in the Transportation Fuel Consumption subsection below. Electricity for electrically powered equipment (e.g., ventilation fans, dewatering pumps, tunnel boring machines) would be supplied by diesel generators located onsite. Energy use associated with these generators also is considered in the analysis of Transportation Fuel Consumption. While there is potential for some electrically powered equipment to be connected to the grid instead of to onsite generators, the extent to which this would occur and the associated amount of energy use are speculative and not quantified herein. However, the overall amount of energy consumed by electrically powered equipment would be similar regardless of whether generators or grid power are used.

On-road electricity consumption would occur from the use of electric vehicles; however, the overall electricity demand during construction is expected to be minimal. Estimated electricity consumption includes 3,071 kWh for the Whittier Narrows Pump Station, 3,034 kWh for the Santa Fe Pump Station, and 458,319 kWh for backbone pipeline construction. Electric vehicles are inherently more energy-efficient than conventional fuel-powered vehicles, further reducing overall energy demand.

Natural Gas Consumption

Off-road natural gas use is not anticipated during construction, as construction equipment would primarily operate on diesel and gasoline, as discussed in the Transportation Fuel Consumption subsection below. However, on-road natural gas use is expected from natural gas-powered vehicles during construction. Estimated natural gas consumption includes 433 gallons for the Whittier Narrows Pump Station, 424 gallons for the Santa Fe Pump Station, and 42,473 gallons for the backbone pipeline.

Natural gas is generally more energy-efficient and produces fewer emissions compared to petroleum-based fuels, contributing to cleaner operations.

Transportation Fuel Consumption

As mentioned above, the primary source of energy consumption during construction would be petroleum-based fuels associated with the use of off-road construction vehicles and equipment, construction worker travel, and delivery and haul truck trips. Off-road fuel consumption associated with construction equipment is estimated at 23,843 gallons of diesel for the Whittier Narrows Pump Station, 23,835 gallons of diesel for the Santa Fe Pump Station, and 4,903,647 gallons of diesel for the backbone pipeline, equivalent to 688,234,269 kBtu. On-road fuel consumption associated with construction worker commutes, vendor trips, and delivery/haul trucks is estimated at 9,714 gallons of diesel and 5,184 gallons of gasoline for the Whittier Narrows Pump Station, 9,519 gallons of diesel and 5,116 gallons of gasoline for the Santa Fe Pump Station, and 953,852 gallons of diesel and 738,619 gallons of gasoline for the backbone pipeline, equivalent to 235,211,561 kBtu. These fuel consumption estimates reflect standard construction practices (e.g., equipment would be appropriately sized, engines would be turned off when not in use to limit idling time, equipment would be properly maintained) and are consistent with similar infrastructure projects.

7.1.1.2 Joint Treatment Site

Construction at the Joint Treatment Site would require the use of onsite heavy-duty construction equipment (i.e., off-road fuel consumption) and fuel consumption from construction worker, vendor, and delivery/haul trucks (i.e., on-road fuel consumption). Construction would generally encompass clearing, demolition of existing structures and pavements, hazardous soils removal, excavation, above-grade construction, and paving.

Electricity Consumption

Off-road construction equipment would primarily be diesel-powered and is discussed in the Transportation Fuel Consumption subsection below. Electricity for electrically powered equipment (e.g., ventilation fans, dewatering pumps) and facilities (e.g., construction trailers) would be supplied by diesel generators located onsite. Energy use associated with these generators also is considered in the analysis of Transportation Fuel Consumption. While there is potential for some electrically powered equipment and facilities to be connected to the grid instead of to onsite generators, the extent to which this would occur and the associated amount of energy use are speculative and not quantified herein. However, the overall amount of energy consumed by electrically powered equipment would be similar regardless of whether generators or grid power are used.

On-road electricity consumption would occur from the use of electric vehicles, but the amount of electricity required during construction is expected to be minimal, estimated at 12,575 kWh. Electric vehicles are inherently more energy-efficient than conventional fuel-powered vehicles, further reducing overall energy demand.

Natural Gas Consumption

Off-road natural gas use is not anticipated during construction, as construction equipment would primarily operate on diesel and gasoline, as discussed in the Transportation Fuel Consumption

subsection below. However, a minor amount of on-road natural gas use is expected from natural gas-powered vehicles during construction. For construction at the Joint Treatment Site, total natural gas consumption is estimated to be approximately 1,295 gallons. Natural gas is generally more energy-efficient and produces fewer emissions compared to petroleum-based fuels, contributing to cleaner operations.

Transportation Fuel Consumption

The primary source of energy consumption during construction would be petroleum-based fuels associated with the use of off-road construction vehicles and equipment, construction worker travel, and delivery and haul truck trips. Off-road fuel consumption associated with construction equipment is estimated at 281,454 gallons of diesel for the Joint Treatment Site, equivalent to 39,122,133 kBtu. On-road fuel consumption associated with construction worker commutes, vendor trips, and delivery/haul trucks is estimated at 29,076 gallons of diesel and 20,471 gallons of gasoline, equivalent to 6,788,587 kBtu.

7.1.1.3 Summary of Total Construction Energy Use

The combined estimated energy use from constructing facilities at the Joint Treatment Site, backbone pipeline, and backbone pump stations—including both off-road and on-road fuel consumption—amounts to 969,878,173 kBtu, as shown in **Table 41.**

Table 41
TOTAL CONSTRUCTION ENERGY USE

	Electricity (kWh)	Natural Gas (gallons)	Diesel (gallons)	Gasoline (gallons)	Total kBtu
Joint Treatment Site	12,575	1,295	310,530	20,471	45,924,590
Backbone Pipeline	458,319	42,473	5,857,499	738,619	913,235,970
Whittier Narrows Pump Station	3,071	433	33,557	5,184	5,377,818
Santa Fe Pump Station	3,034	424	33,354	5,116	5,339,796
Total	**476,999**	**44,625**	**6,234,941**	**769,390**	**969,878,173**

kWh = kilowatt hours; kBtu = thousand British thermal units

7.1.2 Operational Energy Use

The primary energy uses for Pure Water operations would be associated with water purification and pumping purified water from the Joint Treatment Site through the backbone pipeline to various distribution locations. Unlike the existing wastewater collection system, which is largely gravity-fed, the distribution of purified water from the Pure Water facility would require significant energy input to pump water “uphill” to offsite use locations.

7.1.2.1 Backbone Conveyance System

Following construction, the backbone pipeline itself would not consume energy. Ongoing operations would be limited to routine inspection and maintenance activities. Operational energy use at the Santa

Fe Pump Station and Whittier Narrows Pump Station would primarily result from the electricity required to power the pumps used for water conveyance, as well as from regular testing of standby generators.

Electricity Consumption

The Whittier Narrows Pump Station and Santa Fe Pump Station would require pumps between 1,000 and 4,500 horsepower, depending on the location, to convey purified water. Each pump station would require uninterrupted power supply. Annual electricity demand for water conveyance through the backbone conveyance system is estimated at 146,300,000 kWh, equivalent to 499,196,374 kBtu.

At the Whittier Narrows Pump Station and Santa Fe Pump Station, emergency backup generators may be installed to provide temporary power during outages. Each generator is assumed to be 175 kilowatts and be tested for one hour per day, up to 30 days per year. The generators are estimated to consume up to 873 gallons of diesel or 121,347 kBtu a year.

Natural Gas Consumption

Off-road and on-road natural gas use is not anticipated during operation of the backbone conveyance system.

Transportation Fuel Consumption

Operation of the backbone conveyance system would involve occasional trips made by workers visiting the backbone pipeline and pump station sites for ongoing operations and maintenance; however, these light-duty vehicle trips would be minimal, thereby resulting in negligible energy impact.

7.1.2.2 Joint Treatment Site

Operational activities associated with the Joint Treatment Site would include facility and equipment operations and maintenance, chemical storage and management, water quality monitoring, and daily deliveries of treatment chemicals. The fully built-out facility, including DPR components, would require 194 staff, including administrative, operations, maintenance, process controls, chemistry, and public outreach personnel. In addition to operational staff, the visitor center at the AWP Facility is anticipated to receive up to 40 (with an average of 10) visitors per day, consisting mainly of community and school groups, and the Workforce Training Center is anticipated to serve approximately 31 trainees per day. On average, 31 chemical deliveries would occur per day.

Electricity Consumption

The operation of facilities at the Joint Treatment Site would require substantial electricity due to the intensive processes involved in treating wastewater and distributing purified water across the region. Electricity is essential for powering treatment equipment and systems, as well as for pumping water through the backbone pipeline to various receiving locations. In addition to these primary energy demands, Joint Treatment Site operations would also require electricity to support onsite ancillary facilities, vehicle use, and other operational needs.

The Joint Treatment Site would contain multiple components related to treatment and distribution throughout the site that would consume energy, including, but not limited to, the influent pump station, UV/AOP system, MBR, odor control facility for MBR and influent pump station, sidestream centrate

treatment system, ozone facility, BAC facility, RO facility, and pump station. Operational equipment within the MBR would include pumps, mixers, and blowers. The ozone facility would require a generator and pumps, and the BAC would contain outdoor pumps and blowers. The RO facility involves multiple pumps on a large site in the center of the AWP Facility. Six large effluent pumps (five duty and one standby) would be required for the pump station. In addition to components related to treatment and distribution, ancillary facilities and the Workforce Training Center would require electricity for operations. Annual electricity consumption estimates were provided by the engineering team based on equipment load. At full buildout, the Joint Treatment Site's electricity consumption is projected to be 464,223,000 kWh, equivalent to 1,583,994,796 kBtu. Approximately 307,601 kWh would also be consumed annually in association with electric vehicles traveling to and from the Joint Treatment Site.

The Joint Treatment Site's electricity demand would be supplied by SCE, necessitating the construction of two new 66-kV transmission lines to connect the two new substations to the regional grid. While the regional grid has sufficient energy capacity to supply the needs of Pure Water's Joint Treatment Site, the sizing of the existing transmission infrastructure is inadequate to deliver the necessary power to the site. To address this limitation, two new electrical substations would be constructed on the eastern side of the AWP Facility, along with the required transmission infrastructure, to ensure reliable power delivery without straining existing systems.

Metropolitan has been coordinating with SCE to ensure adequate energy supply and transmission capacity. Voltage drops or power reliability concerns resulting from Pure Water's operations are not anticipated. The facility would also integrate renewable energy sources as part of its sustainability measures. Specifically, **GHG-EC-1** requires Metropolitan to install photovoltaic solar panels with a total power rating of at least 1.5 megawatts at the Joint Treatment Site, reducing reliance on external power sources.

To maintain operational resilience, the facility would include up to eight 4-MW backup generators to ensure continuous functionality in the event of power outages or grid disruptions. While no foreseeable outages or grid disruptions are anticipated, these backup systems have been incorporated as a precautionary measure to ensure uninterrupted operations under any unexpected circumstances. The generators combined are estimated to consume up to 37,176 gallons of diesel or 5,167,467 kBtu per year for testing. To improve energy efficiency and reduce reliance on diesel fuel, the facility would also integrate two 2-MW battery packs that would be placed next to the generators and connected to new solar panels for power supply. Solar panels would be installed on the facility rooftops and parking canopies, with battery storage used during nighttime hours or periods of low solar generation, reducing the facility's overall fuel consumption.

The planned infrastructure improvements, including the new substations and transmission line, would ensure the facility's power needs are met efficiently and reliably.

Natural Gas Consumption

Off-road natural gas use is not anticipated during operation of the AWP Facility. However, on-road natural gas use is expected from natural gas-powered vehicles during operation from delivery of chemicals and CO_2. The annual natural gas consumption is estimated to be 1,677 gallons. Natural gas is generally more energy-efficient and produces fewer emissions compared to petroleum-based fuels, contributing to cleaner operations.

Transportation Fuel Consumption

Operational transportation fuel consumption would be associated with employee commutes, visitor travel, and chemical deliveries. Operational transportation fuel consumption is estimated at 58,680 gallons of diesel and 47,667 gallons of gasoline annually. To minimize fuel consumption and emissions, Pure Water would comply with Metropolitan's ZEV Transition Program, which promotes the use of fuel-efficient vehicles and ZEVs for transportation needs. These measures would further reduce the facility's reliance on petroleum-based fuels and support a more sustainable and efficient energy strategy.

7.1.2.3 Summary of Total Operation Energy Use

The combined estimated energy consumption for Pure Water operations, including both off-road and on-road fuel consumption, is 2,103,829,344 kBtu per year, as shown in **Table 42**. Of this total, electricity use alone accounts for 2,084,240,748 kBtu (approximately 99 percent), while other fuel sources such as gasoline, diesel, and natural gas contribute only a small fraction of the total energy demand. Natural gas consumption, in particular, is minimal at just 232,640 kBtu.

Table 42
ANNUAL OPERATIONAL ENERGY USE

	Electricity (kWh)	Natural Gas (gallons)	Diesel (gallons)	Gasoline (gallons)	Total kBtu
Joint Treatment Site	464,530,601	1,677	95,856	47,667	1,604,511,623
Backbone Pipeline[1]	-	-	-	-	-
Whittier Narrows Pump Station	96,200,000	-	436.5	-	328,308,734
Santa Fe Pump Station	50,100,000	-	436.5	-	171,008,988
Total	**610,830,601**	**1,677**	**96,729**	**47,667**	**2,103,829,344**

kWh = kilowatt hours; kBtu = thousand British thermal units
[1] The backbone pipeline would not consume energy during operation.

In Southern California, where significant portions of the water supply must be imported and moved over mountain ranges, energy use for conveyance is a necessity. **Table 43** presents a comparison of electricity use for different water projects.

While the table illustrates that Pure Water would have higher energy demands than Pure Water San Diego for advanced water purification alone (2,053 kWh/AF vs. 1,173 kWh/AF), this difference is justified by the nature of the treatment processes involved. Pure Water would employ DPR, which delivers purified water directly to treatment facilities without the use of an environmental buffer, necessitating a higher level of treatment and, consequently, greater energy consumption. In contrast, Pure Water San Diego utilizes IPR, which allows treated water to blend with other surface water in a reservoir before being extracted for use, reducing the immediate treatment requirements. Additionally, the overall energy demand for Pure Water, including conveyance (3,422 kWh/AF), remains comparable to or lower than other major water supply sources such as desalination (4,503 to 4,700 kWh/AF) and SWP imports (3,280 to 3,300 kWh/AF).

Table 43
ELECTRICITY USE COMPARISON

Electricity Use	kWh/AF
Pure Water Southern California[1]	
AWP Only	2,053
AWP + conveyance	3,422
Pure Water San Diego[2,3]	
AWP Only	1,173
AWP, conveyance, water treatment, distribution, and collection system/wastewater treatment	3,617
Orange County Groundwater Replenishment System[3,4]	
AWP + conveyance	1,481
Pacific Institute Water-Energy-Climate Nexus Report[5]	
SWP Imports (conveyance)	3,280
Colorado River Imports (conveyance)	2,115
Desalination (treatment)	4,503
LACSD Energy/GHG Memo[6]	
SWP Imports (conveyance)	3,300
Colorado River Imports (conveyance)	2,000
Desalination (treatment)	4,700

AWP = advanced water purification
1 Data developed by Metropolitan.
2 City of San Diego 2016
3 System utilizes IPR treatment
4 Orange County Water District and Orange County Sanitation District 1998
5 Pacific Institute 2021
6 Los Angeles County Sanitation Districts 2021

The estimated electricity use of Pure Water aligns with industry standards and remains within the range of comparable regional water supply projects (**Table 43**). In addition, as discussed in Section 6.2, Pure Water has been analyzed as part of Metropolitan's CAP under the Regional Recycled Water Program (Pure Water's former name), and its project-level components remain largely consistent with the assumptions in the CAP. Pure Water as a whole remains on track with Metropolitan's emissions reduction goals. Metropolitan remains within its allocated carbon budget through 2030 under all forecast scenarios and under its 2045 targets for both the low and average emissions scenarios. Even under the high emissions scenario, where the CAP projected a potential exceedance by 2045, Metropolitan has already identified and planned CAP reduction strategies sufficient to offset this exceedance.

7.1.3 Summary of Combined Construction and Operational Impacts

Construction and operation of Pure Water would occur simultaneously for many years and at various times and locations. **Tables 41** and **42** provide a summary of the potential construction and operational energy use associated with Pure Water. As discussed above, combined construction and operational energy use is necessary for the implementation of critical water infrastructure and remains within industry standards. Given Pure Water's adherence to best practices in energy efficiency and compliance with regulatory energy conservation measures and environmental commitments, Pure Water's energy use is not considered wasteful, inefficient, or unnecessary under CEQA. Instead, it would contribute to a more reliable and sustainable local water supply, reducing dependence on imported water sources that

require comparable or even greater energy inputs for long-distance pumping and treatment. Impacts would be less than significant.

7.2 CONFLICT WITH OR OBSTRUCT A STATE OR LOCAL PLAN FOR RENEWABLE ENERGY OR ENERGY EFFICIENCY

SB 100 established the current overarching renewable energy-related policy in California. It requires that 100 percent of electric retail sales be supplied by renewable energy by 2045. California's RPS Program is the primary mechanism by which SB 100 is implemented at the state-wide level. The RPS, which is implemented by the California Public Utilities Commission and the CEC, requires electricity providers to ensure that renewable energy constitutes a specified minimum portion of their electric load.

The Pure Water area is serviced by SCE, whose parent company (Edison International) published a report in 2019 titled *Pathway 2045* that provides an analysis of steps that California must take to meet SB 100's 2045 goal (Edison International 2019). In September 2024, Edison International published *Reaching Net Zero*, which details SCE's plan to reach net zero GHG emissions and support the state's climate goals (Edison International 2024). Achieving net zero emissions will primarily be accomplished through SCE increasing clean power procurement and decreasing electricity generated via natural gas. Measures identified in *Reaching Net Zero* are undertaken by SCE and do not require action by customers such as Metropolitan. Pure Water would consume electricity provided by SCE and, because SCE would achieve net-zero GHG emissions in accordance with SB 100, would therefore consume carbon-free electricity by 2045. Pure Water would not conflict with or obstruct SCE's plan for achieving net-zero emissions, and would therefore also not conflict with or obstruct implementation of SB 100.

The energy-related plan directly applicable to Pure Water is Metropolitan's CAP, which identifies actions to reduce Metropolitan's carbon footprint in the face of climate change, increasing its climate resiliency and energy independence while supporting California's GHG reduction goals. Strategies directed at energy use include phasing out natural gas combustion at Metropolitan facilities, transitioning to a zero-emissions vehicle fleet, utilizing carbon-free electricity, and improving energy efficiency. As discussed in Section 6.2, Pure Water would be consistent with the CAP while also implementing several of the strategies and measures aimed at reducing non-renewable energy use, including installing photovoltaic solar panels and electric vehicle charging stations at the Joint Treatment Site. In addition, Metropolitan would expand existing commute emission reduction programs to the Joint Treatment Site, including public transit subsidies, carpool and vanpool incentives, and bike-to-work support, which would reduce the number of vehicle trips generated and the associated use of non-electrical energy. Metropolitan's pursuit of Envision verification for Pure Water, along with its intent to follow the ASCE Standard for Sustainable Infrastructure (ASCE/COS 73-23) where appropriate, further demonstrates its commitment to energy efficiency and sustainability throughout the project's lifecycle.

As such, Pure Water would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. No impact would occur.

8.0 GENERAL CONFORMITY

This section evaluates potential adverse effects of the Proposed Project as they relate to air pollutant emissions for the purposes of conformity with federal regulations. Project construction and operational emissions were estimated using the CalEEMod model as described in Section 4.0. **Table 44***,* below,

shows a conservative estimate of Project construction emissions for comparison to the *de minimis* conformity thresholds. As shown therein, unmitigated emissions from construction of the Proposed Project would exceed *de minimis* conformity threshold for NO_X.

Table 44
ANNUAL CONSTRUCTION EMISSIONS

Year	Pollutant Emissions (tons per year)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2025	0.01	0.11	0.08	0.00	0.05	0.01
2026	1.02	8.49	9.57	0.03	1.00	0.43
2027	3.69	28.04	33.59	0.12	1.47	1.10
2028	4.92	36.14	43.34	0.15	1.76	1.40
2029	5.39	38.81	45.35	0.15	1.99	1.55
2030	8.63	48.95	61.88	0.22	2.84	2.11
2031	3.61	21.10	29.19	0.10	1.04	0.87
2032	1.04	5.85	8.49	0.03	0.31	0.26
2033	0.17	1.04	2.05	0.00	0.08	0.04
2034	0.17	1.08	1.97	0.00	0.04	0.04
2035	0.15	0.93	1.76	0.00	0.04	0.03
2036	0.02	0.09	0.18	0.00	0.00	0.00
Maximum Annual Emissions	**8.63**	**48.95**	**61.88**	**0.22**	**2.84**	**2.11**
de minimis Levels	10	10	-	-	-	70
Potentially Significant Impact?	No	Yes	No	No	No	No

Note: Modeling data are provided in Appendix A

Table 45, below, shows a conservative estimate of Proposed Project operational emissions for comparison to the *de minimis* conformity thresholds. As shown therein, emissions from operation of the Proposed Project would not exceed *de minimis* conformity thresholds.

Table 45
ANNUAL OPERATIONAL EMISSIONS

Source	Pollutant Emissions (tons per year)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
AWP Stationary	1.08	0.41	2.15	<0.01	0.02	0.02
Mobile	0.05	0.36	0.75	0.01	0.08	0.03
Conveyance Pump Station Stationary	<0.01	0.01	0.05	<0.01	<0.01	<0.01
Total Operational Emissions	**1.12**	**0.78**	**2.96**	**0.01**	**0.09**	**0.05**
de minimis Levels	10	10	-	-	-	70
Potentially Significant Impact?	No	No	No	No	No	No

Note: Modeling data are provided in Appendix A

8.1 MITIGATION MEASURES

Mitigation measure AQ-MM-1, which requires use of Tier 4 final off-road construction equipment, would be required to reduce construction period NO_X emissions.

8.2 SIGNIFICANCE AFTER MITIGATION

Implementation of mitigation measures AQ-MM-1 through AQ-MM-4 would reduce the Proposed Project's construction period emissions; however, as described previously, only measure AQ-MM-1 was quantified. The results of the calculations for annual construction emissions with mitigation are shown in **Table 46**.

Table 46
MITIGATED ANNUAL CONSTRUCTION EMISSIONS

Year	Pollutant Emissions (tons per year)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2025	0.00	0.03	0.12	0.00	0.05	0.01
2026	0.47	2.25	11.75	0.03	0.74	0.18
2027	2.09	5.55	34.97	0.12	0.56	0.27
2028	2.73	5.72	45.34	0.15	0.53	0.27
2029	2.86	5.56	49.23	0.15	0.66	0.33
2030	3.92	8.61	64.84	0.22	1.18	0.58
2031	1.85	3.14	30.29	0.10	0.26	0.15
2032	0.58	0.57	8.59	0.03	0.06	0.03
2033	0.06	0.32	2.88	0.00	0.05	0.02
2034	0.07	0.38	2.97	0.00	0.02	0.01
2035	0.06	0.34	2.65	0.00	0.01	0.01
2036	0.01	0.04	0.28	0.00	0.00	0.00
Maximum Annual Emissions	**3.92**	**8.61**	**64.84**	**0.22**	**1.18**	**0.58**
de minimis Levels	*10*	*10*	-	-	-	*70*
Potentially Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***

Note: Modeling data are provided in Appendix A

As shown in **Table 46**, annual emissions of NO_X would be reduced to a level less than the de minimis thresholds. As such, construction of the Proposed Project would not result in an adverse impact with mitigation.

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Appendix A

Emissions Modeling Outputs

Daily Construction Emissions Summary

Unmitigated Construction Emissions

Joint Treatment Site	ROG	NOx	CO	SO_2	PM10T	PM2.5T
2025	1.98	18.65	13.87	0.05	8.55	2.03
2026	6.53	58.72	59.30	0.20	13.23	4.03
2027	4.82	42.45	45.20	0.10	2.15	1.63
2028	4.37	38.66	38.52	0.10	1.63	1.41
2029	8.27	69.43	72.51	0.19	3.18	2.57
2030	4.93	38.30	43.68	0.12	2.00	1.49
2031	3.76	30.26	33.68	0.09	1.21	1.09
2032	0.82	5.17	10.24	0.02	0.57	0.25
2033	2.39	14.75	28.77	0.06	1.02	0.62
2034	2.02	13.06	24.05	0.06	0.51	0.47
2035	1.17	7.14	13.48	0.03	0.26	0.24
2036	1.14	6.86	13.45	0.03	0.24	0.23

Whittier Narrows PS	ROG	NOx	CO	SO_2	PM10T	PM2.5T
2029	3.05	27.61	29.49	0.06	9.39	5.12
2030	1.58	16.40	19.56	0.05	4.45	2.15
2031	0.92	8.12	12.85	0.02	0.44	0.22
2032	0.77	5.45	9.50	0.01	0.43	0.22

Santa Fe Springs PS	ROG	NOx	CO	SO_2	PM10T	PM2.5T
2029	3.05	27.61	29.49	0.06	9.39	5.12
2030	2.99	26.83	29.78	0.06	9.37	5.10
2031	0.92	8.12	12.85	0.02	0.24	0.22
2032	0.90	7.87	12.79	0.02	0.43	0.22

Backbone Pipeline	ROG	NOx	CO	SO_2	PM10T	PM2.5T
2026	18.68	146.16	175.35	0.66	8.05	5.78
2027	36.56	258.37	328.05	1.16	13.53	10.44
2028	36.56	258.37	328.05	1.16	13.53	10.44
2029	46.52	330.40	388.91	1.34	14.96	12.44
2030	83.57	453.27	567.66	2.12	23.07	17.98
2031	50.29	271.87	354.17	1.28	13.86	11.10
2032	13.03	72.51	105.71	0.36	3.80	3.28

Overlap by Year	ROG	NOx	CO	SO_2	PM10T	PM2.5T
2025	1.98	18.65	13.87	0.05	8.55	2.03
2026	25.21	204.88	234.65	0.86	21.28	9.81
2027	41.37	300.82	373.25	1.26	15.68	12.07
2028	40.92	297.03	366.57	1.25	15.16	11.85
2029	60.89	455.05	520.40	1.66	36.93	25.25
2030	93.07	534.79	660.68	2.35	38.89	26.72
2031	55.89	318.37	413.54	1.41	15.75	12.63
2032	15.52	91.00	138.24	0.41	5.23	3.96
2033	2.39	14.75	28.77	0.06	1.02	0.62
2034	2.02	13.06	24.05	0.06	0.51	0.47
2035	1.17	7.14	13.48	0.03	0.26	0.24
2036	1.14	6.86	13.45	0.03	0.24	0.23
Max	93.07	534.79	660.68	2.35	38.89	26.72
Thresholds	75	100	550	150	150	55
Exceedance?	Yes	Yes	Yes	No	No	No

Mitigated Construction Emissions

Joint Treatment Site	ROG	NOx	CO	SO_2	PM10T	PM2.5T
2025	0.39	4.51	19.48	0.05	7.79	1.34
2026	1.77	18.08	89.79	0.20	11.39	2.36
2027	1.46	8.20	63.67	0.10	0.78	0.38
2028	1.34	7.72	56.49	0.10	0.42	0.31
2029	2.71	14.98	108.95	0.19	1.07	0.66
2030	1.75	9.34	66.62	0.12	0.86	0.45
2031	1.14	6.50	52.02	0.09	0.28	0.25
2032	0.24	1.12	13.76	0.02	0.40	0.10
2033	0.86	4.76	41.03	0.06	0.62	0.25
2034	0.76	4.38	35.68	0.06	0.25	0.17
2035	0.45	2.64	20.36	0.03	0.10	0.10
2036	0.45	2.64	20.36	0.03	0.10	0.10

Whittier Narrows PS	ROG	NOx	CO	SO_2	PM10T	PM2.5T
2029	0.58	9.85	29.72	0.06	8.41	4.22
2030	0.39	5.83	19.98	0.05	4.00	1.74
2031	0.42	2.81	14.82	0.02	0.31	0.11
2032	0.42	2.19	10.09	0.01	0.31	0.11

Santa Fe Springs PS	ROG	NOx	CO	SO_2	PM10T	PM2.5T
2029	0.58	9.39	29.72	0.06	8.41	4.22
2030	0.57	5.83	29.66	0.06	8.41	4.22
2031	0.33	2.81	14.82	0.02	0.07	0.07
2032	0.42	2.81	14.82	0.02	0.31	0.11

Backbone Pipeline	ROG	NOx	CO	SO_2	PM10T	PM2.5T
2026	11.17	33.75	175.35	0.66	3.48	1.58
2027	21.51	45.08	328.05	1.16	4.59	2.22
2028	21.51	45.08	328.05	1.16	4.59	2.22
2029	27.01	41.27	388.91	1.34	4.06	2.06
2030	39.29	73.53	567.66	2.12	7.53	3.69
2031	24.41	38.33	354.17	1.28	4.01	2.03
2032	7.51	6.88	105.71	0.36	0.69	0.41

Overlap by Year	ROG	NOx	CO	SO_2	PM10T	PM2.5T
2025	0.39	4.51	19.48	0.05	7.79	1.34
2026	12.94	51.83	265.14	0.86	14.87	3.94
2027	22.97	53.28	391.72	1.26	5.37	2.60
2028	22.85	52.81	384.54	1.25	5.01	2.53
2029	30.86	75.50	557.30	1.66	21.94	11.16
2030	41.99	94.52	683.92	2.35	20.79	10.10
2031	26.30	50.45	435.83	1.41	4.67	2.46
2032	8.58	12.99	144.38	0.41	1.70	0.73
2033	0.86	4.76	41.03	0.06	0.62	0.25
2034	0.76	4.38	35.68	0.06	0.25	0.17
2035	0.45	2.64	20.36	0.03	0.10	0.10
2036	0.45	2.64	20.36	0.03	0.10	0.10
Max	41.99	94.52	683.92	2.35	21.94	11.16
Thresholds	75	100	550	150	150	55
Exceedance?	No	No	Yes	No	No	No

Annual Construction Emissions Summary

Unmitigated Annual Emissions (tpy)

Backbone Pipeline

	ROG	NOX	CO	SOX	PM10	PM2.5	MT CO2e
2026	0.57	4.49	5.39	0.02	0.25	0.18	1,995.28
2027	3.33	24.87	30.20	0.11	1.31	0.98	11,059.89
2028	4.42	31.52	39.02	0.14	1.57	1.24	13,303.85
2029	4.43	30.41	36.94	0.13	1.44	1.18	12,772.75
2030	7.78	41.57	53.10	0.20	2.14	1.68	19,219.94
2031	3.25	17.96	24.65	0.09	0.93	0.77	8,411.12
2032	0.98	5.45	7.75	0.03	0.28	0.25	2,495.92

Joint Treatment Site

	ROG	NOX	CO	SOX	PM10	PM2.5	MT CO2e
2025	0.01	0.11	0.08	0.00	0.05	0.01	31.89
2026	0.45	4.00	4.18	0.01	0.75	0.25	1,535.12
2027	0.36	3.18	3.40	0.01	0.16	0.12	780.31
2028	0.50	4.62	4.33	0.01	0.18	0.17	1,059.24
2029	0.87	7.52	7.57	0.02	0.30	0.27	1,960.36
2030	0.53	4.34	4.71	0.01	0.19	0.16	1,281.47
2031	0.13	1.04	1.21	0.00	0.04	0.04	301.17
2032	0.03	0.18	0.35	0.00	0.02	0.01	64.71
2033	0.17	1.04	2.05	0.00	0.08	0.04	453.53
2034	0.17	1.08	1.97	0.00	0.04	0.04	476.62
2035	0.15	0.93	1.76	0.00	0.03	0.03	426.34
2036	0.02	0.09	0.18	0.00	0.00	0.00	44.39

Whittier Narrows PS

	ROG	NOX	CO	SOX	PM10	PM2.5	MT CO2e
2029	0.06	0.56	0.55	0.00	0.17	0.07	147.67
2030	0.15	1.45	1.97	0.00	0.22	0.11	443.91
2031	0.12	1.04	1.65	0.00	0.03	0.03	279.18
2032	0.01	0.09	0.16	0.00	0.01	0.00	23.20

Santa Fe Springs PS

	ROG	NOX	CO	SOX	PM10	PM2.5	MT CO2e
2029	0.03	0.32	0.30	0.00	0.08	0.03	92.97
2030	0.17	1.60	2.11	0.00	0.30	0.16	478.77
2031	0.12	1.06	1.67	0.00	0.03	0.03	284.42
2032	0.02	0.13	0.23	0.00	0.01	0.00	34.22

Overlap by Year

	ROG	NOX	CO	SOX	PM10	PM2.5	MT CO2e
2025	0.01	0.11	0.08	0.00	0.05	0.01	31.89
2026	1.02	8.49	9.57	0.03	1.00	0.43	3,530.40
2027	3.69	28.04	33.59	0.12	1.47	1.10	11,840.20
2028	4.92	36.14	43.34	0.15	1.76	1.40	14,363.09
2029	5.39	38.81	45.35	0.15	1.99	1.55	14,973.74
2030	8.63	48.95	61.88	0.22	2.84	2.11	21,424.09
2031	3.61	21.10	29.19	0.10	1.04	0.87	9,275.90
2032	1.04	5.85	8.49	0.03	0.31	0.26	2,618.06
2033	0.17	1.04	2.05	0.00	0.08	0.04	453.53
2034	0.17	1.08	1.97	0.00	0.04	0.04	476.62
2035	0.15	0.93	1.76	0.00	0.03	0.03	426.34
2036	0.02	0.09	0.18	0.00	0.00	0.00	44.39

Mitigated Annual Emissions (tpy)

Backbone Pipeline

	ROG	NOX	CO	SOX	PM10	PM2.5	MT CO2e
2026	0.34	1.04	5.39	0.02	0.11	0.05	1,995.28
2027	1.98	4.94	30.20	0.11	0.50	0.24	11,059.89
2028	2.59	4.90	39.02	0.14	0.49	0.24	13,303.85
2029	2.58	3.79	36.94	0.13	0.36	0.19	12,772.75
2030	3.66	6.63	53.10	0.20	0.69	0.34	19,219.94
2031	1.72	2.19	24.65	0.09	0.23	0.12	8,411.12
2032	0.56	0.44	7.75	0.03	0.04	0.03	2,495.92

Joint Treatment Site

	ROG	NOX	CO	SOX	PM10	PM2.5	MT CO2e
2025	0.00	0.03	0.12	0.00	0.05	0.01	31.89
2026	0.12	1.21	6.37	0.01	0.63	0.14	1,535.12
2027	0.11	0.61	4.77	0.01	0.06	0.03	780.31
2028	0.14	0.82	6.33	0.01	0.03	0.03	1,059.24
2029	0.26	1.50	11.45	0.02	0.07	0.06	1,960.36
2030	0.17	0.97	7.30	0.01	0.06	0.04	1,281.47
2031	0.04	0.22	1.81	0.00	0.01	0.01	301.17
2032	0.01	0.03	0.43	0.00	0.01	0.00	64.71
2033	0.06	0.32	2.88	0.00	0.05	0.02	453.53
2034	0.07	0.38	2.97	0.00	0.02	0.01	476.62
2035	0.06	0.34	2.65	0.00	0.01	0.01	426.34
2036	0.01	0.04	0.28	0.00	0.00	0.00	44.39

Whittier Narrows PS

	ROG	NOX	CO	SOX	PM10	PM2.5	MT CO2e
2029	0.01	0.15	0.55	0.00	0.15	0.06	147.67
2030	0.05	0.50	2.16	0.00	0.18	0.08	443.91
2031	0.04	0.36	1.90	0.00	0.01	0.01	279.18
2032	0.01	0.04	0.16	0.00	0.00	0.00	23.20

Santa Fe Springs PS

	ROG	NOX	CO	SOX	PM10	PM2.5	MT CO2e
2029	0.01	0.12	0.29	0.00	0.07	0.02	92.97
2030	0.05	0.51	2.28	0.00	0.25	0.12	478.77
2031	0.04	0.37	1.93	0.00	0.01	0.01	284.42
2032	0.01	0.06	0.24	0.00	0.01	0.00	34.22

Overlap by Year

	ROG	NOX	CO	SOX	PM10	PM2.5	MT CO2e
2025	0.00	0.03	0.12	0.00	0.05	0.01	31.89
2026	0.47	2.25	11.75	0.03	0.74	0.18	3,530.40
2027	2.09	5.55	34.97	0.12	0.56	0.27	11,840.20
2028	2.73	5.72	45.34	0.15	0.53	0.27	14,363.09
2029	2.86	5.56	49.23	0.15	0.66	0.33	14,973.74
2030	3.92	8.61	64.84	0.22	1.18	0.58	21,424.09
2031	1.85	3.14	30.29	0.10	0.26	0.15	9,275.90
2032	0.58	0.57	8.59	0.03	0.06	0.03	2,618.06
2033	0.06	0.32	2.88	0.00	0.05	0.02	453.53
2034	0.07	0.38	2.97	0.00	0.02	0.01	476.62
2035	0.06	0.34	2.65	0.00	0.01	0.01	426.34
2036	0.01	0.04	0.28	0.00	0.00	0.00	44.39

Total Construction Energy Use

Joint Treatment Site					
	Diesel (gal)	Gas (gal)	Elec (kWh)	NG (gal)	Total kBTU
Offroad	281,454	-	-	-	39,122,133
Onroad	29,076	20,471	12,575	1,295	6,802,457
Total	***310,530***	***20,471***	***12,575***	***1,295***	***45,924,590***

Whittier Narrows PS					
	Diesel (gal)	Gas (gal)	Elec (kWh)	NG (gal)	Total kBTU
Offroad	23,843	-	-	-	3,314,242
Onroad	9,714	5,184	3,071	433	2,063,576
Total	***33,557***	***5,184***	***3,071***	***433***	***5,377,818***

Santa Fe Springs PS					
	Diesel (gal)	Gas (gal)	Elec (kWh)	NG (gal)	Total kBTU
Offroad	23,835	-	-	-	3,313,067
Onroad	9,519	5,116	3,034	424	2,026,729
Total	***33,354***	***5,116***	***3,034***	***424***	***5,339,796***

Backbone Pipeline					
	Diesel (gal)	Gas (gal)	Elec (kWh)	NG (gal)	Total kBTU
Offroad	4,903,647	-	-	-	681,606,960
Onroad	953,852	738,619	458,319	42,473	231,629,010
Total	***5,857,499***	***738,619***	***458,319***	***42,473***	***913,235,970***

Total Energy Use					
	Diesel (gal)	Gas (gal)	Elec (kWh)	NG (gal)	Total kBTU
Offroad	5,232,780	-	-	-	727,356,402
Onroad	1,002,161	769,390	476,999	44,625	242,521,772
Total	***6,234,941***	***769,390***	***476,999***	***44,625***	***969,878,173***

Construction Schedule

Reach 1	CM-1	10/6/2026	6/26/2028
	CM-4A	7/6/2027	6/19/2028
	CM-4B	7/6/2027	10/25/2027
Reach 2	CM-1	10/6/2026	4/2/2029
	CM-4A	7/6/2027	7/3/2028
	CM-4B	8/31/2028	1/30/2030
Reach 3	CM-1/2/3	8/28/2029	12/3/2029
	CM-4A	5/28/2030	8/19/2030
	CM-4B	5/28/2030	3/31/2031
Reach 4	CM-1/3	11/25/2027	2/22/2029
	CM-4B	1/12/2029	4/15/2029
	CM-4C	1/12/2029	10/20/2032
Reach 5	CM-1/2	7/26/2029	4/23/2031
	CM-4A/B	4/25/2030	11/6/2030
	CM-4C	4/25/2030	4/23/2031
Reach 6	CM-4F	7/11/2028	6/19/2031
Reach 7	CM-1/2	2/7/2030	6/26/2030
	CM-4E	2/7/2030	7/2/2030
	CM-4F	2/7/2030	2/25/2032
Reach 8	CM-1/2/3	2/7/2030	8/14/2030
	CM-4D/E	2/7/2030	4/2/2031
Whittier Narrows PS		11/1/2029	3/17/2032
Santa Fe Spreading Grounds PS		11/26/2029	4/9/2032
Joint Treatmet Site Improvements		12/15/2025	2/27/2036

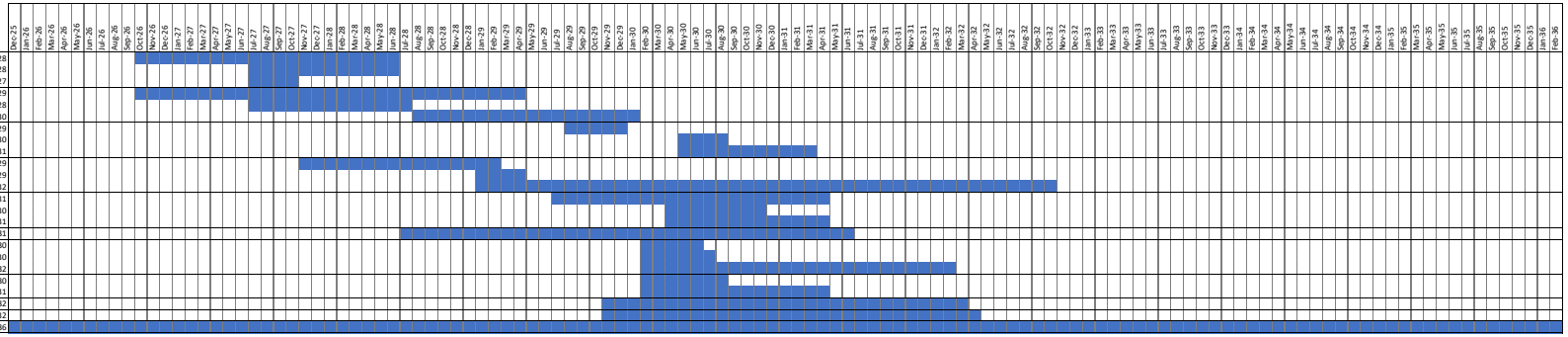

TABLE II-D
PERCENTAGE REDUCTION
FROM TIER 1 TO TIERS 2, 3 & 4

Engine	Tier 1 to Tier 2			Tier 1 to Tier 3			Tier 1 to Tier 4			
Size (hp)	NOx	ROG	PM	NOx	ROG	PM	NOx (interim1)	NOx (final2)	ROG	PM
75 - 99	23%	76%	46%	52%	85%	46%	64%	96%	88%	97%
100 - 174	33%	70%	28%	59%	82%	28%	64%	96%	83%	95%
175 - 299	33%	76%	63%	59%	85%	63%	78%	96%	86%	96%
300 - 600	34%	76%	63%	59%	85%	63%	78%	96%	86%	96%

1 Interim Limit Ends on 12-31-2014
2 Final Limit Begins on 1-1-2015

TABLE II-E
PERCENTAGE REDUCTION
FROM TIER 2 TO TIERS 3 & 4

Engine	Tier 2 to Tier 3			Tier 2 to Tier 4			
Size (hp)	NOx	ROG	PM	NOx (interim1)	NOx (final2)	ROG	PM
75 - 99	38%	38%	0%	53%	94%	50%	95%
100 - 174	39%	39%	0%	46%	94%	43%	93%
175 - 299	39%	39%	0%	68%	94%	43%	90%
300 - 600	38%	38%	0%	67%	93%	42%	90%

1 Interim Limit Ends on 12-31-2014
2 Final Limit Begins on 1-1-2015

TABLE II-F
PERCENTAGE REDUCTION
FROM TIER 3 TO TIER 4

Engine	Tier 3 to Tier 4			
Size (hp)	NOx (interim1)	NOx (final2)	ROG	PM
75 - 99	25%	91%	20%	95%
100 - 174	12%	89%	7%	93%
175 - 299	47%	89%	7%	90%
300 - 600	47%	89%	7%	90%

1 Interim Limit Ends on 12-31-2014
2 Final Limit Begins on 1-1-2015

TABLE II-E
PERCENTAGE REMAINING
FROM TIER 2 TO TIER 4

Engine		Tier 2 to Tier 4			
Size (hp)		NOx (interim[1])	NOx (final[2])	ROG	PM
0	99	47%	6%	50%	5%
100	174	54%	6%	57%	7%
175	299	32%	6%	57%	10%
300	600	33%	7%	58%	10%

Source: https://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies/off-road-engines
Source: http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/off-road-engines/repowered-engines/off-road-engines-table-ii.xls?sfvrsn=2

Backbone Pipeline Construction

Equipment for Construction Methods (CM-1, CM-2 and CM-3A)

CREW TYPE	CONSTRUCTION METHOD	EQUIPMENT TYPE	QUANTITY	FUEL TYPE	HORSE POWER (HP)	LOAD FACTOR	HOURS PER DAY	DAILY HP-HR
Traffic Control Crew	CM-1 Roadways	20 MT Truck Mounted Crane	1	Diesel	100	0.65	8	520
		Four (4) Traffic Safety Message Signs per Construction Location	4	Electric				
		Generator Set 10kw Diesel Trailer Mounted for Traffic Safety Messaging Signs	1	Diesel	13	1.00	8	104
		Concrete Barriers, Plastic Safety Drums	1	N/A				
Sawcut Crew	CM-1 Roadways	36" Asphalt/Concrete Floor Saw 75 HP	1	Diesel	75	0.73	8	438
		Survey Equipment	1	N/A				
Demolition Crew	CM-1 Roadways	Rear Dump Truck 12-18 cy	1	Diesel	300	0.80	8	1,920
		Rear Dump Truck 12-18 cy	1	Diesel	300	0.80	8	1,920
		Air Comp Portable 600 cfm Diesel	1	Diesel	169	0.65	8	879
		Pneumatic Impact Breaker 1.2K (for boom mounting)	1	Air				
Paving Crew	CM-1 Roadways	Hand Held Pavement Breaker 80-90 lbs	1	Diesel	20	0.65	8	104
		Wheel Mntd Asphalt Pavers 10'-30' Barber-Greene-BG-260	1	Diesel	224	0.42	8	753
		Truck for Asphalt Distributor	1	Diesel	300	0.80	8	1,920
		Crawler Mntd Pavement Millers 84"-Terex-PR-800-7-Power Mode: Diesel	1	Diesel	60	0.30	8	144
		Pneumatic Soil/Asphalt Compactor Cat. PS200B- 5200#/Tire	1	Diesel	105	0.38	8	319
		Self Propelled Pavement Brooms 96" 76HP	1	Diesel	76	0.44	8	268
Shoring Crew	CM-1 Roadways, CM-2 SCE Easement, CM-3A LAFCD Easement	80MT Truck Mounted Hydro Crane	1	Diesel	300	0.65	8	1,560
		Vibration Hammer	1	Diesel	200	0.50	8	800
		Portable Welder Diesel 600 amps	1	Diesel	50	0.50	8	200
		Torch Cutting Acetylene-Oxygen 150'	1	N/A				
		Steel Sheeting	1	N/A				
		Utility Blower Fan 520W 2,295 CFM High Velocity Ventilator with Duct Hose	1	Electric				
Pipeline Crew	CM-1 Roadways, CM-2 SCE Easement, CM-3A LAFCD Easement	Flatbed Truck 20,000 GVW	1	Diesel	300	0.80	8	1,920
		Standard Crawler Dozer Cat. D7R 230HP	1	Diesel	230	0.40	8	736
		Articulated Frame Grader Cat 14H 215HP	1	Diesel	215	0.41	8	705
		Loader Backhoe C446-101HP 1.50cy- 17'+ Depth	1	Diesel	101	0.37	8	299
		Hydraulic Excavator Cat. 320 138HP 1.25cy	1	Diesel	138	0.38	8	420
		Hydraulic Excavator Cat. 345 321HP 2.50cy	1	Diesel	321	0.38	8	976
		Two (2) 200MT Truck Mounted Lattice Boom Crane	2	Diesel	300	0.65	8	3,120
		Rear Dump Truck 12-18 cy	1	Diesel	300	0.80	8	1,920
		Hand Held Vibratory Plate 28" 11HP	1	Diesel	11	0.43	8	38
		Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	1	Diesel	18	0.38	8	55
		Self Propelled Pad Foot Compactors-Caterpillar-815 23MT/240HP	1	Diesel	240	0.38	8	730
		Cat CP/CS433 Pad/Smooth Vibratory Compactor 96HP- 6.7MT	1	Diesel	96	0.38	8	292
		Large Generator Set 45kw for Night Lighting	1	Diesel	60	1.00	8	480
		Standby Large Generator Set 45kw for Night Lighting	1	Diesel	60	1.00	-	-
		Large Generator Set 75kw for Dewatering Pumps	1	Diesel	100	1.00	8	800
		Standby Large Generator Set 75kw for Dewatering Pumps	1	Diesel	100	1.00	-	-
		Two (2) Heavy Duty Centrifugal Pumps 90,000gph - Dewatering	2	Diesel	150	0.74	8	1,776
		Standby Heavy Duty Centrifugal Pumps 90,000gph - Dewatering	1	Diesel	150	0.74	8	888
		Electric Submersible Pump 10HP/4" - Dewatering	1	Electric				
		Pump Discharge Hose 6.0 in - Dewatering	1	N/A				
		Pump Suction Hose 6.0 in - Dewatering	1	N/A				
		Four (4) Portable Welder Diesel 600 amps	4	Diesel	50	0.50	8	800
		Four (4) Torch Cutting Acetylene-Oxygen 150'	4	N/A				
		Utility Blower Fan 520W 2,295 CFM High Velocity Ventilator with Duct Hose	1	Electric				
		Pressure Washer- 3000 psi	1	Diesel	10	0.30	8	24
		Three (3) Portable Light Tower Diesel 30'-6 Light 15.5HP	3	Diesel	16	1.00	8	372
		Standby Cat CP433 Pad Foot Compactor 96HP	1	Diesel	96	0.38	-	-
		Standby Tandem Vib Compactor Cat CB434 56" 70HP 7.9MT	1	Diesel	70	0.38	-	-
		Trench Box	1	N/A				
		Pipeline Laser w/Target	1	N/A				
		Trench Plates	1	N/A				

Backbone Pipeline Construction

Equipment for Construction Methods (CM-1, CM-2 and CM-3A)

CREW TYPE	CONSTRUCTION METHOD	EQUIPMENT TYPE	QUANTITY	FUEL TYPE	HORSE POWER (HP)	LOAD FACTOR	HOURS PER DAY	DAILY HP-HR
Water Truck Crew	CM-2 SCE Easement, CM-3A LAFCD Easement	On-Highway Water Truck 4000 Gallon	1	Diesel	300	0.80	8	1,920
Utility Relocation Crew	CM-1 Roadways, CM-2 SCE Easement, CM-3A LAFCD Easement	Hydraulic Excavator Cat. 320 138HP 1.25cy	1	Diesel	138	0.65	8	718
		Rear Dump Truck 12-18 cy	1	Diesel	300	0.80	8	1,920
		Hand Held Vibratory Plate 28" 11HP	1	Diesel	11	0.43	8	38
		Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	1	Diesel	18	0.38	8	55
		Self Propelled Pad Foot Compactors-Caterpillar-815 23MT/240HP	1	Diesel	240	0.38	8	730
		Trench Plates	1	N/A				
Temporary Gravel Roadway Crew	CM-2 SCE Easement, CM-3A LAFCD Easement	Rear Dump Truck 12-18 cy	1	Diesel	300	0.80	8	1,920
		Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	1	Diesel	18	0.38	8	55
		Hydraulic Excavator Cat. 320 138HP 1.25cy with Grader attachment	1	Diesel	138	0.65	8	718
Site Restoration Crew	CM-2 SCE Easement, CM-3A LAFCD Easement	Rear Dump Truck 12-18 cy	1	Diesel	300	0.80	8	1,920
		Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	1	Diesel	18	0.38	8	55
		Hydraulic Excavator Cat. 320 138HP 1.25cy with Grader attachment	1	Diesel	138	0.65	8	718
		Tractor with Pneumatic Seed Drill	1	Diesel	100	0.37	8	296
		Peterson BT40C Blower Truck in Mulch	1	Diesel	300	0.80	8	1,920

Equipment for Electrical and Communication Conduit Ductbank Construction

Paving Crew	CM-1 Roadways, CM-2 SCE Easement, CM-3A LAFCD Easement	Hand Held Pavement Breaker 80-90 lbs	1	Diesel	20	0.65	8	104
		Wheel Mntd Asphalt Pavers 10'-30' Barber-Greene-BG-260	1	Diesel	224	0.42	8	753
		Truck for Asphalt Distributor	1	Diesel	300	0.80	8	1,920
		Crawler Mntd Pavement Millers 84"-Terex-PR-800-7-Power Mode: Diesel	1	Diesel	60	0.30	8	144
		Pneumatic Soil/Asphalt Compactor Cat. PS200B- 5200#/Tire	1	Diesel	105	0.38	8	319
		Self Propelled Pavement Brooms 96" 76HP	1	Diesel	76	0.44	8	268
Trenching, Backfilling, Conduit, Formwork Crew	CM-1 Roadways, CM-2 SCE Easement, CM-3A LAFCD Easement	Rear Dump Truck 12-18 cy	1	Diesel	300	0.80	8	1,920
		Rear Dump Truck 12-18 cy	1	Diesel	300	0.80	8	1,920
		Loader Backhoe C446-101HP 1.50cy- 17'+ Depth	1	Diesel	101	0.37	8	299
		Hydraulic Excavator Cat. 320 138HP 1.25cy	1	Diesel	138	0.38	8	420
		Flatbed Truck 20,000 GVW (rebar, formwork, conduits, etc.)	1	Diesel	300	0.80	8	1,920
		10 MT Truck Mounted Crane	1	Diesel	80	0.65	8	416
Concrete Crew	CM-1 Roadways, CM-2 SCE Easement, CM-3A LAFCD Easement	10.5 CY Concrete Mixer Truck	1	Diesel	300	0.80	8	1,920
Electrician Crew	CM-1 Roadways, CM-2 SCE Easement, CM-3A LAFCD Easement	2 ton Reel Lift Delivery Truck (Electrical)	1	Diesel	300	0.80	8	1,920
		2 ton Reel Lift Delivery Truck (Fiberoptic)	1	Diesel	300	0.80	8	1,920
		Electrical Line Puller	1	Diesel	37	0.40	8	118
		Fiberoptic Cable Pulling Trailer	1	Diesel	16	0.40	8	51
Trenching, Backfilling, Conduit, Formwork Crew	CM-1 Roadways, CM-2 SCE Easement, CM-3A LAFCD Easement	Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	1	Diesel	18	0.38	8	55

Backbone Pipeline Construction

Equipment for Construction Methods (CM-1, CM-2 and CM-3A)	Emissison Factor (lbs/hp-hr)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / hp-hr
20 MT Truck Mounted Crane	1.89E-04	2.29E-04	2.35E-03	2.13E-03	3.34E-01	1.19E-04	1.10E-04	3.09E-06		1.49E-02
Four (4) Traffic Safety Message Signs per Construction Location										
Generator Set 10kw Diesel Trailer Mounted for Traffic Safety Messaging Signs	2.61E-04	3.16E-04	3.90E-03	2.60E-03	4.04E-01	8.67E-05	7.98E-05	3.73E-06		1.80E-02
Concrete Barriers, Plastic Safety Drums										
36" Asphalt/Concrete Floor Saw 75 HP	5.52E-04	6.57E-04	6.87E-03	5.62E-03	9.15E-01	1.36E-04	1.25E-04	1.18E-05		4.18E-02
Survey Equipment										
Rear Dump Truck 12-18 cy	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Rear Dump Truck 12-18 cy	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Air Comp Portable 600 cfm Diesel	4.93E-05	5.97E-05	2.01E-03	4.18E-04	3.64E-01	1.67E-05	1.54E-05	3.36E-06		1.62E-02
Pneumatic Impact Breaker 1.2K (for boom mounting)										
Hand Held Pavement Breaker 80-90 lbs	1.18E-04	1.43E-04	2.53E-03	2.46E-03	4.04E-01	7.33E-05	6.74E-05	3.73E-06		1.80E-02
Wheel Mntd Asphalt Pavers 10'-30' Barber-Greene-BG-260	8.18E-05	9.90E-05	9.18E-04	9.16E-04	4.84E-01	3.08E-05	2.84E-05	4.47E-06		2.15E-02
Truck for Asphalt Distributor	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Crawler Mntd Pavement Millers 84"-Terex-PR-800-7-Power Mode: Diesel	3.38E-04	4.09E-04	2.55E-03	4.12E-03	3.52E-01	2.70E-04	2.48E-04	3.25E-06		1.57E-02
Pneumatic Soil/Asphalt Compactor Cat. PS200B- 5200#/Tire	1.58E-04	1.91E-04	2.82E-03	2.05E-03	4.37E-01	9.57E-05	8.81E-05	4.03E-06		1.94E-02
Self Propelled Pavement Brooms 96" 76HP	2.41E-04	2.91E-04	3.55E-03	2.60E-03	5.05E-01	1.31E-04	1.21E-04	4.66E-06		2.25E-02
80MT Truck Mounted Hydro Crane	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Vibration Hammer	1.07E-04	1.30E-04	3.27E-03	9.84E-04	5.87E-01	4.46E-05	4.10E-05	5.42E-06		2.61E-02
Portable Welder Diesel 600 amps	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Torch Cutting Acetylene-Oxygen 150'										
Steel Sheeting										
Utility Blower Fan 520W 2,295 CFM High Velocity Ventilator with Duct Hose										
Flatbed Truck 20,000 GVW	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Standard Crawler Dozer Cat. D7R 230HP	3.43E-04	4.15E-04	3.11E-03	4.43E-03	4.61E-01	1.96E-04	1.81E-04	4.25E-06		2.05E-02
Articulated Frame Grader Cat 14H 215HP	1.63E-04	1.97E-04	1.08E-03	1.91E-03	4.75E-01	6.42E-05	5.91E-05	4.39E-06		2.11E-02
Loader Backhoe C446-101HP 1.50cy- 17'+ Depth	1.24E-04	1.50E-04	2.83E-03	1.53E-03	4.30E-01	5.16E-05	4.74E-05	3.97E-06		1.91E-02
Hydraulic Excavator Cat. 320 138HP 1.25cy	1.02E-04	1.24E-04	2.59E-03	8.50E-04	4.44E-01	4.10E-05	3.77E-05	4.11E-06		1.98E-02
Hydraulic Excavator Cat. 345 321HP 2.50cy	9.05E-05	1.09E-04	9.25E-04	7.73E-04	4.45E-01	2.62E-05	2.41E-05	4.11E-06		1.98E-02
Two (2) 200MT Truck Mounted Lattice Boom Crane	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Rear Dump Truck 12-18 cy	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Hand Held Vibratory Plate 28" 11HP	4.35E-04	5.18E-04	3.29E-03	3.93E-03	5.39E-01	1.53E-04	1.41E-04	8.38E-06		2.46E-02
Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	2.77E-03	3.36E-03	9.22E-03	6.35E-03	4.85E-01	8.73E-04	8.03E-04	4.40E-06		2.16E-02
Self Propelled Pad Foot Compactors-Caterpillar-815 23MT/240HP	1.19E-04	1.44E-04	1.09E-03	9.81E-04	5.07E-01	3.53E-05	3.25E-05	4.68E-06		2.25E-02
Cat CP/CS433 Pad/Smooth Vibratory Compactor 96HP- 6.7MT	1.58E-04	1.91E-04	2.82E-03	2.05E-03	4.37E-01	9.57E-05	8.81E-05	4.03E-06		1.94E-02
Large Generator Set 45kw for Night Lighting	1.82E-04	2.20E-04	2.68E-03	1.96E-03	3.64E-01	3.49E-05	3.21E-05	3.36E-06		1.62E-02
Standby Large Generator Set 45kw for Night Lighting	1.82E-04	2.20E-04	2.68E-03	1.96E-03	3.64E-01	3.49E-05	3.21E-05	3.36E-06		1.62E-02
Large Generator Set 75kw for Dewatering Pumps	1.02E-04	1.23E-04	2.67E-03	1.07E-03	3.64E-01	8.91E-05	8.19E-05	3.36E-06		1.62E-02
Standby Large Generator Set 75kw for Dewatering Pumps	1.02E-04	1.23E-04	2.67E-03	1.07E-03	3.64E-01	8.91E-05	8.19E-05	3.36E-06		1.62E-02
Two (2) Heavy Duty Centrifugal Pumps 90,000gph - Dewatering	5.06E-05	6.12E-05	2.01E-03	5.52E-04	3.64E-01	2.01E-05	1.85E-05	3.36E-06		1.62E-02
Standby Heavy Duty Centrifugal Pumps 90,000gph - Dewatering	5.06E-05	6.12E-05	2.01E-03	5.52E-04	3.64E-01	2.01E-05	1.85E-05	3.36E-06		1.62E-02
Electric Submersible Pump 10HP/4" - Dewatering										
Pump Discharge Hose 6.0 in - Dewatering										
Pump Suction Hose 6.0 in - Dewatering										
Four (4) Portable Welder Diesel 600 amps	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Four (4) Torch Cutting Acetylene-Oxygen 150'										
Utility Blower Fan 520W 2,295 CFM High Velocity Ventilator with Duct Hose										
Pressure Washer- 3000 psi	1.32E-04	1.58E-04	2.11E-03	2.15E-03	3.76E-01	4.30E-05	3.96E-05	4.86E-06		1.70E-02
Three (3) Portable Light Tower Diesel 30'-6 Light 15.5HP	1.03E-04	1.24E-04	2.38E-03	2.14E-03	4.04E-01	4.23E-05	3.89E-05	3.74E-06		1.80E-02
Standby Cat CP433 Pad Foot Compactor 96HP	1.58E-04	1.91E-04	2.82E-03	2.05E-03	4.37E-01	9.57E-05	8.81E-05	4.03E-06		1.94E-02
Standby Tandem Vib Compactor Cat CB434 56" 70HP 7.9MT	1.58E-04	1.91E-04	2.82E-03	2.05E-03	4.37E-01	9.57E-05	8.81E-05	4.03E-06		1.94E-02
Trench Box										
Pipeline Laser w/Target										
Trench Plates										

Backbone Pipeline Construction

Equipment for Construction Methods (CM-1, CM-2 and CM-3A)	Emissison Factor (lbs/hp-hr)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / hp-hr
On-Highway Water Truck 4000 Gallon	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Hydraulic Excavator Cat. 320 138HP 1.25cy	1.02E-04	1.24E-04	2.59E-03	8.50E-04	4.44E-01	4.10E-05	3.77E-05	4.11E-06		1.98E-02
Rear Dump Truck 12-18 cy	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Hand Held Vibratory Plate 28" 11HP	4.35E-04	5.18E-04	3.29E-03	3.93E-03	5.39E-01	1.53E-04	1.41E-04	8.38E-06		2.46E-02
Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	2.77E-03	3.36E-03	9.22E-03	6.35E-03	4.85E-01	8.73E-04	8.03E-04	4.40E-06		2.16E-02
Self Propelled Pad Foot Compactors-Caterpillar-815 23MT/240HP	1.19E-04	1.44E-04	1.09E-03	9.81E-04	5.07E-01	3.53E-05	3.25E-05	4.68E-06		2.25E-02
Trench Plates										
Rear Dump Truck 12-18 cy	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	2.77E-03	3.36E-03	9.22E-03	6.35E-03	4.85E-01	8.73E-04	8.03E-04	4.40E-06		2.16E-02
Hydraulic Excavator Cat. 320 138HP 1.25cy with Grader attachment	1.02E-04	1.24E-04	2.59E-03	8.50E-04	4.44E-01	4.10E-05	3.77E-05	4.11E-06		1.98E-02
Rear Dump Truck 12-18 cy	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	2.77E-03	3.36E-03	9.22E-03	6.35E-03	4.85E-01	8.73E-04	8.03E-04	4.40E-06		2.16E-02
Hydraulic Excavator Cat. 320 138HP 1.25cy with Grader attachment	1.02E-04	1.24E-04	2.59E-03	8.50E-04	4.44E-01	4.10E-05	3.77E-05	4.11E-06		1.98E-02
Tractor with Pneumatic Seed Drill	1.24E-04	1.50E-04	2.83E-03	1.53E-03	4.30E-01	5.16E-05	4.74E-05	3.97E-06		1.91E-02
Peterson BT40C Blower Truck in Mulch	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02

Equipment for Electrical and Communication Conduit Ductbank Construction	Emissison Factor (lbs/hp-hr)									
Hand Held Pavement Breaker 80-90 lbs	2.61E-04	3.16E-04	3.90E-03	2.60E-03	4.04E-01	8.67E-05	7.98E-05	3.73E-06		1.80E-02
Wheel Mntd Asphalt Pavers 10'-30' Barber-Greene-BG-260	8.18E-05	9.90E-05	9.18E-04	9.16E-04	4.84E-01	3.08E-05	2.84E-05	4.47E-06		2.15E-02
Truck for Asphalt Distributor	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Crawler Mntd Pavement Millers 84"-Terex-PR-800-7-Power Mode: Diesel	5.17E-04	6.26E-04	3.24E-03	5.06E-03	4.12E-01	4.72E-04	4.35E-04	3.80E-06		1.83E-02
Pneumatic Soil/Asphalt Compactor Cat. PS200B- 5200#/Tire	8.25E-05	9.98E-05	2.41E-03	8.27E-04	4.36E-01	3.68E-05	3.39E-05	4.03E-06		1.94E-02
Self Propelled Pavement Brooms 96" 76HP	1.24E-04	1.50E-04	2.83E-03	1.53E-03	4.30E-01	5.16E-05	4.74E-05	3.97E-06		1.91E-02
Rear Dump Truck 12-18 cy	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Rear Dump Truck 12-18 cy	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Loader Backhoe C446-101HP 1.50cy- 17'+ Depth	1.05E-04	1.27E-04	2.52E-03	8.73E-04	4.28E-01	4.28E-05	3.94E-05	3.95E-06		1.90E-02
Hydraulic Excavator Cat. 320 138HP 1.25cy	1.02E-04	1.24E-04	2.59E-03	8.50E-04	4.44E-01	4.10E-05	3.77E-05	4.11E-06		1.98E-02
Flatbed Truck 20,000 GVW (rebar, formwork, conduits, etc.)	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
10 MT Truck Mounted Crane	1.89E-04	2.29E-04	2.35E-03	2.13E-03	3.34E-01	1.19E-04	1.10E-04	3.09E-06		1.49E-02
10.5 CY Concrete Mixer Truck	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
2 ton Reel Lift Delivery Truck (Electrical)	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
2 ton Reel Lift Delivery Truck (Fiberoptic)	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Electrical Line Puller	5.19E-04	6.28E-04	4.59E-03	3.65E-03	5.14E-01	1.91E-04	1.76E-04	4.74E-06		2.29E-02
Fiberoptic Cable Pulling Trailer	8.74E-04	1.06E-03	5.15E-03	3.63E-03	5.11E-01	2.58E-04	2.37E-04	4.70E-06		2.27E-02
Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	2.77E-03	3.36E-03	9.22E-03	6.35E-03	4.85E-01	8.73E-04	8.03E-04	4.40E-06		2.16E-02

Backbone Pipeline Construction

Equipment for Construction Methods (CM-1, CM-2 and CM-3A)	Unmitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
20 MT Truck Mounted Crane	9.82E-02	1.19E-01	1.22E+00	1.11E+00	1.74E+02	6.19E-02	5.70E-02	1.60E-03	0.00E+00	7.73
Four (4) Traffic Safety Message Signs per Construction Location										
Generator Set 10kw Diesel Trailer Mounted for Traffic Safety Messaging Signs	2.72E-02	3.29E-02	4.06E-01	2.70E-01	4.21E+01	9.02E-03	8.30E-03	3.88E-04	0.00E+00	1.87
Concrete Barriers, Plastic Safety Drums										
36" Asphalt/Concrete Floor Saw 75 HP	2.42E-01	2.88E-01	3.01E+00	2.46E+00	4.01E+02	5.94E-02	5.46E-02	5.18E-03	0.00E+00	18.32
Survey Equipment										
Rear Dump Truck 12-18 cy	2.45E-01	2.97E-01	1.97E+00	1.72E+00	8.51E+02	6.59E-02	6.06E-02	7.86E-03	0.00E+00	37.80
Rear Dump Truck 12-18 cy	2.45E-01	2.97E-01	1.97E+00	1.72E+00	8.51E+02	6.59E-02	6.06E-02	7.86E-03	0.00E+00	37.80
Air Comp Portable 600 cfm Diesel	4.34E-02	5.25E-02	1.77E+00	3.67E-01	3.20E+02	1.47E-02	1.35E-02	2.95E-03	0.00E+00	14.21
Pneumatic Impact Breaker 1.2K (for boom mounting)										
Hand Held Pavement Breaker 80-90 lbs	1.23E-02	1.49E-02	2.63E-01	2.55E-01	4.21E+01	7.62E-03	7.01E-03	3.88E-04	0.00E+00	1.87
Wheel Mntd Asphalt Pavers 10'-30' Barber-Greene-BG-260	6.16E-02	7.45E-02	6.91E-01	6.90E-01	3.64E+02	2.32E-02	2.13E-02	3.36E-03	0.00E+00	16.18
Truck for Asphalt Distributor	2.45E-01	2.97E-01	1.97E+00	1.72E+00	8.51E+02	6.59E-02	6.06E-02	7.86E-03	0.00E+00	37.80
Crawler Mntd Pavement Millers 84"-Terex-PR-800-7-Power Mode: Diesel	4.87E-02	5.90E-02	3.67E-01	5.93E-01	5.08E+01	3.89E-02	3.58E-02	4.68E-04	0.00E+00	2.26
Pneumatic Soil/Asphalt Compactor Cat. PS200B- 5200#/Tire	5.03E-02	6.09E-02	9.01E-01	6.56E-01	1.39E+02	3.06E-02	2.81E-02	1.29E-03	0.00E+00	6.20
Self Propelled Pavement Brooms 96" 76HP	6.44E-02	7.79E-02	9.50E-01	6.94E-01	1.35E+02	3.51E-02	3.23E-02	1.25E-03	0.00E+00	6.01
80MT Truck Mounted Hydro Crane	2.05E-01	2.48E-01	1.47E+00	2.49E+00	5.23E+02	1.03E-01	9.52E-02	4.83E-03	0.00E+00	23.23
Vibration Hammer	8.59E-02	1.04E-01	2.62E+00	7.87E-01	4.70E+02	3.57E-02	3.28E-02	4.34E-03	0.00E+00	20.87
Portable Welder Diesel 600 amps	7.88E-02	9.38E-02	8.96E-01	7.10E-01	1.13E+02	1.94E-02	1.78E-02	1.46E-03	0.00E+00	5.16
Torch Cutting Acetylene-Oxygen 150'										
Steel Sheeting										
Utility Blower Fan 520W 2,295 CFM High Velocity Ventilator with Duct Hose										
Flatbed Truck 20,000 GVW	2.45E-01	2.97E-01	1.97E+00	1.72E+00	8.51E+02	6.59E-02	6.06E-02	7.86E-03	0.00E+00	37.80
Standard Crawler Dozer Cat. D7R 230HP	2.53E-01	3.06E-01	2.29E+00	3.26E+00	3.39E+02	1.44E-01	1.33E-01	3.13E-03	0.00E+00	15.07
Articulated Frame Grader Cat 14H 215HP	1.15E-01	1.39E-01	7.60E-01	1.35E+00	3.35E+02	4.53E-02	4.17E-02	3.10E-03	0.00E+00	14.90
Loader Backhoe C446-101HP 1.50cy- 17'+ Depth	3.69E-02	4.47E-02	8.45E-01	4.58E-01	1.29E+02	1.54E-02	1.42E-02	1.19E-03	0.00E+00	5.72
Hydraulic Excavator Cat. 320 138HP 1.25cy	4.30E-02	5.20E-02	1.08E+00	3.57E-01	1.86E+02	1.72E-02	1.58E-02	1.72E-03	0.00E+00	8.29
Hydraulic Excavator Cat. 345 321HP 2.50cy	8.83E-02	1.07E-01	9.03E-01	7.54E-01	4.34E+02	2.55E-02	2.35E-02	4.01E-03	0.00E+00	19.29
Two (2) 200MT Truck Mounted Lattice Boom Crane	4.09E-01	4.95E-01	2.94E+00	4.98E+00	1.05E+03	2.07E-01	1.90E-01	9.65E-03	0.00E+00	46.46
Rear Dump Truck 12-18 cy	2.45E-01	2.97E-01	1.97E+00	1.72E+00	8.51E+02	6.59E-02	6.06E-02	7.86E-03	0.00E+00	37.80
Hand Held Vibratory Plate 28" 11HP	1.65E-02	1.96E-02	1.24E-01	1.49E-01	2.04E+01	5.81E-03	5.34E-03	3.17E-04	0.00E+00	0.93
Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	1.52E-01	1.84E-01	5.04E-01	3.47E-01	2.65E+01	4.78E-02	4.39E-02	2.41E-04	0.00E+00	1.18
Self Propelled Pad Foot Compactors-Caterpillar-815 23MT/240HP	8.67E-02	1.05E-01	7.97E-01	7.16E-01	3.70E+02	2.57E-02	2.37E-02	3.41E-03	0.00E+00	16.43
Cat CP/CS433 Pad/Smooth Vibratory Compactor 96HP- 6.7MT	4.60E-02	5.57E-02	8.23E-01	6.00E-01	1.27E+02	2.79E-02	2.57E-02	1.18E-03	0.00E+00	5.66
Large Generator Set 45kw for Night Lighting	8.74E-02	1.06E-01	1.29E+00	9.43E-01	1.75E+02	1.67E-02	1.54E-02	1.61E-03	0.00E+00	7.76
Standby Large Generator Set 45kw for Night Lighting	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Large Generator Set 75kw for Dewatering Pumps	8.14E-02	9.85E-02	2.14E+00	8.56E-01	2.91E+02	7.13E-02	6.56E-02	2.69E-03	0.00E+00	12.93
Standby Large Generator Set 75kw for Dewatering Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Two (2) Heavy Duty Centrifugal Pumps 90,000gph - Dewatering	8.99E-02	1.09E-01	3.56E+00	9.80E-01	6.46E+02	3.57E-02	3.28E-02	5.97E-03	0.00E+00	28.71
Standby Heavy Duty Centrifugal Pumps 90,000gph - Dewatering	4.49E-02	5.44E-02	1.78E+00	4.90E-01	3.23E+02	1.78E-02	1.64E-02	2.98E-03	0.00E+00	14.35
Electric Submersible Pump 10HP/4" - Dewatering										
Pump Discharge Hose 6.0 in - Dewatering										
Pump Suction Hose 6.0 in - Dewatering										
Four (4) Portable Welder Diesel 600 amps	3.15E-01	3.75E-01	3.58E+00	2.84E+00	4.51E+02	7.74E-02	7.12E-02	5.83E-03	0.00E+00	20.65
Four (4) Torch Cutting Acetylene-Oxygen 150'										
Utility Blower Fan 520W 2,295 CFM High Velocity Ventilator with Duct Hose										
Pressure Washer- 3000 psi	3.18E-03	3.78E-03	5.08E-02	5.17E-02	9.02E+00	1.03E-03	9.50E-04	1.17E-04	0.00E+00	0.41
Three (3) Portable Light Tower Diesel 30'-6 Light 15.5HP	3.82E-02	4.62E-02	8.86E-01	7.98E-01	1.50E+02	1.57E-02	1.45E-02	1.39E-03	0.00E+00	6.69
Standby Cat CP433 Pad Foot Compactor 96HP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Standby Tandem Vib Compactor Cat CB434 56" 70HP 7.9MT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Trench Box										
Pipeline Laser w/Target										
Trench Plates										

Backbone Pipeline Construction

Equipment for Construction Methods (CM-1, CM-2 and CM-3A)	Unmitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
On-Highway Water Truck 4000 Gallon	2.45E-01	2.97E-01	1.97E+00	1.72E+00	8.51E+02	6.59E-02	6.06E-02	7.86E-03	0.00E+00	37.80
Hydraulic Excavator Cat. 320 138HP 1.25cy	7.35E-02	8.89E-02	1.86E+00	6.10E-01	3.19E+02	2.94E-02	2.70E-02	2.95E-03	0.00E+00	14.17
Rear Dump Truck 12-18 cy	2.45E-01	2.97E-01	1.97E+00	1.72E+00	8.51E+02	6.59E-02	6.06E-02	7.86E-03	0.00E+00	37.80
Hand Held Vibratory Plate 28" 11HP	1.65E-02	1.96E-02	1.24E-01	1.49E-01	2.04E+01	5.81E-03	5.34E-03	3.17E-04	0.00E+00	0.93
Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	1.52E-01	1.84E-01	5.04E-01	3.47E-01	2.65E+01	4.78E-02	4.39E-02	2.41E-04	0.00E+00	1.18
Self Propelled Pad Foot Compactors-Caterpillar-815 23MT/240HP	8.67E-02	1.05E-01	7.97E-01	7.16E-01	3.70E+02	2.57E-02	2.37E-02	3.41E-03	0.00E+00	16.43
Trench Plates										
Rear Dump Truck 12-18 cy	2.45E-01	2.97E-01	1.97E+00	1.72E+00	8.51E+02	6.59E-02	6.06E-02	7.86E-03	0.00E+00	37.80
Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	1.52E-01	1.84E-01	5.04E-01	3.47E-01	2.65E+01	4.78E-02	4.39E-02	2.41E-04	0.00E+00	1.18
Hydraulic Excavator Cat. 320 138HP 1.25cy with Grader attachment	7.35E-02	8.89E-02	1.86E+00	6.10E-01	3.19E+02	2.94E-02	2.70E-02	2.95E-03	0.00E+00	14.17
Rear Dump Truck 12-18 cy	2.45E-01	2.97E-01	1.97E+00	1.72E+00	8.51E+02	6.59E-02	6.06E-02	7.86E-03	0.00E+00	37.80
Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	1.52E-01	1.84E-01	5.04E-01	3.47E-01	2.65E+01	4.78E-02	4.39E-02	2.41E-04	0.00E+00	1.18
Hydraulic Excavator Cat. 320 138HP 1.25cy with Grader attachment	7.35E-02	8.89E-02	1.86E+00	6.10E-01	3.19E+02	2.94E-02	2.70E-02	2.95E-03	0.00E+00	14.17
Tractor with Pneumatic Seed Drill	3.66E-02	4.43E-02	8.37E-01	4.53E-01	1.27E+02	1.53E-02	1.40E-02	1.18E-03	0.00E+00	5.66
Peterson BT40C Blower Truck in Mulch	2.45E-01	2.97E-01	1.97E+00	1.72E+00	8.51E+02	6.59E-02	6.06E-02	7.86E-03	0.00E+00	37.80

Equipment for Electrical and Communication Conduit Ductbank Construction	Unmitigated Daily Emissions (lbs/day)									
Hand Held Pavement Breaker 80-90 lbs	2.72E-02	3.29E-02	4.06E-01	2.70E-01	4.21E+01	9.02E-03	8.30E-03	3.88E-04	0.00E+00	1.87
Wheel Mntd Asphalt Pavers 10'-30' Barber-Greene-BG-260	6.16E-02	7.45E-02	6.91E-01	6.90E-01	3.64E+02	2.32E-02	2.13E-02	3.36E-03	0.00E+00	16.18
Truck for Asphalt Distributor	2.45E-01	2.97E-01	1.97E+00	1.72E+00	8.51E+02	6.59E-02	6.06E-02	7.86E-03	0.00E+00	37.80
Crawler Mntd Pavement Millers 84"-Terex-PR-800-7-Power Mode: Diesel	7.45E-02	9.02E-02	4.67E-01	7.28E-01	5.94E+01	6.80E-02	6.26E-02	5.47E-04	0.00E+00	2.64
Pneumatic Soil/Asphalt Compactor Cat. PS200B- 5200#/Tire	2.63E-02	3.18E-02	7.69E-01	2.64E-01	1.39E+02	1.17E-02	1.08E-02	1.29E-03	0.00E+00	6.19
Self Propelled Pavement Brooms 96" 76HP	3.31E-02	4.00E-02	7.57E-01	4.10E-01	1.15E+02	1.38E-02	1.27E-02	1.06E-03	0.00E+00	5.12
Rear Dump Truck 12-18 cy	2.45E-01	2.97E-01	1.97E+00	1.72E+00	8.51E+02	6.59E-02	6.06E-02	7.86E-03	0.00E+00	37.80
Rear Dump Truck 12-18 cy	2.45E-01	2.97E-01	1.97E+00	1.72E+00	8.51E+02	6.59E-02	6.06E-02	7.86E-03	0.00E+00	37.80
Loader Backhoe C446-101HP 1.50cy- 17'+ Depth	3.13E-02	3.79E-02	7.52E-01	2.61E-01	1.28E+02	1.28E-02	1.18E-02	1.18E-03	0.00E+00	5.68
Hydraulic Excavator Cat. 320 138HP 1.25cy	4.30E-02	5.20E-02	1.08E+00	3.57E-01	1.86E+02	1.72E-02	1.58E-02	1.72E-03	0.00E+00	8.29
Flatbed Truck 20,000 GVW (rebar, formwork, conduits, etc.)	2.45E-01	2.97E-01	1.97E+00	1.72E+00	8.51E+02	6.59E-02	6.06E-02	7.86E-03	0.00E+00	37.80
10 MT Truck Mounted Crane	7.86E-02	9.51E-02	9.79E-01	8.86E-01	1.39E+02	4.95E-02	4.56E-02	1.28E-03	0.00E+00	6.18
10.5 CY Concrete Mixer Truck	2.45E-01	2.97E-01	1.97E+00	1.72E+00	8.51E+02	6.59E-02	6.06E-02	7.86E-03	0.00E+00	37.80
2 ton Reel Lift Delivery Truck (Electrical)	2.45E-01	2.97E-01	1.97E+00	1.72E+00	8.51E+02	6.59E-02	6.06E-02	7.86E-03	0.00E+00	37.80
2 ton Reel Lift Delivery Truck (Fiberoptic)	2.45E-01	2.97E-01	1.97E+00	1.72E+00	8.51E+02	6.59E-02	6.06E-02	7.86E-03	0.00E+00	37.80
Electrical Line Puller	6.15E-02	7.44E-02	5.44E-01	4.32E-01	6.09E+01	2.26E-02	2.08E-02	5.61E-04	0.00E+00	2.71
Fiberoptic Cable Pulling Trailer	4.47E-02	5.41E-02	2.64E-01	1.86E-01	2.62E+01	1.32E-02	1.22E-02	2.41E-04	0.00E+00	1.16
Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	1.52E-01	1.84E-01	5.04E-01	3.47E-01	2.65E+01	4.78E-02	4.39E-02	2.41E-04	0.00E+00	1.18

Backbone Pipeline Construction

Equipment for Construction Methods (CM-1, CM-2 and CM-3A)	Mitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
20 MT Truck Mounted Crane	9.82E-02	6.79E-02	1.22E+00	7.14E-02	1.74E+02	4.22E-03	3.88E-03	1.60E-03	0.00E+00	7.73
Four (4) Traffic Safety Message Signs per Construction Location										
Generator Set 10kw Diesel Trailer Mounted for Traffic Safety Messaging Signs	2.72E-02	1.64E-02	4.06E-01	1.52E-02	4.21E+01	4.51E-04	4.15E-04	3.88E-04	0.00E+00	1.87
Concrete Barriers, Plastic Safety Drums										
36" Asphalt/Concrete Floor Saw 75 HP	2.42E-01	1.44E-01	3.01E+00	1.39E-01	4.01E+02	2.97E-03	2.73E-03	5.18E-03	0.00E+00	18.32
Survey Equipment										
Rear Dump Truck 12-18 cy	2.45E-01	1.73E-01	1.97E+00	1.13E-01	8.51E+02	6.59E-03	6.06E-03	7.86E-03	0.00E+00	37.80
Rear Dump Truck 12-18 cy	2.45E-01	1.73E-01	1.97E+00	1.13E-01	8.51E+02	6.59E-03	6.06E-03	7.86E-03	0.00E+00	37.80
Air Comp Portable 600 cfm Diesel	4.34E-02	3.00E-02	1.77E+00	2.37E-02	3.20E+02	1.00E-03	9.21E-04	2.95E-03	0.00E+00	14.21
Pneumatic Impact Breaker 1.2K (for boom mounting)										
Hand Held Pavement Breaker 80-90 lbs	1.23E-02	7.43E-03	2.63E-01	1.44E-02	4.21E+01	3.81E-04	3.51E-04	3.88E-04	0.00E+00	1.87
Wheel Mntd Asphalt Pavers 10'-30' Barber-Greene-BG-260	6.16E-02	4.26E-02	6.91E-01	4.44E-02	3.64E+02	2.32E-03	2.13E-03	3.36E-03	0.00E+00	16.18
Truck for Asphalt Distributor	2.45E-01	1.73E-01	1.97E+00	1.13E-01	8.51E+02	6.59E-03	6.06E-03	7.86E-03	0.00E+00	37.80
Crawler Mntd Pavement Millers 84"-Terex-PR-800-7-Power Mode: Diesel	4.87E-02	2.95E-02	3.67E-01	3.35E-02	5.08E+01	1.94E-03	1.79E-03	4.68E-04	0.00E+00	2.26
Pneumatic Soil/Asphalt Compactor Cat. PS200B- 5200#/Tire	5.03E-02	3.48E-02	9.01E-01	4.23E-02	1.39E+02	2.08E-03	1.92E-03	1.29E-03	0.00E+00	6.20
Self Propelled Pavement Brooms 96" 76HP	6.44E-02	3.90E-02	9.50E-01	3.92E-02	1.35E+02	1.75E-03	1.61E-03	1.25E-03	0.00E+00	6.01
80MT Truck Mounted Hydro Crane	2.05E-01	1.44E-01	1.47E+00	1.64E-01	5.23E+02	1.03E-02	9.52E-03	4.83E-03	0.00E+00	23.23
Vibration Hammer	8.59E-02	5.94E-02	2.62E+00	5.07E-02	4.70E+02	3.57E-03	3.28E-03	4.34E-03	0.00E+00	20.87
Portable Welder Diesel 600 amps	7.88E-02	4.69E-02	8.96E-01	4.01E-02	1.13E+02	9.68E-04	8.90E-04	1.46E-03	0.00E+00	5.16
Torch Cutting Acetylene-Oxygen 150'										
Steel Sheeting										
Utility Blower Fan 520W 2,295 CFM High Velocity Ventilator with Duct Hose										
Flatbed Truck 20,000 GVW	2.45E-01	1.73E-01	1.97E+00	1.13E-01	8.51E+02	6.59E-03	6.06E-03	7.86E-03	0.00E+00	37.80
Standard Crawler Dozer Cat. D7R 230HP	2.53E-01	1.75E-01	2.29E+00	2.10E-01	3.39E+02	1.44E-02	1.33E-02	3.13E-03	0.00E+00	15.07
Articulated Frame Grader Cat 14H 215HP	1.15E-01	7.95E-02	7.60E-01	8.68E-02	3.35E+02	4.53E-03	4.17E-03	3.10E-03	0.00E+00	14.90
Loader Backhoe C446-101HP 1.50cy- 17'+ Depth	3.69E-02	2.55E-02	8.45E-01	2.95E-02	1.29E+02	1.05E-03	9.67E-04	1.19E-03	0.00E+00	5.72
Hydraulic Excavator Cat. 320 138HP 1.25cy	4.30E-02	2.97E-02	1.08E+00	2.30E-02	1.86E+02	1.17E-03	1.08E-03	1.72E-03	0.00E+00	8.29
Hydraulic Excavator Cat. 345 321HP 2.50cy	8.83E-02	6.23E-02	9.03E-01	4.96E-02	4.34E+02	2.55E-03	2.35E-03	4.01E-03	0.00E+00	19.29
Two (2) 200MT Truck Mounted Lattice Boom Crane	4.09E-01	2.89E-01	2.94E+00	3.27E-01	1.05E+03	2.07E-02	1.90E-02	9.65E-03	0.00E+00	46.46
Rear Dump Truck 12-18 cy	2.45E-01	1.73E-01	1.97E+00	1.13E-01	8.51E+02	6.59E-03	6.06E-03	7.86E-03	0.00E+00	37.80
Hand Held Vibratory Plate 28" 11HP	1.65E-02	9.81E-03	1.24E-01	8.38E-03	2.04E+01	2.90E-04	2.67E-04	3.17E-04	0.00E+00	0.93
Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	1.52E-01	9.18E-02	5.04E-01	1.96E-02	2.65E+01	2.39E-03	2.20E-03	2.41E-04	0.00E+00	1.18
Self Propelled Pad Foot Compactors-Caterpillar-815 23MT/240HP	8.67E-02	5.99E-02	7.97E-01	4.61E-02	3.70E+02	2.57E-03	2.37E-03	3.41E-03	0.00E+00	16.43
Cat CP/CS433 Pad/Smooth Vibratory Compactor 96HP- 6.7MT	4.60E-02	2.78E-02	8.23E-01	3.38E-02	1.27E+02	1.40E-03	1.29E-03	1.18E-03	0.00E+00	5.66
Large Generator Set 45kw for Night Lighting	8.74E-02	5.29E-02	1.29E+00	5.32E-02	1.75E+02	8.37E-04	7.70E-04	1.61E-03	0.00E+00	7.76
Standby Large Generator Set 45kw for Night Lighting	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Large Generator Set 75kw for Dewatering Pumps	8.14E-02	5.63E-02	2.14E+00	5.52E-02	2.91E+02	4.86E-03	4.47E-03	2.69E-03	0.00E+00	12.93
Standby Large Generator Set 75kw for Dewatering Pumps	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Two (2) Heavy Duty Centrifugal Pumps 90,000gph - Dewatering	8.99E-02	6.22E-02	3.56E+00	6.32E-02	6.46E+02	2.43E-03	2.24E-03	5.97E-03	0.00E+00	28.71
Standby Heavy Duty Centrifugal Pumps 90,000gph - Dewatering	4.49E-02	3.11E-02	1.78E+00	3.16E-02	3.23E+02	1.22E-03	1.12E-03	2.98E-03	0.00E+00	14.35
Electric Submersible Pump 10HP/4" - Dewatering										
Pump Discharge Hose 6.0 in - Dewatering										
Pump Suction Hose 6.0 in - Dewatering										
Four (4) Portable Welder Diesel 600 amps	3.15E-01	1.88E-01	3.58E+00	1.60E-01	4.51E+02	3.87E-03	3.56E-03	5.83E-03	0.00E+00	20.65
Four (4) Torch Cutting Acetylene-Oxygen 150'										
Utility Blower Fan 520W 2,295 CFM High Velocity Ventilator with Duct Hose										
Pressure Washer- 3000 psi	3.18E-03	1.89E-03	5.08E-02	2.91E-03	9.02E+00	5.16E-05	4.75E-05	1.17E-04	0.00E+00	0.41
Three (3) Portable Light Tower Diesel 30'-6 Light 15.5HP	3.82E-02	2.31E-02	8.86E-01	4.50E-02	1.50E+02	7.87E-04	7.24E-04	1.39E-03	0.00E+00	6.69
Standby Cat CP433 Pad Foot Compactor 96HP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Standby Tandem Vib Compactor Cat CB434 56" 70HP 7.9MT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Trench Box										
Pipeline Laser w/Target										
Trench Plates										

Backbone Pipeline Construction

Equipment for Construction Methods (CM-1, CM-2 and CM-3A)	Mitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
On-Highway Water Truck 4000 Gallon	2.45E-01	1.73E-01	1.97E+00	1.13E-01	8.51E+02	6.59E-03	6.06E-03	7.86E-03	0.00E+00	37.80
Hydraulic Excavator Cat. 320 138HP 1.25cy	7.35E-02	5.08E-02	1.86E+00	3.93E-02	3.19E+02	2.00E-03	1.84E-03	2.95E-03	0.00E+00	14.17
Rear Dump Truck 12-18 cy	2.45E-01	1.73E-01	1.97E+00	1.13E-01	8.51E+02	6.59E-03	6.06E-03	7.86E-03	0.00E+00	37.80
Hand Held Vibratory Plate 28" 11HP	1.65E-02	9.81E-03	1.24E-01	8.38E-03	2.04E+01	2.90E-04	2.67E-04	3.17E-04	0.00E+00	0.93
Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	1.52E-01	9.18E-02	5.04E-01	1.96E-02	2.65E+01	2.39E-03	2.20E-03	2.41E-04	0.00E+00	1.18
Self Propelled Pad Foot Compactors-Caterpillar-815 23MT/240HP	8.67E-02	5.99E-02	7.97E-01	4.61E-02	3.70E+02	2.57E-03	2.37E-03	3.41E-03	0.00E+00	16.43
Trench Plates										
Rear Dump Truck 12-18 cy	2.45E-01	1.73E-01	1.97E+00	1.13E-01	8.51E+02	6.59E-03	6.06E-03	7.86E-03	0.00E+00	37.80
Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	1.52E-01	9.18E-02	5.04E-01	1.96E-02	2.65E+01	2.39E-03	2.20E-03	2.41E-04	0.00E+00	1.18
Hydraulic Excavator Cat. 320 138HP 1.25cy with Grader attachment	7.35E-02	5.08E-02	1.86E+00	3.93E-02	3.19E+02	2.00E-03	1.84E-03	2.95E-03	0.00E+00	14.17
Rear Dump Truck 12-18 cy	2.45E-01	1.73E-01	1.97E+00	1.13E-01	8.51E+02	6.59E-03	6.06E-03	7.86E-03	0.00E+00	37.80
Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	1.52E-01	9.18E-02	5.04E-01	1.96E-02	2.65E+01	2.39E-03	2.20E-03	2.41E-04	0.00E+00	1.18
Hydraulic Excavator Cat. 320 138HP 1.25cy with Grader attachment	7.35E-02	5.08E-02	1.86E+00	3.93E-02	3.19E+02	2.00E-03	1.84E-03	2.95E-03	0.00E+00	14.17
Tractor with Pneumatic Seed Drill	3.66E-02	2.53E-02	8.37E-01	2.92E-02	1.27E+02	1.04E-03	9.57E-04	1.18E-03	0.00E+00	5.66
Peterson BT40C Blower Truck in Mulch	2.45E-01	1.73E-01	1.97E+00	1.13E-01	8.51E+02	6.59E-03	6.06E-03	7.86E-03	0.00E+00	37.80

Equipment for Electrical and Communication Conduit Ductbank Construction	Mitigated Daily Emissions (lbs/day)									
Hand Held Pavement Breaker 80-90 lbs	2.72E-02	1.64E-02	4.06E-01	1.52E-02	4.21E+01	4.51E-04	4.15E-04	3.88E-04	0.00E+00	1.87
Wheel Mntd Asphalt Pavers 10'-30' Barber-Greene-BG-260	6.16E-02	4.26E-02	6.91E-01	4.44E-02	3.64E+02	2.32E-03	2.13E-03	3.36E-03	0.00E+00	16.18
Truck for Asphalt Distributor	2.45E-01	1.73E-01	1.97E+00	1.13E-01	8.51E+02	6.59E-03	6.06E-03	7.86E-03	0.00E+00	37.80
Crawler Mntd Pavement Millers 84"-Terex-PR-800-7-Power Mode: Diesel	7.45E-02	4.51E-02	4.67E-01	4.11E-02	5.94E+01	3.40E-03	3.13E-03	5.47E-04	0.00E+00	2.64
Pneumatic Soil/Asphalt Compactor Cat. PS200B- 5200#/Tire	2.63E-02	1.82E-02	7.69E-01	1.70E-02	1.39E+02	8.01E-04	7.37E-04	1.29E-03	0.00E+00	6.19
Self Propelled Pavement Brooms 96" 76HP	3.31E-02	2.00E-02	7.57E-01	2.31E-02	1.15E+02	6.90E-04	6.34E-04	1.06E-03	0.00E+00	5.12
Rear Dump Truck 12-18 cy	2.45E-01	1.73E-01	1.97E+00	1.13E-01	8.51E+02	6.59E-03	6.06E-03	7.86E-03	0.00E+00	37.80
Rear Dump Truck 12-18 cy	2.45E-01	1.73E-01	1.97E+00	1.13E-01	8.51E+02	6.59E-03	6.06E-03	7.86E-03	0.00E+00	37.80
Loader Backhoe C446-101HP 1.50cy- 17'+ Depth	3.13E-02	2.16E-02	7.52E-01	1.68E-02	1.28E+02	8.72E-04	8.03E-04	1.18E-03	0.00E+00	5.68
Hydraulic Excavator Cat. 320 138HP 1.25cy	4.30E-02	2.97E-02	1.08E+00	2.30E-02	1.86E+02	1.17E-03	1.08E-03	1.72E-03	0.00E+00	8.29
Flatbed Truck 20,000 GVW (rebar, formwork, conduits, etc.)	2.45E-01	1.73E-01	1.97E+00	1.13E-01	8.51E+02	6.59E-03	6.06E-03	7.86E-03	0.00E+00	37.80
10 MT Truck Mounted Crane	7.86E-02	4.75E-02	9.79E-01	5.00E-02	1.39E+02	2.48E-03	2.28E-03	1.28E-03	0.00E+00	6.18
10.5 CY Concrete Mixer Truck	2.45E-01	1.73E-01	1.97E+00	1.13E-01	8.51E+02	6.59E-03	6.06E-03	7.86E-03	0.00E+00	37.80
2 ton Reel Lift Delivery Truck (Electrical)	2.45E-01	1.73E-01	1.97E+00	1.13E-01	8.51E+02	6.59E-03	6.06E-03	7.86E-03	0.00E+00	37.80
2 ton Reel Lift Delivery Truck (Fiberoptic)	2.45E-01	1.73E-01	1.97E+00	1.13E-01	8.51E+02	6.59E-03	6.06E-03	7.86E-03	0.00E+00	37.80
Electrical Line Puller	6.15E-02	3.72E-02	5.44E-01	2.44E-02	6.09E+01	1.13E-03	1.04E-03	5.61E-04	0.00E+00	2.71
Fiberoptic Cable Pulling Trailer	4.47E-02	2.71E-02	2.64E-01	1.05E-02	2.62E+01	6.60E-04	6.08E-04	2.41E-04	0.00E+00	1.16
Trench Compactor Wacker RT820 3K#/32" 18HP 4-Drum	1.52E-01	9.18E-02	5.04E-01	1.96E-02	2.65E+01	2.39E-03	2.20E-03	2.41E-04	0.00E+00	1.18

Backbone Pipeline Construction

Equipment for CM-4A, CM-4B, CM-4C, CM-4D, CM-4E, and CM-4F

ACTIVITY/TASK	DESCRIPTION	PIPE DIAMETER	CREW SIZE	EQUIPMENT TYPE	Quantity	Fuel Type	HORSE POWER (HP)	LOAD FACTOR	HOURS PER DAY	DAILY HP-HR
Mobilization and Demobilization CM-4A, CM-4B, CM-4C	General Mobilization and Demobilization 8-hr/day	7	6	Excavator - CAT 329	1	Diesel	239	0.65	6	932
				Wheel Loader - CAT l950	1	Diesel	230	0.65	6	897
				Hydraulic Crane 50 ton	1	Diesel	195	0.65	6	761
				Generator - 210kW	1	Diesel	363	1.00	8	2,904
				Bobcat skid steer	1	Diesel	54	0.65	6	211
				Telehandler, 15t	1	Diesel	175	0.65	6	683
				Welding Machine - 450A	1	Diesel	45	0.50	4	90
Site Preparation CM-4A, CM-4B, CM-4C	Site Preparation 8-hr/day	7	10	Excavator - CAT 329	1	Diesel	239	0.65	6	932
				Hydraulic Crane 50 ton	1	Diesel	195	0.65	6	761
				Wheel Loader - CAT l950	1	Diesel	230	0.65	6	897
				Bobcat skid steer	1	Diesel	54	0.65	6	211
				Generator - 210kW	1	Diesel	363	1.00	8	2,904
				Welding Machine - 450A	1	Diesel	45	0.50	4	90
				Telehandler, 15t	1	Diesel	175	0.65	6	683
				Air Compressor - 185cfm	1	Diesel	80	0.65	6	312
Excavate/Backfill Shaft and Site Restoration CM-4A, CM-4B, CM-4C	Backfill Shaft and Site Restoration 8-hr/day	7	8	Hydraulic Crane 50 ton	1	Diesel	195	0.65	6	761
				Wheel Loader - CAT l966	1	Diesel	311	0.65	6	1,213
				Air Compressor - 185cfm	1	Diesel	80	0.75	6	360
				Excavator - CAT 349	2	Diesel	425	0.65	6	3,315
				Generator - 210kW	1	Diesel	363	1.00	8	2,904
				Bobcat skid steer	1	Diesel	54	0.65	6	211
				Telehandler, 15t	1	Diesel	175	0.65	6	683
				Welding Machine - 450A	1	Diesel	45	0.50	4	90
				Dump Truck - 10CY	5	Diesel	300	0.80	7	8,400
Secant Pile Installation - Shafts CM-4A, CM-4B, CM-4C	Shaft Support of Excavation Secant Piles 10 hr/day	7	10	Drill Rig (Bauer BG 40)	1	Diesel	580	0.90	9	4,698
				Excavator - CAT 349	1	Diesel	425	0.65	7	1,934
				Crawler Crane - 100 ton	1	Diesel	240	0.65	7	1,092
				Generator - 210kW	1	Diesel	363	1.00	10	3,630
				Wheel Loader - CAT l950	2	Diesel	230	0.65	7	2,093
				Concrete Pump Truck	1	Diesel	210	0.50	5	525
				Dump Truck - 10CY	1	Diesel	300	0.50	5	750
Shaft Excavation CM-4A, CM-4B, CM-4C	Shaft Excavation 10-hr/day		10	Air Compressor - 185cfm	1	Diesel	80	0.65	7	364
				Excavator - CAT 349	1	Diesel	425	0.90	9	3,443
				Generator - 210kW	1	Diesel	363	1.00	10	3,630
				Crawler Crane - 100 ton	1	Diesel	240	0.75	8	1,440
				Wheel Loader - CAT l950	1	Diesel	230	0.65	7	1,047
				Excavator - CAT 301	1	Diesel	50	0.90	9	405
				Dump Truck - 10CY	4	Diesel	300	0.80	8	7,680

Backbone Pipeline Construction

Equipment for CM-4A, CM-4B, CM-4C, CM-4D, CM-4E, and CM-4F

ACTIVITY/TASK	DESCRIPTION	PIPE DIAMETER	CREW SIZE	EQUIPMENT TYPE	Quantity	Fuel Type	HORSE POWER (HP)	LOAD FACTOR	HOURS PER DAY	DAILY HP-HR
Sheet Pile Installation - Shafts CM-4A, CM-4B, CM-4C	Shaft Support of Excavation Sheet Piles 10 hr/day	7	10	Crawler Crane - 100 ton	1	Diesel	240	0.90	9	1,944
				Excavator - CAT 349	1	Diesel	425	0.65	7	1,934
				Vibratory Hammer	1	Diesel	200	0.75	8	1,200
				Generator - 210kW	1	Diesel	363	1.00	10	3,630
				Welding Machine - 450A	1	Diesel	45	0.65	7	205
				Telehandler, 12k	1	Diesel	142	0.65	7	646
CM-4A Pipe Jacking	Pipe Jacking 24-hr/day	7	16	Hydraulic Crane 50 ton	1	Diesel	195	0.65	16	2,028
				Road Header	1	Electric		0.75	18	
				Jacking Frame	1	Electric		0.75	18	
				Locomotive 12ton/120hp	1	Diesel	120	0.50	12	720
				Wheel Loader - CAT l966	1	Diesel	311	0.65	16	3,234
				Air Compressor - 1200cfm	1	Diesel	327	0.75	18	4,415
				Telehandler, 15t	1	Diesel	175	0.65	16	1,820
				Welding Machine - 450A	1	Diesel	45	0.65	16	468
				Dewtering Pumps	2	Electric		1.00	24	
				Water Treatment Plant	1	Electric		1.00	24	
				Ventilation Fan - 100HP	1	Electric		0.90	22	
				Dump Truck - 10CY	2	Diesel	300	0.50	12	3,600
				Light Plant Genset, 7.5kW	2	Diesel	12	0.50	12	144
				Generator - 400kW	1	Diesel	689	1.00	24	16,536
	Carrier Pipeline Installation 24-hr/day	7	16	Hydraulic Crane 50 ton	1	Diesel	195	0.65	16	2,028
				Welding Machine - 450A	2	Diesel	45	0.80	20	1,440
				Generator - 210kW	1	Diesel	363	1.00	24	8,712
				Wheel Loader - CAT l966	1	Diesel	311	0.65	16	3,234
				Telehandler, 15t	1	Diesel	175	0.65	16	1,820
				Dewtering Pumps	2	Electric		1.00	24	
				Water Treatment Plant	1	Electric		1.00	24	
				Ventilation Fan - 100HP	1	Electric		0.90	22	
				Air Compressor - 750cfm	1	Diesel	270	0.75	18	3,645
				Light Plant Genset, 7.5kW	2	Diesel	12	0.50	12	144
	Carrier Pipeline Backfill 24-hr/day	7	16	Hydraulic Crane 50 ton	1	Diesel	195	0.65	8	1,014
				Generator - 210kW	1	Diesel	363	1.00	12	4,356
				Wheel Loader - CAT l966	1	Diesel	311	0.65	8	1,617
				Telehandler, 15t	1	Diesel	175	0.65	8	910
				Ventilation Fan - 100HP	1	Electric		0.90	11	
				Grout Plant 12 cy/hr	1	Electric		0.90	11	
				Air Compressor - 750cfm	1	Diesel	270	0.65	8	1,404

Backbone Pipeline Construction

Equipment for CM-4A, CM-4B, CM-4C, CM-4D, CM-4E, and CM-4F

ACTIVITY/TASK	DESCRIPTION	PIPE DIAMETER	CREW SIZE	EQUIPMENT TYPE	Quantity	Fuel Type	HORSE POWER (HP)	LOAD FACTOR	HOURS PER DAY	DAILY HP-HR
CM-4B Microtunnel	Tunnel Excavation 24-hr/day	7	15	Hydraulic Crane 50 ton	1	Diesel	195	0.65	16	2,028
				MTBM	1	Electric		0.50	12	
				Jacking Frame	1	Electric		0.75	18	
				Wheel Loader - CAT l966	1	Diesel	311	0.65	16	3,234
				Telehandler, 15t	1	Diesel	175	0.65	16	1,820
				Air Compressor - 1200cfm	1	Diesel	327	0.75	18	4,415
				Welding Machine - 450A	1	Diesel	45	0.50	12	270
				Ventilation Fan - 100HP	1	Electric		0.90	22	
				Water Treatment Plant	1	Electric		0.90	22	
				Dewtering Pumps	2	Electric		1.00	24	
				Slurry Separation Plant	1	Electric		0.70	17	
				Slurry Mixing System	1	Electric		0.25	6	
				Light Plant Genset, 7.5kW	2	Diesel	12	0.50	12	144
				Dump Truck - 10CY	2	Diesel	300	0.50	12	3,600
				Generator - 210kW	1	Diesel	363	1.00	24	8,712
				Generator - 750kW	1	Diesel	1,214	0.80	20	19,424
	Carrier Pipeline Installation 24-hr/day	7	16	Hydraulic Crane 50 ton	1	Diesel	195	0.65	16	2,028
				Welding Machine - 450A	2	Diesel	45	0.90	22	1,782
				Generator - 210kW	1	Diesel	363	1.00	24	8,712
				Wheel Loader - CAT l966	1	Diesel	311	0.65	16	3,234
				Telehandler, 15t	1	Diesel	175	0.65	16	1,820
				Dewtering Pumps	2	Electric		1.00	24	
				Water Treatment Plant	1	Electric		1.00	24	
				Ventilation Fan - 100HP	1	Electric		0.90	22	
				Air Compressor - 750cfm	1	Diesel	270	0.65	16	2,808
				Light Plant Genset, 7.5kW	2	Diesel	12	0.50	12	144
	Carrier Pipeline Backfill 12-hr/day	7	16	Hydraulic Crane 50 ton	1	Diesel	195	0.65	8	1,014
				Generator - 210kW	1	Diesel	363	1.00	12	4,356
				Wheel Loader - CAT l966	1	Diesel	311	0.65	8	1,617
				Telehandler, 15t	1	Diesel	175	0.65	8	910
				Ventilation Fan - 100HP	1	Electric		0.90	11	
				Grout Plant 12 cy/hr	1	Electric		0.90	11	
				Air Compressor - 750cfm	1	Diesel	270	0.65	8	1,404

Backbone Pipeline Construction

Equipment for CM-4A, CM-4B, CM-4C, CM-4D, CM-4E, and CM-4F

ACTIVITY/TASK	DESCRIPTION	PIPE DIAMETER	CREW SIZE	EQUIPMENT TYPE	Quantity	Fuel Type	HORSE POWER (HP)	LOAD FACTOR	HOURS PER DAY	DAILY HP-HR
CM-4C Traditional Tunneling (EPBM)	Tunnel Excavation 24-hr/day	7	20	Crawler Crane 100ton/100'	1	Diesel	240	0.65	16	2,496
				Wheel Loader - CAT l966	1	Diesel	311	0.65	16	3,234
				EPBM	1	Electric		0.50	12	
				Telehandler, 12k	1	Diesel	142	0.65	16	1,477
				Grout Plant 12 cy/hr	1	Electric		0.50	12	
				Locomotive 12ton/120hp	2	Diesel	120	0.50	12	1,440
				Generator - 210kW	1	Diesel	363	1.00	24	8,712
				Generator - 1450kW	-	Diesel	2,100	0.80	20	-
				Air Compressor - 1200cfm	1	Diesel	327	0.75	18	4,415
				Welding Machine - 450A	1	Diesel	45	0.50	12	270
				Light Plant Genset, 7.5kW	2	Diesel	12	0.50	12	144
				Dewtering Pumps	2	Electric		1.00	24	
				Water Treatment Plant	1	Electric		1.00	24	
				Ventilation Fan - 100HP	2	Electric		0.90	22	
				Dump Truck - 10CY	3	Diesel	300	0.50	12	5,400
				Excavator - CAT 305	1	Diesel	18	0.65	16	187
	Carrier Pipeline Installation 24-hr/day	7	16	Hydraulic Crane 50 ton	1	Diesel	195	0.65	16	2,028
				Pipeline Carrier	1	Diesel	100	0.75	18	1,350
				Generator - 210kW	1	Diesel	363	1.00	24	8,712
				Wheel Loader - CAT l966	1	Diesel	311	0.65	16	3,234
				Telehandler, 15t	1	Diesel	175	0.65	16	1,820
				Grout Plant 12 cy/hr	1	Electric		0.75	18	
				Dewtering Pumps	2	Electric		0.90	22	
				Water Treatment Plant	1	Electric		0.90	22	
				Welding Machine - 450A	2	Diesel	45	0.80	20	1,440
				Ventilation Fan - 100HP	1	Electric		0.90	22	
				Air Compressor - 750cfm	1	Diesel	270	0.65	16	2,808
				Light Plant Genset, 7.5kW	2	Diesel	12	0.50	12	144
	Carrier Pipeline Backfill 12-hr/day	7	16	Hydraulic Crane 50 ton	1	Diesel	195	0.65	8	1,014
				Generator - 210kW	1	Diesel	363	1.00	12	4,356
				Wheel Loader - CAT l966	1	Diesel	311	0.65	8	1,617
				Telehandler, 15t	1	Diesel	175	0.65	8	910
				Ventilation Fan - 100HP	1	Electric		0.90	11	
				Grout Plant 12 cy/hr	1	Electric		0.90	11	
				Air Compressor - 750cfm	1	Diesel	270	0.65	8	1,404
Mobilization and Demobilization CM-4D, CM-4E, CM-4F	General Mobilization and Demobilization 8-hr/day	9	6	Excavator - CAT 329	1	Diesel	239	0.65	6	932
				Wheel Loader - CAT l950	1	Diesel	230	0.65	6	897
				Generator - 210kW	1	Diesel	363	1.00	8	2,904
				Hydraulic Crane 50 ton	1	Diesel	195	0.65	6	761
				Welding Machine - 450A	1	Diesel	45	0.50	4	90

Backbone Pipeline Construction

Equipment for CM-4A, CM-4B, CM-4C, CM-4D, CM-4E, and CM-4F

ACTIVITY/TASK	DESCRIPTION	PIPE DIAMETER	CREW SIZE	EQUIPMENT TYPE	Quantity	Fuel Type	HORSE POWER (HP)	LOAD FACTOR	HOURS PER DAY	DAILY HP-HR
Site Preparation CM-4D, CM-4E, CM-4F	Site Preparation 8 hr/day	9	6	Excavator - CAT 329	1	Diesel	239	0.65	6	932
				Generator - 210kW	1	Diesel	363	1.00	8	2,904
				Hydraulic Crane 50 ton	1	Diesel	195	0.65	6	761
				Wheel Loader - CAT l950	1	Diesel	230	0.65	6	897
				Air Compressor - 185cfm	1	Diesel	80	0.50	4	160
Excav/Backfill Shaft and Site Restoration CM-4D, CM-4E, CM-4F	Backfill Shaft and Site Restoration 8-hr/day	9	8	Hydraulic Crane 50 ton	1	Diesel	195	0.65	6	761
				Wheel Loader - CAT l966	1	Diesel	311	0.65	6	1,213
				Generator - 210kW	1	Diesel	363	1.00	8	2,904
				Air Compressor - 185cfm	1	Diesel	80	0.50	4	160
				Excavator - CAT 349	2	Diesel	425	0.65	6	3,315
				Welding Machine - 450A	1	Diesel	45	0.50	4	90
				Dump Truck - 10CY	5	Diesel	300	0.50	4	3,000
Secant Pile Installation - Shafts CM-4D, CM-4E, CM-4F	Shaft Excavation and Support 10-hr/day	9	10	Drill Rig (Bauer BG 40)	1	Diesel	580	0.90	9	4,698
				Crawler Crane - 100 ton	1	Diesel	240	0.75	8	1,440
				Generator - 210kW	1	Diesel	363	1.00	10	3,630
				Wheel Loader - CAT l950	2	Diesel	230	0.65	7	2,093
				Concrete Pump Truck	1	Diesel	210	0.80	8	1,344
				Dump Truck - 10CY	1	Diesel	300	0.50	5	750
				Excavator - CAT 349	1	Diesel	425	0.65	7	1,934
Shaft Excavation CM-4D, CM-4E, CM-4F	Shaft Excavation 10-hr/day	9	10	Air Compressor - 185cfm	1	Diesel	80	0.65	7	364
				Excavator - CAT 349	1	Diesel	425	0.90	9	3,443
				Generator - 210kW	1	Diesel	363	1.00	10	3,630
				Crawler Crane - 100 ton	1	Diesel	240	0.75	8	1,440
				Wheel Loader - CAT l950	1	Diesel	230	0.65	7	1,047
				Excavator - CAT 301	1	Diesel	50	0.90	9	405
				Dump Truck - 10CY	4	Diesel	300	0.80	8	7,680
Sheet Pile Installation - Shafts CM-4D, CM-4E, CM-4F	Shaft Excavation and Support 10-hr/day	9	10	Crawler Crane - 100 ton	1	Diesel	240	0.75	8	1,440
				Vibratory Hammer	1	Diesel	200	0.75	8	1,200
				Generator - 210kW	1	Diesel	363	1.00	10	3,630
				Welding Machine - 450A	1	Diesel	45	0.80	8	288
				Telehandler, 12k	1	Diesel	142	0.65	7	646
				Excavator - CAT 349	1	Diesel	425	0.65	7	1,934

Backbone Pipeline Construction

Equipment for CM-4A, CM-4B, CM-4C, CM-4D, CM-4E, and CM-4F

ACTIVITY/TASK	DESCRIPTION	PIPE DIAMETER	CREW SIZE	EQUIPMENT TYPE	Quantity	Fuel Type	HORSE POWER (HP)	LOAD FACTOR	HOURS PER DAY	DAILY HP-HR
Pipe Jacking CM-4D	Pipe Jacking 24-hr/day	9	10	Hydraulic Crane 50 ton	1	Diesel	195	0.65	16	2,028
				Road Header/excavator arm	1	Electric		0.75	18	
				Jacking Frame	1	Electric		0.75	18	
				Locomotive 12ton/120hp	1	Diesel	120	0.50	12	720
				Wheel Loader - CAT l966	1	Diesel	311	0.65	16	3,234
				Air Compressor - 1200cfm	1	Diesel	327	0.75	18	4,415
				Telehandler, 15t	1	Diesel	175	0.65	16	1,820
				Welding Machine - 450A	1	Diesel	45	0.80	20	720
				Dewtering Pumps	2	Electric		1.00	24	
				Water Treatment Plant	1	Electric		1.00	24	
				Ventilation Fan - 100HP	2	Electric		0.90	22	
				Dump Truck - 10CY	1	Diesel	300	0.50	12	1,800
				Light Plant Genset, 7.5kW	2	Diesel	12	0.85	21	428
				Generator - 400kW	1	Diesel	689	1.00	24	16,536
	Carrier Pipeline Installation 24-hr/day	9	14	Hydraulic Crane 50 ton	1	Diesel	195	0.65	16	2,028
				Welding Machine - 450A	2	Diesel	45	0.80	20	1,440
				Generator - 210kW	1	Diesel	363	1.00	24	8,712
				Ventilation Fan - 100HP	1	Electric		0.90	22	
				Wheel Loader - CAT l966	1	Diesel	311	0.65	16	3,234
				Telehandler, 15t	1	Diesel	175	0.65	16	1,820
				Dewtering Pumps	2	Electric		1.00	24	
				Water Treatment Plant	1	Electric		1.00	24	
				Air Compressor - 750cfm	1	Diesel	270	0.75	18	3,645
				Light Plant Genset, 7.5kW	2	Diesel	12	0.50	12	144
	Carrier Pipeline Backfill 12-hr/day	9	16	Hydraulic Crane 50 ton	1	Diesel	195	0.65	8	1,014
				Generator - 210kW	1	Diesel	363	1.00	12	4,356
				Wheel Loader - CAT l966	1	Diesel	311	0.65	8	1,617
				Telehandler, 15t	1	Diesel	175	0.65	8	910
				Ventilation Fan - 100HP	1	Electric		0.90	11	
				Grout Plant 12 cy/hr	1	Electric		0.90	11	
				Air Compressor - 750cfm	1	Diesel	270	0.65	8	1,404

Backbone Pipeline Construction

Equipment for CM-4A, CM-4B, CM-4C, CM-4D, CM-4E, and CM-4F

ACTIVITY/TASK	DESCRIPTION	PIPE DIAMETER	CREW SIZE	EQUIPMENT TYPE	Quantity	Fuel Type	HORSE POWER (HP)	LOAD FACTOR	HOURS PER DAY	DAILY HP-HR
Shield with Ribs and Lagging CM-4E	Tunnel Excavation 24-hr/day	9	14	Hydraulic Crane 50 ton	1	Diesel	195	0.65	16	2,028
				Road Header/excavator arm	1	Electric		0.75	18	
				Shield with Jacking Frame	1	Electric		0.75	18	
				Wheel Loader - CAT l966	1	Diesel	311	0.65	16	3,234
				Air Compressor - 1200cfm	1	Diesel	327	0.75	18	4,415
				Welding Machine - 450A	1	Diesel	45	0.50	12	270
				Ventilation Fan - 100HP	2	Electric		0.90	22	-
				Dump Truck - 10CY	1	Diesel	300	0.50	12	1,800
				Generator - 400kW	1	Diesel	689	1.00	24	16,536
				Locomotive 12ton/120hp	2	Diesel	120	0.50	12	1,440
				Grout Plant 12 cy/hr	1	Electric		0.50	12	
				Dewtering Pumps	2	Electric		1.00	24	
				Water Treatment Plant	1	Electric		1.00	24	
				Light Plant Genset, 7.5kW	2	Diesel	12	0.50	12	144
				Welding Machine - 450A	1	Diesel	45	0.50	12	270
				Telehandler, 12k	1	Diesel	142	0.65	16	1,477
	Carrier Pipeline Installation 24-hr/day	9	17	Hydraulic Crane 50 ton	1	Diesel	195	0.65	16	2,028
				Welding Machine - 450A	2	Diesel	45	0.50	12	540
				Generator - 210kW	1	Diesel	363	1.00	24	8,712
				Pipeline Carrier	1	Diesel	100	0.75	18	1,350
				Ventilation Fan - 100HP	2	Electric		0.90	22	
				Dewtering Pumps	2	Electric		1.00	24	
				Water Treatment Plant	1	Electric		1.00	24	
				Wheel Loader - CAT l966	1	Diesel	311	0.65	16	3,234
				Telehandler, 15t	1	Diesel	175	0.65	16	1,820
				Air Compressor - 750cfm	1	Diesel	270	0.65	16	2,808
				Light Plant Genset, 7.5kW	2	Diesel	12	0.50	12	144
	Carrier Pipeline Backfill 12-hr/day	9	16	Hydraulic Crane 50 ton	1	Diesel	195	0.65	8	1,014
				Generator - 210kW	1	Diesel	363	1.00	12	4,356
				Wheel Loader - CAT l966	1	Diesel	311	0.65	8	1,617
				Telehandler, 15t	1	Diesel	175	0.65	8	910
				Ventilation Fan - 100HP	1	Electric		0.90	11	
				Grout Plant 12 cy/hr	1	Electric		0.90	11	
				Air Compressor - 750cfm	1	Diesel	270	0.65	8	1,404

Backbone Pipeline Construction

Equipment for CM-4A, CM-4B, CM-4C, CM-4D, CM-4E, and CM-4F

ACTIVITY/TASK	DESCRIPTION	PIPE DIAMETER	CREW SIZE	EQUIPMENT TYPE	Quantity	Fuel Type	HORSE POWER (HP)	LOAD FACTOR	HOURS PER DAY	DAILY HP-HR
Traditional Tunneling (EPBM) CM-4F	Tunnel Excavation 24-hr/day	9	20	Crawler Crane 100ton/100'	1	Diesel	240	0.65	16	2,496
				Wheel Loader - CAT l966	1	Diesel	311	0.65	16	3,234
				EPBM	1	Electric		0.50	12	
				Telehandler, 12k	1	Diesel	142	0.65	16	1,477
				Grout Plant 12 cy/hr	1	Electric		0.50	12	
				Locomotive 12ton/120hp	2	Diesel	120	0.50	12	1,440
				Generator - 210kW	1	Diesel	363	1.00	24	8,712
				Generator - 1450kW	-	Diesel	2,100	0.80	20	-
				Air Compressor - 1200cfm	1	Diesel	327	0.75	18	4,415
				Welding Machine - 450A	1	Diesel	45	0.50	12	270
				Light Plant Genset, 7.5kW	2	Diesel	12	0.50	12	144
				Ventilation Fan - 100HP	2	Electric		0.90	22	
				Dewtering Pumps	2	Electric		1.00	24	
				Water Treatment Plant	1	Electric		1.00	24	
				Dump Truck - 10CY	3	Diesel	300	0.50	12	5,400
				Excavator - CAT 305	1	Diesel	18	0.65	16	187
	Carrier Pipeline Installation 24-hr/day	9	17	Hydraulic Crane 50 ton	1	Diesel	195	0.65	16	2,028
				Pipeline Carrier	1	Diesel	100	0.75	18	1,350
				Generator - 210kW	1	Diesel	363	1.00	24	8,712
				Wheel Loader - CAT l966	1	Diesel	311	0.65	16	3,234
				Welding Machine - 450A	2	Diesel	45	0.50	12	540
				Telehandler, 15t	1	Diesel	175	0.65	16	1,820
				Ventilation Fan - 100HP	1	Electric		0.90	22	
				Dewtering Pumps	2	Electric		1.00	24	
				Water Treatment Plant	1	Electric		1.00	24	
				Air Compressor - 750cfm	1	Diesel	270	0.65	16	2,808
				Light Plant Genset, 7.5kW	2	Diesel	12	0.50	12	144
	Carrier Pipeline Backfill 12-hr/day	9	16	Hydraulic Crane 50 ton	1	Diesel	195	0.65	8	1,014
				Generator - 210kW	1	Diesel	363	1.00	12	4,356
				Wheel Loader - CAT l966	1	Diesel	311	0.65	8	1,617
				Telehandler, 15t	1	Diesel	175	0.65	8	910
				Ventilation Fan - 100HP	1	Electric		0.90	11	
				Grout Plant 12 cy/hr	1	Electric		0.90	11	
				Air Compressor - 750cfm	1	Diesel	270	0.65	8	1,404

Backbone Pipeline Construction

	Emissison Factor (lbs/hp-hr)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / hp-hr
Excavator - CAT 329	9.05E-05	1.09E-04	9.25E-04	7.73E-04	4.45E-01	2.62E-05	2.41E-05	4.11E-06		1.98E-02
Wheel Loader - CAT l950	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Bobcat skid steer	8.98E-05	1.09E-04	2.64E-03	1.47E-03	4.29E-01	4.18E-05	3.84E-05	3.97E-06		1.91E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Excavator - CAT 329	9.05E-05	1.09E-04	9.25E-04	7.73E-04	4.45E-01	2.62E-05	2.41E-05	4.11E-06		1.98E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Wheel Loader - CAT l950	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Bobcat skid steer	8.98E-05	1.09E-04	2.64E-03	1.47E-03	4.29E-01	4.18E-05	3.84E-05	3.97E-06		1.91E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Air Compressor - 185cfm	7.90E-05	9.56E-05	2.43E-03	1.20E-03	3.64E-01	8.70E-05	8.00E-05	3.36E-06		1.62E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Wheel Loader - CAT l966	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Air Compressor - 185cfm	7.90E-05	9.56E-05	2.43E-03	1.20E-03	3.64E-01	8.70E-05	8.00E-05	3.36E-06		1.62E-02
Excavator - CAT 349	9.05E-05	1.09E-04	9.25E-04	7.73E-04	4.45E-01	2.62E-05	2.41E-05	4.11E-06		1.98E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Bobcat skid steer	8.98E-05	1.09E-04	2.64E-03	1.47E-03	4.29E-01	4.18E-05	3.84E-05	3.97E-06		1.91E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Dump Truck - 10CY	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Drill Rig (Bauer BG 40)	9.07E-05	1.10E-04	1.09E-03	8.46E-04	5.77E-01	2.99E-05	2.75E-05	5.33E-06		2.57E-02
Excavator - CAT 349	9.05E-05	1.09E-04	9.25E-04	7.73E-04	4.45E-01	2.62E-05	2.41E-05	4.11E-06		1.98E-02
Crawler Crane - 100 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Wheel Loader - CAT l950	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Concrete Pump Truck	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Dump Truck - 10CY	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Air Compressor - 185cfm	7.90E-05	9.56E-05	2.43E-03	1.20E-03	3.64E-01	8.70E-05	8.00E-05	3.36E-06		1.62E-02
Excavator - CAT 349	9.05E-05	1.09E-04	9.25E-04	7.73E-04	4.45E-01	2.62E-05	2.41E-05	4.11E-06		1.98E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Crawler Crane - 100 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Wheel Loader - CAT l950	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Excavator - CAT 301	2.74E-04	3.31E-04	3.55E-03	2.87E-03	4.94E-01	8.30E-05	7.64E-05	4.56E-06		2.20E-02
Dump Truck - 10CY	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02

Backbone Pipeline Construction

	Emissison Factor (lbs/hp-hr)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / hp-hr
Crawler Crane - 100 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Excavator - CAT 349	9.05E-05	1.09E-04	9.25E-04	7.73E-04	4.45E-01	2.62E-05	2.41E-05	4.11E-06		1.98E-02
Vibratory Hammer	1.07E-04	1.29E-04	1.18E-03	1.19E-03	5.82E-01	3.90E-05	3.59E-05	5.38E-06		2.59E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Telehandler, 12k	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Road Header										
Jacking Frame										
Locomotive 12ton/120hp	1.52E-04	1.84E-04	2.84E-03	1.32E-03	4.60E-01	7.30E-05	6.72E-05	4.24E-06		2.04E-02
Wheel Loader - CAT l966	1.23E-04	1.49E-04	9.85E-04	1.04E-03	4.21E-01	3.88E-05	3.57E-05	3.88E-06		1.87E-02
Air Compressor - 1200cfm	5.36E-05	6.49E-05	6.84E-04	2.95E-04	3.64E-01	1.36E-05	1.25E-05	3.36E-06		1.62E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Dewtering Pumps										
Water Treatment Plant										
Ventilation Fan - 100HP										
Dump Truck - 10CY	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Light Plant Genset, 7.5kW	4.72E-04	5.62E-04	6.11E-03	5.53E-03	9.27E-01	1.32E-04	1.21E-04	1.20E-05		4.23E-02
Generator - 400kW	1.03E-04	1.24E-04	7.75E-04	4.38E-04	3.64E-01	2.67E-05	2.46E-05	3.36E-06		1.62E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Wheel Loader - CAT l966	1.23E-04	1.49E-04	9.85E-04	1.04E-03	4.21E-01	3.88E-05	3.57E-05	3.88E-06		1.87E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Dewtering Pumps										
Water Treatment Plant										
Ventilation Fan - 100HP										
Air Compressor - 750cfm	5.04E-05	6.10E-05	6.92E-04	3.06E-04	3.64E-01	1.33E-05	1.23E-05	3.36E-06		1.62E-02
Light Plant Genset, 7.5kW	4.72E-04	5.62E-04	6.11E-03	5.53E-03	9.27E-01	1.32E-04	1.21E-04	1.20E-05		4.23E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Wheel Loader - CAT l966	1.23E-04	1.49E-04	9.85E-04	1.04E-03	4.21E-01	3.88E-05	3.57E-05	3.88E-06		1.87E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	5.04E-05	6.10E-05	6.92E-04	3.06E-04	3.64E-01	1.33E-05	1.23E-05	3.36E-06		1.62E-02

Backbone Pipeline Construction

	Emissison Factor (lbs/hp-hr)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / hp-hr
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
MTBM										
Jacking Frame										
Wheel Loader - CAT l966	1.23E-04	1.49E-04	9.85E-04	1.04E-03	4.21E-01	3.88E-05	3.57E-05	3.88E-06		1.87E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Air Compressor - 1200cfm	5.36E-05	6.49E-05	6.84E-04	2.95E-04	3.64E-01	1.36E-05	1.25E-05	3.36E-06		1.62E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Ventilation Fan - 100HP										
Water Treatment Plant										
Dewtering Pumps										
Slurry Separation Plant										
Slurry Mixing System										
Light Plant Genset, 7.5kW	4.72E-04	5.62E-04	6.11E-03	5.53E-03	9.27E-01	1.32E-04	1.21E-04	1.20E-05		4.23E-02
Dump Truck - 10CY	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Generator - 750kW	1.03E-04	1.24E-04	7.64E-04	1.59E-03	3.64E-01	3.60E-05	3.31E-05	3.36E-06		1.62E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Wheel Loader - CAT l966	1.23E-04	1.49E-04	9.85E-04	1.04E-03	4.21E-01	3.88E-05	3.57E-05	3.88E-06		1.87E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Dewtering Pumps										
Water Treatment Plant										
Ventilation Fan - 100HP										
Air Compressor - 750cfm	5.04E-05	6.10E-05	6.92E-04	3.06E-04	3.64E-01	1.33E-05	1.23E-05	3.36E-06		1.62E-02
Light Plant Genset, 7.5kW	4.72E-04	5.62E-04	6.11E-03	5.53E-03	9.27E-01	1.32E-04	1.21E-04	1.20E-05		4.23E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Wheel Loader - CAT l966	1.23E-04	1.49E-04	9.85E-04	1.04E-03	4.21E-01	3.88E-05	3.57E-05	3.88E-06		1.87E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	5.04E-05	6.10E-05	6.92E-04	3.06E-04	3.64E-01	1.33E-05	1.23E-05	3.36E-06		1.62E-02

Backbone Pipeline Construction

	Emissison Factor (lbs/hp-hr)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / hp-hr
Crawler Crane 100ton/100'	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Wheel Loader - CAT l966	1.23E-04	1.49E-04	9.85E-04	1.04E-03	4.21E-01	3.88E-05	3.57E-05	3.88E-06		1.87E-02
EPBM										
Telehandler, 12k	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Grout Plant 12 cy/hr										
Locomotive 12ton/120hp	1.52E-04	1.84E-04	2.84E-03	1.32E-03	4.60E-01	7.30E-05	6.72E-05	4.24E-06		2.04E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Generator - 1450kW	1.03E-04	1.24E-04	7.64E-04	1.59E-03	3.64E-01	3.60E-05	3.31E-05	3.36E-06		1.62E-02
Air Compressor - 1200cfm	5.36E-05	6.49E-05	6.84E-04	2.95E-04	3.64E-01	1.36E-05	1.25E-05	3.36E-06		1.62E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Light Plant Genset, 7.5kW	4.72E-04	5.62E-04	6.11E-03	5.53E-03	9.27E-01	1.32E-04	1.21E-04	1.20E-05		4.23E-02
Dewtering Pumps										
Water Treatment Plant										
Ventilation Fan - 100HP										
Dump Truck - 10CY	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Excavator - CAT 305	2.76E-03	3.34E-03	9.38E-03	6.37E-03	4.94E-01	8.88E-04	8.17E-04	4.48E-06		2.19E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Pipeline Carrier	1.27E-04	1.54E-04	3.01E-03	1.66E-03	4.61E-01	5.21E-05	4.79E-05	4.26E-06		2.05E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Wheel Loader - CAT l966	1.23E-04	1.49E-04	9.85E-04	1.04E-03	4.21E-01	3.88E-05	3.57E-05	3.88E-06		1.87E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Grout Plant 12 cy/hr										
Dewtering Pumps										
Water Treatment Plant										
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Ventilation Fan - 100HP										
Air Compressor - 750cfm	5.04E-05	6.10E-05	6.92E-04	3.06E-04	3.64E-01	1.33E-05	1.23E-05	3.36E-06		1.62E-02
Light Plant Genset, 7.5kW	4.72E-04	5.62E-04	6.11E-03	5.53E-03	9.27E-01	1.32E-04	1.21E-04	1.20E-05		4.23E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Wheel Loader - CAT l966	1.23E-04	1.49E-04	9.85E-04	1.04E-03	4.21E-01	3.88E-05	3.57E-05	3.88E-06		1.87E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	5.04E-05	6.10E-05	6.92E-04	3.06E-04	3.64E-01	1.33E-05	1.23E-05	3.36E-06		1.62E-02
Excavator - CAT 329	9.05E-05	1.09E-04	9.25E-04	7.73E-04	4.45E-01	2.62E-05	2.41E-05	4.11E-06		1.98E-02
Wheel Loader - CAT l950	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02

Backbone Pipeline Construction

	Emissison Factor (lbs/hp-hr)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / hp-hr
Excavator - CAT 329	9.05E-05	1.09E-04	9.25E-04	7.73E-04	4.45E-01	2.62E-05	2.41E-05	4.11E-06		1.98E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Wheel Loader - CAT l950	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Air Compressor - 185cfm	7.90E-05	9.56E-05	2.43E-03	1.20E-03	3.64E-01	8.70E-05	8.00E-05	3.36E-06		1.62E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Wheel Loader - CAT l966	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Air Compressor - 185cfm	7.90E-05	9.56E-05	2.43E-03	1.20E-03	3.64E-01	8.70E-05	8.00E-05	3.36E-06		1.62E-02
Excavator - CAT 349	9.05E-05	1.09E-04	9.25E-04	7.73E-04	4.45E-01	2.62E-05	2.41E-05	4.11E-06		1.98E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Dump Truck - 10CY	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Drill Rig (Bauer BG 40)	9.07E-05	1.10E-04	1.09E-03	8.46E-04	5.77E-01	2.99E-05	2.75E-05	5.33E-06		2.57E-02
Crawler Crane - 100 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Wheel Loader - CAT l950	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Concrete Pump Truck	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Dump Truck - 10CY	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Excavator - CAT 349	9.05E-05	1.09E-04	9.25E-04	7.73E-04	4.45E-01	2.62E-05	2.41E-05	4.11E-06		1.98E-02
Air Compressor - 185cfm	7.90E-05	9.56E-05	2.43E-03	1.20E-03	3.64E-01	8.70E-05	8.00E-05	3.36E-06		1.62E-02
Excavator - CAT 349	9.05E-05	1.09E-04	9.25E-04	7.73E-04	4.45E-01	2.62E-05	2.41E-05	4.11E-06		1.98E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Crawler Crane - 100 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Wheel Loader - CAT l950	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Excavator - CAT 301	2.74E-04	3.31E-04	3.55E-03	2.87E-03	4.94E-01	8.30E-05	7.64E-05	4.56E-06		2.20E-02
Dump Truck - 10CY	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Crawler Crane - 100 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Vibratory Hammer	1.07E-04	1.29E-04	1.18E-03	1.19E-03	5.82E-01	3.90E-05	3.59E-05	5.38E-06		2.59E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Telehandler, 12k	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Excavator - CAT 349	9.05E-05	1.09E-04	9.25E-04	7.73E-04	4.45E-01	2.62E-05	2.41E-05	4.11E-06		1.98E-02

Backbone Pipeline Construction

	Emissison Factor (lbs/hp-hr)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / hp-hr
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Road Header/excavator arm										
Jacking Frame										
Locomotive 12ton/120hp	1.52E-04	1.84E-04	2.84E-03	1.32E-03	4.60E-01	7.30E-05	6.72E-05	4.24E-06		2.04E-02
Wheel Loader - CAT l966	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Air Compressor - 1200cfm	5.36E-05	6.49E-05	6.84E-04	2.95E-04	3.64E-01	1.36E-05	1.25E-05	3.36E-06		1.62E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Dewtering Pumps										
Water Treatment Plant										
Ventilation Fan - 100HP										
Dump Truck - 10CY	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Light Plant Genset, 7.5kW	4.72E-04	5.62E-04	6.11E-03	5.53E-03	9.27E-01	1.32E-04	1.21E-04	1.20E-05		4.23E-02
Generator - 400kW	1.03E-04	1.24E-04	7.75E-04	4.38E-04	3.64E-01	2.67E-05	2.46E-05	3.36E-06		1.62E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Ventilation Fan - 100HP										
Wheel Loader - CAT l966	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Dewtering Pumps										
Water Treatment Plant										
Air Compressor - 750cfm	5.04E-05	6.10E-05	6.92E-04	3.06E-04	3.64E-01	1.33E-05	1.23E-05	3.36E-06		1.62E-02
Light Plant Genset, 7.5kW	4.72E-04	5.62E-04	6.11E-03	5.53E-03	9.27E-01	1.32E-04	1.21E-04	1.20E-05		4.23E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Wheel Loader - CAT l966	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	5.04E-05	6.10E-05	6.92E-04	3.06E-04	3.64E-01	1.33E-05	1.23E-05	3.36E-06		1.62E-02

Backbone Pipeline Construction

	Emissison Factor (lbs/hp-hr)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / hp-hr
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Road Header/excavator arm										
Shield with Jacking Frame										
Wheel Loader - CAT l966	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Air Compressor - 1200cfm	5.36E-05	6.49E-05	6.84E-04	2.95E-04	3.64E-01	1.36E-05	1.25E-05	3.36E-06		1.62E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Ventilation Fan - 100HP										
Dump Truck - 10CY	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Generator - 400kW	1.03E-04	1.24E-04	7.75E-04	4.38E-04	3.64E-01	2.67E-05	2.46E-05	3.36E-06		1.62E-02
Locomotive 12ton/120hp	1.52E-04	1.84E-04	2.84E-03	1.32E-03	4.60E-01	7.30E-05	6.72E-05	4.24E-06		2.04E-02
Grout Plant 12 cy/hr										
Dewtering Pumps										
Water Treatment Plant										
Light Plant Genset, 7.5kW	4.72E-04	5.62E-04	6.11E-03	5.53E-03	9.27E-01	1.32E-04	1.21E-04	1.20E-05		4.23E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Telehandler, 12k	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Pipeline Carrier	1.27E-04	1.54E-04	3.01E-03	1.66E-03	4.61E-01	5.21E-05	4.79E-05	4.26E-06		2.05E-02
Ventilation Fan - 100HP										
Dewtering Pumps										
Water Treatment Plant										
Wheel Loader - CAT l966	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Air Compressor - 750cfm	5.04E-05	6.10E-05	6.92E-04	3.06E-04	3.64E-01	1.33E-05	1.23E-05	3.36E-06		1.62E-02
Light Plant Genset, 7.5kW	4.72E-04	5.62E-04	6.11E-03	5.53E-03	9.27E-01	1.32E-04	1.21E-04	1.20E-05		4.23E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Wheel Loader - CAT l966	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	5.04E-05	6.10E-05	6.92E-04	3.06E-04	3.64E-01	1.33E-05	1.23E-05	3.36E-06		1.62E-02

Backbone Pipeline Construction

	Emissison Factor (lbs/hp-hr)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / hp-hr
Crawler Crane 100ton/100'	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Wheel Loader - CAT l966	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
EPBM										
Telehandler, 12k	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Grout Plant 12 cy/hr										
Locomotive 12ton/120hp	1.52E-04	1.84E-04	2.84E-03	1.32E-03	4.60E-01	7.30E-05	6.72E-05	4.24E-06		2.04E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Generator - 1450kW	1.03E-04	1.24E-04	7.64E-04	1.59E-03	3.64E-01	3.60E-05	3.31E-05	3.36E-06		1.62E-02
Air Compressor - 1200cfm	5.36E-05	6.49E-05	6.84E-04	2.95E-04	3.64E-01	1.36E-05	1.25E-05	3.36E-06		1.62E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Light Plant Genset, 7.5kW	4.72E-04	5.62E-04	6.11E-03	5.53E-03	9.27E-01	1.32E-04	1.21E-04	1.20E-05		4.23E-02
Ventilation Fan - 100HP										
Dewtering Pumps										
Water Treatment Plant										
Dump Truck - 10CY	1.28E-04	1.55E-04	1.03E-03	8.95E-04	4.43E-01	3.43E-05	3.16E-05	4.09E-06		1.97E-02
Excavator - CAT 305	2.76E-03	3.34E-03	9.38E-03	6.37E-03	4.94E-01	8.88E-04	8.17E-04	4.48E-06		2.19E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Pipeline Carrier	1.03E-04	1.24E-04	7.75E-04	4.38E-04	3.64E-01	2.67E-05	2.46E-05	3.36E-06		1.62E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Wheel Loader - CAT l966	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Welding Machine - 450A	3.94E-04	4.69E-04	4.48E-03	3.55E-03	5.64E-01	9.68E-05	8.90E-05	7.29E-06		2.58E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Ventilation Fan - 100HP										
Dewtering Pumps										
Water Treatment Plant										
Air Compressor - 750cfm	5.04E-05	6.10E-05	6.92E-04	3.06E-04	3.64E-01	1.33E-05	1.23E-05	3.36E-06		1.62E-02
Light Plant Genset, 7.5kW	4.72E-04	5.62E-04	6.11E-03	5.53E-03	9.27E-01	1.32E-04	1.21E-04	1.20E-05		4.23E-02
Hydraulic Crane 50 ton	1.31E-04	1.59E-04	9.42E-04	1.59E-03	3.35E-01	6.63E-05	6.10E-05	3.09E-06		1.49E-02
Generator - 210kW	8.77E-05	1.06E-04	7.44E-04	3.81E-04	3.64E-01	1.86E-05	1.72E-05	3.36E-06		1.62E-02
Wheel Loader - CAT l966	1.15E-04	1.40E-04	9.30E-04	1.07E-03	4.20E-01	3.58E-05	3.29E-05	3.88E-06		1.87E-02
Telehandler, 15t	1.22E-04	1.48E-04	2.60E-03	1.16E-03	4.68E-01	8.19E-05	7.53E-05	4.32E-06		2.08E-02
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	5.04E-05	6.10E-05	6.92E-04	3.06E-04	3.64E-01	1.33E-05	1.23E-05	3.36E-06		1.62E-02

Backbone Pipeline Construction

	Unmitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
Excavator - CAT 329	8.43E-02	1.02E-01	8.63E-01	7.20E-01	4.15E+02	2.44E-02	2.24E-02	3.83E-03	0.00E+00	18.42
Wheel Loader - CAT l950	1.04E-01	1.25E-01	8.34E-01	9.57E-01	3.77E+02	3.21E-02	2.96E-02	3.48E-03	0.00E+00	16.74
Hydraulic Crane 50 ton	9.98E-02	1.21E-01	7.17E-01	1.21E+00	2.55E+02	5.04E-02	4.64E-02	2.35E-03	0.00E+00	11.33
Generator - 210kW	2.55E-01	3.08E-01	2.16E+00	1.11E+00	1.06E+03	5.41E-02	4.98E-02	9.76E-03	0.00E+00	46.94
Bobcat skid steer	1.89E-02	2.29E-02	5.55E-01	3.09E-01	9.04E+01	8.80E-03	8.10E-03	8.36E-04	0.00E+00	4.02
Telehandler, 15t	8.36E-02	1.01E-01	1.77E+00	7.91E-01	3.19E+02	5.59E-02	5.14E-02	2.95E-03	0.00E+00	14.19
Welding Machine - 450A	3.55E-02	4.22E-02	4.03E-01	3.20E-01	5.07E+01	8.71E-03	8.01E-03	6.56E-04	0.00E+00	2.32
Excavator - CAT 329	8.43E-02	1.02E-01	8.63E-01	7.20E-01	4.15E+02	2.44E-02	2.24E-02	3.83E-03	0.00E+00	18.42
Hydraulic Crane 50 ton	9.98E-02	1.21E-01	7.17E-01	1.21E+00	2.55E+02	5.04E-02	4.64E-02	2.35E-03	0.00E+00	11.33
Wheel Loader - CAT l950	1.04E-01	1.25E-01	8.34E-01	9.57E-01	3.77E+02	3.21E-02	2.96E-02	3.48E-03	0.00E+00	16.74
Bobcat skid steer	1.89E-02	2.29E-02	5.55E-01	3.09E-01	9.04E+01	8.80E-03	8.10E-03	8.36E-04	0.00E+00	4.02
Generator - 210kW	2.55E-01	3.08E-01	2.16E+00	1.11E+00	1.06E+03	5.41E-02	4.98E-02	9.76E-03	0.00E+00	46.94
Welding Machine - 450A	3.55E-02	4.22E-02	4.03E-01	3.20E-01	5.07E+01	8.71E-03	8.01E-03	6.56E-04	0.00E+00	2.32
Telehandler, 15t	8.36E-02	1.01E-01	1.77E+00	7.91E-01	3.19E+02	5.59E-02	5.14E-02	2.95E-03	0.00E+00	14.19
Air Compressor - 185cfm	2.46E-02	2.98E-02	7.58E-01	3.74E-01	1.13E+02	2.71E-02	2.50E-02	1.05E-03	0.00E+00	5.04
Hydraulic Crane 50 ton	9.98E-02	1.21E-01	7.17E-01	1.21E+00	2.55E+02	5.04E-02	4.64E-02	2.35E-03	0.00E+00	11.33
Wheel Loader - CAT l966	1.40E-01	1.69E-01	1.13E+00	1.29E+00	5.09E+02	4.34E-02	4.00E-02	4.71E-03	0.00E+00	22.64
Air Compressor - 185cfm	2.84E-02	3.44E-02	8.74E-01	4.32E-01	1.31E+02	3.13E-02	2.88E-02	1.21E-03	0.00E+00	5.82
Excavator - CAT 349	3.00E-01	3.63E-01	3.07E+00	2.56E+00	1.47E+03	8.68E-02	7.98E-02	1.36E-02	0.00E+00	65.52
Generator - 210kW	2.55E-01	3.08E-01	2.16E+00	1.11E+00	1.06E+03	5.41E-02	4.98E-02	9.76E-03	0.00E+00	46.94
Bobcat skid steer	1.89E-02	2.29E-02	5.55E-01	3.09E-01	9.04E+01	8.80E-03	8.10E-03	8.36E-04	0.00E+00	4.02
Telehandler, 15t	8.36E-02	1.01E-01	1.77E+00	7.91E-01	3.19E+02	5.59E-02	5.14E-02	2.95E-03	0.00E+00	14.19
Welding Machine - 450A	3.55E-02	4.22E-02	4.03E-01	3.20E-01	5.07E+01	8.71E-03	8.01E-03	6.56E-04	0.00E+00	2.32
Dump Truck - 10CY	1.07E+00	1.30E+00	8.63E+00	7.52E+00	3.72E+03	2.88E-01	2.65E-01	3.44E-02	0.00E+00	165.38
Drill Rig (Bauer BG 40)	4.26E-01	5.16E-01	5.11E+00	3.97E+00	2.71E+03	1.41E-01	1.29E-01	2.51E-02	0.00E+00	120.54
Excavator - CAT 349	1.75E-01	2.12E-01	1.79E+00	1.49E+00	8.60E+02	5.06E-02	4.66E-02	7.95E-03	0.00E+00	38.22
Crawler Crane - 100 ton	1.43E-01	1.73E-01	1.03E+00	1.74E+00	3.66E+02	7.24E-02	6.66E-02	3.38E-03	0.00E+00	16.26
Generator - 210kW	3.18E-01	3.85E-01	2.70E+00	1.38E+00	1.32E+03	6.77E-02	6.23E-02	1.22E-02	0.00E+00	58.68
Wheel Loader - CAT l950	2.42E-01	2.92E-01	1.95E+00	2.23E+00	8.79E+02	7.50E-02	6.90E-02	8.12E-03	0.00E+00	39.07
Concrete Pump Truck	6.71E-02	8.11E-02	5.39E-01	4.70E-01	2.33E+02	1.80E-02	1.66E-02	2.15E-03	0.00E+00	10.34
Dump Truck - 10CY	9.58E-02	1.16E-01	7.70E-01	6.71E-01	3.32E+02	2.58E-02	2.37E-02	3.07E-03	0.00E+00	14.77
Air Compressor - 185cfm	2.88E-02	3.48E-02	8.84E-01	4.37E-01	1.32E+02	3.17E-02	2.91E-02	1.22E-03	0.00E+00	5.88
Excavator - CAT 349	3.11E-01	3.77E-01	3.19E+00	2.66E+00	1.53E+03	9.01E-02	8.29E-02	1.41E-02	0.00E+00	68.04
Generator - 210kW	3.18E-01	3.85E-01	2.70E+00	1.38E+00	1.32E+03	6.77E-02	6.23E-02	1.22E-02	0.00E+00	58.68
Crawler Crane - 100 ton	1.89E-01	2.29E-01	1.36E+00	2.30E+00	4.83E+02	9.55E-02	8.79E-02	4.46E-03	0.00E+00	21.44
Wheel Loader - CAT l950	1.21E-01	1.46E-01	9.73E-01	1.12E+00	4.40E+02	3.75E-02	3.45E-02	4.06E-03	0.00E+00	19.54
Excavator - CAT 301	1.11E-01	1.34E-01	1.44E+00	1.16E+00	2.00E+02	3.36E-02	3.09E-02	1.85E-03	0.00E+00	8.90
Dump Truck - 10CY	9.81E-01	1.19E+00	7.89E+00	6.87E+00	3.40E+03	2.64E-01	2.43E-01	3.14E-02	0.00E+00	151.21

Backbone Pipeline Construction

	Unmitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
Crawler Crane - 100 ton	2.55E-01	3.09E-01	1.83E+00	3.10E+00	6.51E+02	1.29E-01	1.19E-01	6.01E-03	0.00E+00	28.95
Excavator - CAT 349	1.75E-01	2.12E-01	1.79E+00	1.49E+00	8.60E+02	5.06E-02	4.66E-02	7.95E-03	0.00E+00	38.22
Vibratory Hammer	1.28E-01	1.55E-01	1.41E+00	1.43E+00	6.98E+02	4.68E-02	4.31E-02	6.45E-03	0.00E+00	31.04
Generator - 210kW	3.18E-01	3.85E-01	2.70E+00	1.38E+00	1.32E+03	6.77E-02	6.23E-02	1.22E-02	0.00E+00	58.68
Welding Machine - 450A	8.07E-02	9.61E-02	9.17E-01	7.27E-01	1.15E+02	1.98E-02	1.82E-02	1.49E-03	0.00E+00	5.28
Telehandler, 12k	7.91E-02	9.57E-02	1.68E+00	7.49E-01	3.02E+02	5.29E-02	4.87E-02	2.79E-03	0.00E+00	13.43
Hydraulic Crane 50 ton	2.66E-01	3.22E-01	1.91E+00	3.23E+00	6.80E+02	1.35E-01	1.24E-01	6.27E-03	0.00E+00	30.20
Road Header										
Jacking Frame										
Locomotive 12ton/120hp	1.09E-01	1.32E-01	2.05E+00	9.47E-01	3.31E+02	5.26E-02	4.84E-02	3.06E-03	0.00E+00	14.71
Wheel Loader - CAT l966	3.99E-01	4.82E-01	3.19E+00	3.36E+00	1.36E+03	1.25E-01	1.15E-01	1.26E-02	0.00E+00	60.45
Air Compressor - 1200cfm	2.37E-01	2.86E-01	3.02E+00	1.30E+00	1.61E+03	5.98E-02	5.51E-02	1.48E-02	0.00E+00	71.36
Telehandler, 15t	2.23E-01	2.70E-01	4.73E+00	2.11E+00	8.51E+02	1.49E-01	1.37E-01	7.86E-03	0.00E+00	37.83
Welding Machine - 450A	1.84E-01	2.20E-01	2.10E+00	1.66E+00	2.64E+02	4.53E-02	4.17E-02	3.41E-03	0.00E+00	12.08
Dewtering Pumps										
Water Treatment Plant										
Ventilation Fan - 100HP										
Dump Truck - 10CY	4.60E-01	5.56E-01	3.70E+00	3.22E+00	1.59E+03	1.24E-01	1.14E-01	1.47E-02	0.00E+00	70.88
Light Plant Genset, 7.5kW	6.80E-02	8.09E-02	8.80E-01	7.97E-01	1.34E+02	1.90E-02	1.75E-02	1.73E-03	0.00E+00	6.09
Generator - 400kW	1.70E+00	2.05E+00	1.28E+01	7.24E+00	6.01E+03	4.42E-01	4.06E-01	5.56E-02	0.00E+00	267.30
Hydraulic Crane 50 ton	2.66E-01	3.22E-01	1.91E+00	3.23E+00	6.80E+02	1.35E-01	1.24E-01	6.27E-03	0.00E+00	30.20
Welding Machine - 450A	5.68E-01	6.76E-01	6.45E+00	5.12E+00	8.12E+02	1.39E-01	1.28E-01	1.05E-02	0.00E+00	37.16
Generator - 210kW	7.64E-01	9.24E-01	6.48E+00	3.32E+00	3.17E+03	1.62E-01	1.49E-01	2.93E-02	0.00E+00	140.83
Wheel Loader - CAT l966	3.99E-01	4.82E-01	3.19E+00	3.36E+00	1.36E+03	1.25E-01	1.15E-01	1.26E-02	0.00E+00	60.45
Telehandler, 15t	2.23E-01	2.70E-01	4.73E+00	2.11E+00	8.51E+02	1.49E-01	1.37E-01	7.86E-03	0.00E+00	37.83
Dewtering Pumps										
Water Treatment Plant										
Ventilation Fan - 100HP										
Air Compressor - 750cfm	1.84E-01	2.22E-01	2.52E+00	1.12E+00	1.33E+03	4.86E-02	4.47E-02	1.23E-02	0.00E+00	58.92
Light Plant Genset, 7.5kW	6.80E-02	8.09E-02	8.80E-01	7.97E-01	1.34E+02	1.90E-02	1.75E-02	1.73E-03	0.00E+00	6.09
Hydraulic Crane 50 ton	1.33E-01	1.61E-01	9.55E-01	1.62E+00	3.40E+02	6.73E-02	6.19E-02	3.14E-03	0.00E+00	15.10
Generator - 210kW	3.82E-01	4.62E-01	3.24E+00	1.66E+00	1.58E+03	8.12E-02	7.47E-02	1.46E-02	0.00E+00	70.41
Wheel Loader - CAT l966	1.99E-01	2.41E-01	1.59E+00	1.68E+00	6.80E+02	6.27E-02	5.77E-02	6.28E-03	0.00E+00	30.22
Telehandler, 15t	1.11E-01	1.35E-01	2.36E+00	1.05E+00	4.26E+02	7.45E-02	6.86E-02	3.93E-03	0.00E+00	18.92
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	7.08E-02	8.56E-02	9.72E-01	4.30E-01	5.11E+02	1.87E-02	1.72E-02	4.72E-03	0.00E+00	22.70

Backbone Pipeline Construction

	Unmitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
Hydraulic Crane 50 ton	2.66E-01	3.22E-01	1.91E+00	3.23E+00	6.80E+02	1.35E-01	1.24E-01	6.27E-03	0.00E+00	30.20
MTBM										
Jacking Frame										
Wheel Loader - CAT l966	3.99E-01	4.82E-01	3.19E+00	3.36E+00	1.36E+03	1.25E-01	1.15E-01	1.26E-02	0.00E+00	60.45
Telehandler, 15t	2.23E-01	2.70E-01	4.73E+00	2.11E+00	8.51E+02	1.49E-01	1.37E-01	7.86E-03	0.00E+00	37.83
Air Compressor - 1200cfm	2.37E-01	2.86E-01	3.02E+00	1.30E+00	1.61E+03	5.98E-02	5.51E-02	1.48E-02	0.00E+00	71.36
Welding Machine - 450A	1.06E-01	1.27E-01	1.21E+00	9.59E-01	1.52E+02	2.61E-02	2.40E-02	1.97E-03	0.00E+00	6.97
Ventilation Fan - 100HP										
Water Treatment Plant										
Dewtering Pumps										
Slurry Separation Plant										
Slurry Mixing System										
Light Plant Genset, 7.5kW	6.80E-02	8.09E-02	8.80E-01	7.97E-01	1.34E+02	1.90E-02	1.75E-02	1.73E-03	0.00E+00	6.09
Dump Truck - 10CY	4.60E-01	5.56E-01	3.70E+00	3.22E+00	1.59E+03	1.24E-01	1.14E-01	1.47E-02	0.00E+00	70.88
Generator - 210kW	7.64E-01	9.24E-01	6.48E+00	3.32E+00	3.17E+03	1.62E-01	1.49E-01	2.93E-02	0.00E+00	140.83
Generator - 750kW	2.00E+00	2.41E+00	1.48E+01	3.09E+01	7.06E+03	7.00E-01	6.44E-01	6.53E-02	0.00E+00	313.98
Hydraulic Crane 50 ton	2.66E-01	3.22E-01	1.91E+00	3.23E+00	6.80E+02	1.35E-01	1.24E-01	6.27E-03	0.00E+00	30.20
Welding Machine - 450A	7.03E-01	8.36E-01	7.98E+00	6.33E+00	1.00E+03	1.72E-01	1.59E-01	1.30E-02	0.00E+00	45.99
Generator - 210kW	7.64E-01	9.24E-01	6.48E+00	3.32E+00	3.17E+03	1.62E-01	1.49E-01	2.93E-02	0.00E+00	140.83
Wheel Loader - CAT l966	3.99E-01	4.82E-01	3.19E+00	3.36E+00	1.36E+03	1.25E-01	1.15E-01	1.26E-02	0.00E+00	60.45
Telehandler, 15t	2.23E-01	2.70E-01	4.73E+00	2.11E+00	8.51E+02	1.49E-01	1.37E-01	7.86E-03	0.00E+00	37.83
Dewtering Pumps										
Water Treatment Plant										
Ventilation Fan - 100HP										
Air Compressor - 750cfm	1.42E-01	1.71E-01	1.94E+00	8.59E-01	1.02E+03	3.75E-02	3.45E-02	9.44E-03	0.00E+00	45.39
Light Plant Genset, 7.5kW	6.80E-02	8.09E-02	8.80E-01	7.97E-01	1.34E+02	1.90E-02	1.75E-02	1.73E-03	0.00E+00	6.09
Hydraulic Crane 50 ton	1.33E-01	1.61E-01	9.55E-01	1.62E+00	3.40E+02	6.73E-02	6.19E-02	3.14E-03	0.00E+00	15.10
Generator - 210kW	3.82E-01	4.62E-01	3.24E+00	1.66E+00	1.58E+03	8.12E-02	7.47E-02	1.46E-02	0.00E+00	70.41
Wheel Loader - CAT l966	1.99E-01	2.41E-01	1.59E+00	1.68E+00	6.80E+02	6.27E-02	5.77E-02	6.28E-03	0.00E+00	30.22
Telehandler, 15t	1.11E-01	1.35E-01	2.36E+00	1.05E+00	4.26E+02	7.45E-02	6.86E-02	3.93E-03	0.00E+00	18.92
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	7.08E-02	8.56E-02	9.72E-01	4.30E-01	5.11E+02	1.87E-02	1.72E-02	4.72E-03	0.00E+00	22.70

Backbone Pipeline Construction

	Unmitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
Crawler Crane 100ton/100'	3.27E-01	3.96E-01	2.35E+00	3.98E+00	8.36E+02	1.66E-01	1.52E-01	7.72E-03	0.00E+00	37.17
Wheel Loader - CAT l966	3.99E-01	4.82E-01	3.19E+00	3.36E+00	1.36E+03	1.25E-01	1.15E-01	1.26E-02	0.00E+00	60.45
EPBM										
Telehandler, 12k	1.81E-01	2.19E-01	3.84E+00	1.71E+00	6.91E+02	1.21E-01	1.11E-01	6.38E-03	0.00E+00	30.70
Grout Plant 12 cy/hr										
Locomotive 12ton/120hp	2.19E-01	2.65E-01	4.09E+00	1.89E+00	6.62E+02	1.05E-01	9.67E-02	6.11E-03	0.00E+00	29.42
Generator - 210kW	7.64E-01	9.24E-01	6.48E+00	3.32E+00	3.17E+03	1.62E-01	1.49E-01	2.93E-02	0.00E+00	140.83
Generator - 1450kW	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Air Compressor - 1200cfm	2.37E-01	2.86E-01	3.02E+00	1.30E+00	1.61E+03	5.98E-02	5.51E-02	1.48E-02	0.00E+00	71.36
Welding Machine - 450A	1.06E-01	1.27E-01	1.21E+00	9.59E-01	1.52E+02	2.61E-02	2.40E-02	1.97E-03	0.00E+00	6.97
Light Plant Genset, 7.5kW	6.80E-02	8.09E-02	8.80E-01	7.97E-01	1.34E+02	1.90E-02	1.75E-02	1.73E-03	0.00E+00	6.09
Dewtering Pumps										
Water Treatment Plant										
Ventilation Fan - 100HP										
Dump Truck - 10CY	6.90E-01	8.35E-01	5.54E+00	4.83E+00	2.39E+03	1.85E-01	1.71E-01	2.21E-02	0.00E+00	106.32
Excavator - CAT 305	5.17E-01	6.25E-01	1.76E+00	1.19E+00	9.24E+01	1.66E-01	1.53E-01	8.39E-04	0.00E+00	4.11
Hydraulic Crane 50 ton	2.66E-01	3.22E-01	1.91E+00	3.23E+00	6.80E+02	1.35E-01	1.24E-01	6.27E-03	0.00E+00	30.20
Pipeline Carrier	1.72E-01	2.08E-01	4.06E+00	2.24E+00	6.22E+02	7.03E-02	6.47E-02	5.75E-03	0.00E+00	27.65
Generator - 210kW	7.64E-01	9.24E-01	6.48E+00	3.32E+00	3.17E+03	1.62E-01	1.49E-01	2.93E-02	0.00E+00	140.83
Wheel Loader - CAT l966	3.99E-01	4.82E-01	3.19E+00	3.36E+00	1.36E+03	1.25E-01	1.15E-01	1.26E-02	0.00E+00	60.45
Telehandler, 15t	2.23E-01	2.70E-01	4.73E+00	2.11E+00	8.51E+02	1.49E-01	1.37E-01	7.86E-03	0.00E+00	37.83
Grout Plant 12 cy/hr										
Dewtering Pumps										
Water Treatment Plant										
Welding Machine - 450A	5.68E-01	6.76E-01	6.45E+00	5.12E+00	8.12E+02	1.39E-01	1.28E-01	1.05E-02	0.00E+00	37.16
Ventilation Fan - 100HP										
Air Compressor - 750cfm	1.42E-01	1.71E-01	1.94E+00	8.59E-01	1.02E+03	3.75E-02	3.45E-02	9.44E-03	0.00E+00	45.39
Light Plant Genset, 7.5kW	6.80E-02	8.09E-02	8.80E-01	7.97E-01	1.34E+02	1.90E-02	1.75E-02	1.73E-03	0.00E+00	6.09
Hydraulic Crane 50 ton	1.33E-01	1.61E-01	9.55E-01	1.62E+00	3.40E+02	6.73E-02	6.19E-02	3.14E-03	0.00E+00	15.10
Generator - 210kW	3.82E-01	4.62E-01	3.24E+00	1.66E+00	1.58E+03	8.12E-02	7.47E-02	1.46E-02	0.00E+00	70.41
Wheel Loader - CAT l966	1.99E-01	2.41E-01	1.59E+00	1.68E+00	6.80E+02	6.27E-02	5.77E-02	6.28E-03	0.00E+00	30.22
Telehandler, 15t	1.11E-01	1.35E-01	2.36E+00	1.05E+00	4.26E+02	7.45E-02	6.86E-02	3.93E-03	0.00E+00	18.92
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	7.08E-02	8.56E-02	9.72E-01	4.30E-01	5.11E+02	1.87E-02	1.72E-02	4.72E-03	0.00E+00	22.70
Excavator - CAT 329	8.43E-02	1.02E-01	8.63E-01	7.20E-01	4.15E+02	2.44E-02	2.24E-02	3.83E-03	0.00E+00	18.42
Wheel Loader - CAT l950	1.04E-01	1.25E-01	8.34E-01	9.57E-01	3.77E+02	3.21E-02	2.96E-02	3.48E-03	0.00E+00	16.74
Generator - 210kW	2.55E-01	3.08E-01	2.16E+00	1.11E+00	1.06E+03	5.41E-02	4.98E-02	9.76E-03	0.00E+00	46.94
Hydraulic Crane 50 ton	9.98E-02	1.21E-01	7.17E-01	1.21E+00	2.55E+02	5.04E-02	4.64E-02	2.35E-03	0.00E+00	11.33
Welding Machine - 450A	3.55E-02	4.22E-02	4.03E-01	3.20E-01	5.07E+01	8.71E-03	8.01E-03	6.56E-04	0.00E+00	2.32

Backbone Pipeline Construction

	Unmitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
Excavator - CAT 329	8.43E-02	1.02E-01	8.63E-01	7.20E-01	4.15E+02	2.44E-02	2.24E-02	3.83E-03	0.00E+00	18.42
Generator - 210kW	2.55E-01	3.08E-01	2.16E+00	1.11E+00	1.06E+03	5.41E-02	4.98E-02	9.76E-03	0.00E+00	46.94
Hydraulic Crane 50 ton	9.98E-02	1.21E-01	7.17E-01	1.21E+00	2.55E+02	5.04E-02	4.64E-02	2.35E-03	0.00E+00	11.33
Wheel Loader - CAT l950	1.04E-01	1.25E-01	8.34E-01	9.57E-01	3.77E+02	3.21E-02	2.96E-02	3.48E-03	0.00E+00	16.74
Air Compressor - 185cfm	1.26E-02	1.53E-02	3.89E-01	1.92E-01	5.82E+01	1.39E-02	1.28E-02	5.38E-04	0.00E+00	2.59
Hydraulic Crane 50 ton	9.98E-02	1.21E-01	7.17E-01	1.21E+00	2.55E+02	5.04E-02	4.64E-02	2.35E-03	0.00E+00	11.33
Wheel Loader - CAT l966	1.40E-01	1.69E-01	1.13E+00	1.29E+00	5.09E+02	4.34E-02	4.00E-02	4.71E-03	0.00E+00	22.64
Generator - 210kW	2.55E-01	3.08E-01	2.16E+00	1.11E+00	1.06E+03	5.41E-02	4.98E-02	9.76E-03	0.00E+00	46.94
Air Compressor - 185cfm	1.26E-02	1.53E-02	3.89E-01	1.92E-01	5.82E+01	1.39E-02	1.28E-02	5.38E-04	0.00E+00	2.59
Excavator - CAT 349	3.00E-01	3.63E-01	3.07E+00	2.56E+00	1.47E+03	8.68E-02	7.98E-02	1.36E-02	0.00E+00	65.52
Welding Machine - 450A	3.55E-02	4.22E-02	4.03E-01	3.20E-01	5.07E+01	8.71E-03	8.01E-03	6.56E-04	0.00E+00	2.32
Dump Truck - 10CY	3.83E-01	4.64E-01	3.08E+00	2.69E+00	1.33E+03	1.03E-01	9.48E-02	1.23E-02	0.00E+00	59.07
Drill Rig (Bauer BG 40)	4.26E-01	5.16E-01	5.11E+00	3.97E+00	2.71E+03	1.41E-01	1.29E-01	2.51E-02	0.00E+00	120.54
Crawler Crane - 100 ton	1.89E-01	2.29E-01	1.36E+00	2.30E+00	4.83E+02	9.55E-02	8.79E-02	4.46E-03	0.00E+00	21.44
Generator - 210kW	3.18E-01	3.85E-01	2.70E+00	1.38E+00	1.32E+03	6.77E-02	6.23E-02	1.22E-02	0.00E+00	58.68
Wheel Loader - CAT l950	2.42E-01	2.92E-01	1.95E+00	2.23E+00	8.79E+02	7.50E-02	6.90E-02	8.12E-03	0.00E+00	39.07
Concrete Pump Truck	1.72E-01	2.08E-01	1.38E+00	1.20E+00	5.95E+02	4.61E-02	4.25E-02	5.50E-03	0.00E+00	26.46
Dump Truck - 10CY	9.58E-02	1.16E-01	7.70E-01	6.71E-01	3.32E+02	2.58E-02	2.37E-02	3.07E-03	0.00E+00	14.77
Excavator - CAT 349	1.75E-01	2.12E-01	1.79E+00	1.49E+00	8.60E+02	5.06E-02	4.66E-02	7.95E-03	0.00E+00	38.22
Air Compressor - 185cfm	2.88E-02	3.48E-02	8.84E-01	4.37E-01	1.32E+02	3.17E-02	2.91E-02	1.22E-03	0.00E+00	5.88
Excavator - CAT 349	3.11E-01	3.77E-01	3.19E+00	2.66E+00	1.53E+03	9.01E-02	8.29E-02	1.41E-02	0.00E+00	68.04
Generator - 210kW	3.18E-01	3.85E-01	2.70E+00	1.38E+00	1.32E+03	6.77E-02	6.23E-02	1.22E-02	0.00E+00	58.68
Crawler Crane - 100 ton	1.89E-01	2.29E-01	1.36E+00	2.30E+00	4.83E+02	9.55E-02	8.79E-02	4.46E-03	0.00E+00	21.44
Wheel Loader - CAT l950	1.21E-01	1.46E-01	9.73E-01	1.12E+00	4.40E+02	3.75E-02	3.45E-02	4.06E-03	0.00E+00	19.54
Excavator - CAT 301	1.11E-01	1.34E-01	1.44E+00	1.16E+00	2.00E+02	3.36E-02	3.09E-02	1.85E-03	0.00E+00	8.90
Dump Truck - 10CY	9.81E-01	1.19E+00	7.89E+00	6.87E+00	3.40E+03	2.64E-01	2.43E-01	3.14E-02	0.00E+00	151.21
Crawler Crane - 100 ton	1.89E-01	2.29E-01	1.36E+00	2.30E+00	4.83E+02	9.55E-02	8.79E-02	4.46E-03	0.00E+00	21.44
Vibratory Hammer	1.28E-01	1.55E-01	1.41E+00	1.43E+00	6.98E+02	4.68E-02	4.31E-02	6.45E-03	0.00E+00	31.04
Generator - 210kW	3.18E-01	3.85E-01	2.70E+00	1.38E+00	1.32E+03	6.77E-02	6.23E-02	1.22E-02	0.00E+00	58.68
Welding Machine - 450A	1.14E-01	1.35E-01	1.29E+00	1.02E+00	1.62E+02	2.79E-02	2.56E-02	2.10E-03	0.00E+00	7.43
Telehandler, 12k	7.91E-02	9.57E-02	1.68E+00	7.49E-01	3.02E+02	5.29E-02	4.87E-02	2.79E-03	0.00E+00	13.43
Excavator - CAT 349	1.75E-01	2.12E-01	1.79E+00	1.49E+00	8.60E+02	5.06E-02	4.66E-02	7.95E-03	0.00E+00	38.22

Backbone Pipeline Construction

	Unmitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
Hydraulic Crane 50 ton	2.66E-01	3.22E-01	1.91E+00	3.23E+00	6.80E+02	1.35E-01	1.24E-01	6.27E-03	0.00E+00	30.20
Road Header/excavator arm										
Jacking Frame										
Locomotive 12ton/120hp	1.09E-01	1.32E-01	2.05E+00	9.47E-01	3.31E+02	5.26E-02	4.84E-02	3.06E-03	0.00E+00	14.71
Wheel Loader - CAT l966	3.73E-01	4.52E-01	3.01E+00	3.45E+00	1.36E+03	1.16E-01	1.07E-01	1.25E-02	0.00E+00	60.38
Air Compressor - 1200cfm	2.37E-01	2.86E-01	3.02E+00	1.30E+00	1.61E+03	5.98E-02	5.51E-02	1.48E-02	0.00E+00	71.36
Telehandler, 15t	2.23E-01	2.70E-01	4.73E+00	2.11E+00	8.51E+02	1.49E-01	1.37E-01	7.86E-03	0.00E+00	37.83
Welding Machine - 450A	2.84E-01	3.38E-01	3.23E+00	2.56E+00	4.06E+02	6.97E-02	6.41E-02	5.25E-03	0.00E+00	18.58
Dewtering Pumps										
Water Treatment Plant										
Ventilation Fan - 100HP										
Dump Truck - 10CY	2.30E-01	2.78E-01	1.85E+00	1.61E+00	7.97E+02	6.18E-02	5.69E-02	7.37E-03	0.00E+00	35.44
Light Plant Genset, 7.5kW	2.02E-01	2.41E-01	2.62E+00	2.37E+00	3.97E+02	5.65E-02	5.20E-02	5.13E-03	0.00E+00	18.12
Generator - 400kW	1.70E+00	2.05E+00	1.28E+01	7.24E+00	6.01E+03	4.42E-01	4.06E-01	5.56E-02	0.00E+00	267.30
Hydraulic Crane 50 ton	2.66E-01	3.22E-01	1.91E+00	3.23E+00	6.80E+02	1.35E-01	1.24E-01	6.27E-03	0.00E+00	30.20
Welding Machine - 450A	5.68E-01	6.76E-01	6.45E+00	5.12E+00	8.12E+02	1.39E-01	1.28E-01	1.05E-02	0.00E+00	37.16
Generator - 210kW	7.64E-01	9.24E-01	6.48E+00	3.32E+00	3.17E+03	1.62E-01	1.49E-01	2.93E-02	0.00E+00	140.83
Ventilation Fan - 100HP										
Wheel Loader - CAT l966	3.73E-01	4.52E-01	3.01E+00	3.45E+00	1.36E+03	1.16E-01	1.07E-01	1.25E-02	0.00E+00	60.38
Telehandler, 15t	2.23E-01	2.70E-01	4.73E+00	2.11E+00	8.51E+02	1.49E-01	1.37E-01	7.86E-03	0.00E+00	37.83
Dewtering Pumps										
Water Treatment Plant										
Air Compressor - 750cfm	1.84E-01	2.22E-01	2.52E+00	1.12E+00	1.33E+03	4.86E-02	4.47E-02	1.23E-02	0.00E+00	58.92
Light Plant Genset, 7.5kW	6.80E-02	8.09E-02	8.80E-01	7.97E-01	1.34E+02	1.90E-02	1.75E-02	1.73E-03	0.00E+00	6.09
Hydraulic Crane 50 ton	1.33E-01	1.61E-01	9.55E-01	1.62E+00	3.40E+02	6.73E-02	6.19E-02	3.14E-03	0.00E+00	15.10
Generator - 210kW	3.82E-01	4.62E-01	3.24E+00	1.66E+00	1.58E+03	8.12E-02	7.47E-02	1.46E-02	0.00E+00	70.41
Wheel Loader - CAT l966	1.87E-01	2.26E-01	1.50E+00	1.72E+00	6.79E+02	5.79E-02	5.33E-02	6.27E-03	0.00E+00	30.19
Telehandler, 15t	1.11E-01	1.35E-01	2.36E+00	1.05E+00	4.26E+02	7.45E-02	6.86E-02	3.93E-03	0.00E+00	18.92
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	7.08E-02	8.56E-02	9.72E-01	4.30E-01	5.11E+02	1.87E-02	1.72E-02	4.72E-03	0.00E+00	22.70

Backbone Pipeline Construction

	Unmitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
Hydraulic Crane 50 ton	2.66E-01	3.22E-01	1.91E+00	3.23E+00	6.80E+02	1.35E-01	1.24E-01	6.27E-03	0.00E+00	30.20
Road Header/excavator arm										
Shield with Jacking Frame										
Wheel Loader - CAT l966	3.73E-01	4.52E-01	3.01E+00	3.45E+00	1.36E+03	1.16E-01	1.07E-01	1.25E-02	0.00E+00	60.38
Air Compressor - 1200cfm	2.37E-01	2.86E-01	3.02E+00	1.30E+00	1.61E+03	5.98E-02	5.51E-02	1.48E-02	0.00E+00	71.36
Welding Machine - 450A	1.06E-01	1.27E-01	1.21E+00	9.59E-01	1.52E+02	2.61E-02	2.40E-02	1.97E-03	0.00E+00	6.97
Ventilation Fan - 100HP										
Dump Truck - 10CY	2.30E-01	2.78E-01	1.85E+00	1.61E+00	7.97E+02	6.18E-02	5.69E-02	7.37E-03	0.00E+00	35.44
Generator - 400kW	1.70E+00	2.05E+00	1.28E+01	7.24E+00	6.01E+03	4.42E-01	4.06E-01	5.56E-02	0.00E+00	267.30
Locomotive 12ton/120hp	2.19E-01	2.65E-01	4.09E+00	1.89E+00	6.62E+02	1.05E-01	9.67E-02	6.11E-03	0.00E+00	29.42
Grout Plant 12 cy/hr										
Dewtering Pumps										
Water Treatment Plant										
Light Plant Genset, 7.5kW	6.80E-02	8.09E-02	8.80E-01	7.97E-01	1.34E+02	1.90E-02	1.75E-02	1.73E-03	0.00E+00	6.09
Welding Machine - 450A	1.06E-01	1.27E-01	1.21E+00	9.59E-01	1.52E+02	2.61E-02	2.40E-02	1.97E-03	0.00E+00	6.97
Telehandler, 12k	1.81E-01	2.19E-01	3.84E+00	1.71E+00	6.91E+02	1.21E-01	1.11E-01	6.38E-03	0.00E+00	30.70
Hydraulic Crane 50 ton	2.66E-01	3.22E-01	1.91E+00	3.23E+00	6.80E+02	1.35E-01	1.24E-01	6.27E-03	0.00E+00	30.20
Welding Machine - 450A	2.13E-01	2.53E-01	2.42E+00	1.92E+00	3.04E+02	5.22E-02	4.81E-02	3.94E-03	0.00E+00	13.94
Generator - 210kW	7.64E-01	9.24E-01	6.48E+00	3.32E+00	3.17E+03	1.62E-01	1.49E-01	2.93E-02	0.00E+00	140.83
Pipeline Carrier	1.72E-01	2.08E-01	4.06E+00	2.24E+00	6.22E+02	7.03E-02	6.47E-02	5.75E-03	0.00E+00	27.65
Ventilation Fan - 100HP										
Dewtering Pumps										
Water Treatment Plant										
Wheel Loader - CAT l966	3.73E-01	4.52E-01	3.01E+00	3.45E+00	1.36E+03	1.16E-01	1.07E-01	1.25E-02	0.00E+00	60.38
Telehandler, 15t	2.23E-01	2.70E-01	4.73E+00	2.11E+00	8.51E+02	1.49E-01	1.37E-01	7.86E-03	0.00E+00	37.83
Air Compressor - 750cfm	1.42E-01	1.71E-01	1.94E+00	8.59E-01	1.02E+03	3.75E-02	3.45E-02	9.44E-03	0.00E+00	45.39
Light Plant Genset, 7.5kW	6.80E-02	8.09E-02	8.80E-01	7.97E-01	1.34E+02	1.90E-02	1.75E-02	1.73E-03	0.00E+00	6.09
Hydraulic Crane 50 ton	1.33E-01	1.61E-01	9.55E-01	1.62E+00	3.40E+02	6.73E-02	6.19E-02	3.14E-03	0.00E+00	15.10
Generator - 210kW	3.82E-01	4.62E-01	3.24E+00	1.66E+00	1.58E+03	8.12E-02	7.47E-02	1.46E-02	0.00E+00	70.41
Wheel Loader - CAT l966	1.87E-01	2.26E-01	1.50E+00	1.72E+00	6.79E+02	5.79E-02	5.33E-02	6.27E-03	0.00E+00	30.19
Telehandler, 15t	1.11E-01	1.35E-01	2.36E+00	1.05E+00	4.26E+02	7.45E-02	6.86E-02	3.93E-03	0.00E+00	18.92
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	7.08E-02	8.56E-02	9.72E-01	4.30E-01	5.11E+02	1.87E-02	1.72E-02	4.72E-03	0.00E+00	22.70

Backbone Pipeline Construction

	Unmitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
Crawler Crane 100ton/100'	3.27E-01	3.96E-01	2.35E+00	3.98E+00	8.36E+02	1.66E-01	1.52E-01	7.72E-03	0.00E+00	37.17
Wheel Loader - CAT l966	3.73E-01	4.52E-01	3.01E+00	3.45E+00	1.36E+03	1.16E-01	1.07E-01	1.25E-02	0.00E+00	60.38
EPBM										
Telehandler, 12k	1.81E-01	2.19E-01	3.84E+00	1.71E+00	6.91E+02	1.21E-01	1.11E-01	6.38E-03	0.00E+00	30.70
Grout Plant 12 cy/hr										
Locomotive 12ton/120hp	2.19E-01	2.65E-01	4.09E+00	1.89E+00	6.62E+02	1.05E-01	9.67E-02	6.11E-03	0.00E+00	29.42
Generator - 210kW	7.64E-01	9.24E-01	6.48E+00	3.32E+00	3.17E+03	1.62E-01	1.49E-01	2.93E-02	0.00E+00	140.83
Generator - 1450kW	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Air Compressor - 1200cfm	2.37E-01	2.86E-01	3.02E+00	1.30E+00	1.61E+03	5.98E-02	5.51E-02	1.48E-02	0.00E+00	71.36
Welding Machine - 450A	1.06E-01	1.27E-01	1.21E+00	9.59E-01	1.52E+02	2.61E-02	2.40E-02	1.97E-03	0.00E+00	6.97
Light Plant Genset, 7.5kW	6.80E-02	8.09E-02	8.80E-01	7.97E-01	1.34E+02	1.90E-02	1.75E-02	1.73E-03	0.00E+00	6.09
Ventilation Fan - 100HP										
Dewtering Pumps										
Water Treatment Plant										
Dump Truck - 10CY	6.90E-01	8.35E-01	5.54E+00	4.83E+00	2.39E+03	1.85E-01	1.71E-01	2.21E-02	0.00E+00	106.32
Excavator - CAT 305	5.17E-01	6.25E-01	1.76E+00	1.19E+00	9.24E+01	1.66E-01	1.53E-01	8.39E-04	0.00E+00	4.11
Hydraulic Crane 50 ton	2.66E-01	3.22E-01	1.91E+00	3.23E+00	6.80E+02	1.35E-01	1.24E-01	6.27E-03	0.00E+00	30.20
Pipeline Carrier	1.39E-01	1.68E-01	1.05E+00	5.91E-01	4.91E+02	3.60E-02	3.32E-02	4.54E-03	0.00E+00	21.82
Generator - 210kW	7.64E-01	9.24E-01	6.48E+00	3.32E+00	3.17E+03	1.62E-01	1.49E-01	2.93E-02	0.00E+00	140.83
Wheel Loader - CAT l966	3.73E-01	4.52E-01	3.01E+00	3.45E+00	1.36E+03	1.16E-01	1.07E-01	1.25E-02	0.00E+00	60.38
Welding Machine - 450A	2.13E-01	2.53E-01	2.42E+00	1.92E+00	3.04E+02	5.22E-02	4.81E-02	3.94E-03	0.00E+00	13.94
Telehandler, 15t	2.23E-01	2.70E-01	4.73E+00	2.11E+00	8.51E+02	1.49E-01	1.37E-01	7.86E-03	0.00E+00	37.83
Ventilation Fan - 100HP										
Dewtering Pumps										
Water Treatment Plant										
Air Compressor - 750cfm	1.42E-01	1.71E-01	1.94E+00	8.59E-01	1.02E+03	3.75E-02	3.45E-02	9.44E-03	0.00E+00	45.39
Light Plant Genset, 7.5kW	6.80E-02	8.09E-02	8.80E-01	7.97E-01	1.34E+02	1.90E-02	1.75E-02	1.73E-03	0.00E+00	6.09
Hydraulic Crane 50 ton	1.33E-01	1.61E-01	9.55E-01	1.62E+00	3.40E+02	6.73E-02	6.19E-02	3.14E-03	0.00E+00	15.10
Generator - 210kW	3.82E-01	4.62E-01	3.24E+00	1.66E+00	1.58E+03	8.12E-02	7.47E-02	1.46E-02	0.00E+00	70.41
Wheel Loader - CAT l966	1.87E-01	2.26E-01	1.50E+00	1.72E+00	6.79E+02	5.79E-02	5.33E-02	6.27E-03	0.00E+00	30.19
Telehandler, 15t	1.11E-01	1.35E-01	2.36E+00	1.05E+00	4.26E+02	7.45E-02	6.86E-02	3.93E-03	0.00E+00	18.92
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	7.08E-02	8.56E-02	9.72E-01	4.30E-01	5.11E+02	1.87E-02	1.72E-02	4.72E-03	0.00E+00	22.70

Backbone Pipeline Construction

	Mitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
Excavator - CAT 329	8.43E-02	5.83E-02	8.63E-01	4.64E-02	4.15E+02	2.44E-03	2.24E-03	3.83E-03	0.00E+00	18.42
Wheel Loader - CAT l950	1.04E-01	7.16E-02	8.34E-01	6.17E-02	3.77E+02	3.21E-03	2.96E-03	3.48E-03	0.00E+00	16.74
Hydraulic Crane 50 ton	9.98E-02	6.90E-02	7.17E-01	7.82E-02	2.55E+02	5.04E-03	4.64E-03	2.35E-03	0.00E+00	11.33
Generator - 210kW	2.55E-01	1.80E-01	2.16E+00	7.27E-02	1.06E+03	5.41E-03	4.98E-03	9.76E-03	0.00E+00	46.94
Bobcat skid steer	1.89E-02	1.14E-02	5.55E-01	1.74E-02	9.04E+01	4.40E-04	4.05E-04	8.36E-04	0.00E+00	4.02
Telehandler, 15t	8.36E-02	5.78E-02	1.77E+00	5.10E-02	3.19E+02	5.59E-03	5.14E-03	2.95E-03	0.00E+00	14.19
Welding Machine - 450A	3.55E-02	2.11E-02	4.03E-01	1.80E-02	5.07E+01	4.35E-04	4.01E-04	6.56E-04	0.00E+00	2.32
Excavator - CAT 329	8.43E-02	5.83E-02	8.63E-01	4.64E-02	4.15E+02	2.44E-03	2.24E-03	3.83E-03	0.00E+00	18.42
Hydraulic Crane 50 ton	9.98E-02	6.90E-02	7.17E-01	7.82E-02	2.55E+02	5.04E-03	4.64E-03	2.35E-03	0.00E+00	11.33
Wheel Loader - CAT l950	1.04E-01	7.16E-02	8.34E-01	6.17E-02	3.77E+02	3.21E-03	2.96E-03	3.48E-03	0.00E+00	16.74
Bobcat skid steer	1.89E-02	1.14E-02	5.55E-01	1.74E-02	9.04E+01	4.40E-04	4.05E-04	8.36E-04	0.00E+00	4.02
Generator - 210kW	2.55E-01	1.80E-01	2.16E+00	7.27E-02	1.06E+03	5.41E-03	4.98E-03	9.76E-03	0.00E+00	46.94
Welding Machine - 450A	3.55E-02	2.11E-02	4.03E-01	1.80E-02	5.07E+01	4.35E-04	4.01E-04	6.56E-04	0.00E+00	2.32
Telehandler, 15t	8.36E-02	5.78E-02	1.77E+00	5.10E-02	3.19E+02	5.59E-03	5.14E-03	2.95E-03	0.00E+00	14.19
Air Compressor - 185cfm	2.46E-02	1.49E-02	7.58E-01	2.11E-02	1.13E+02	1.36E-03	1.25E-03	1.05E-03	0.00E+00	5.04
Hydraulic Crane 50 ton	9.98E-02	6.90E-02	7.17E-01	7.82E-02	2.55E+02	5.04E-03	4.64E-03	2.35E-03	0.00E+00	11.33
Wheel Loader - CAT l966	1.40E-01	9.88E-02	1.13E+00	8.51E-02	5.09E+02	4.34E-03	4.00E-03	4.71E-03	0.00E+00	22.64
Air Compressor - 185cfm	2.84E-02	1.72E-02	8.74E-01	2.44E-02	1.31E+02	1.57E-03	1.44E-03	1.21E-03	0.00E+00	5.82
Excavator - CAT 349	3.00E-01	2.12E-01	3.07E+00	1.69E-01	1.47E+03	8.68E-03	7.98E-03	1.36E-02	0.00E+00	65.52
Generator - 210kW	2.55E-01	1.80E-01	2.16E+00	7.27E-02	1.06E+03	5.41E-03	4.98E-03	9.76E-03	0.00E+00	46.94
Bobcat skid steer	1.89E-02	1.14E-02	5.55E-01	1.74E-02	9.04E+01	4.40E-04	4.05E-04	8.36E-04	0.00E+00	4.02
Telehandler, 15t	8.36E-02	5.78E-02	1.77E+00	5.10E-02	3.19E+02	5.59E-03	5.14E-03	2.95E-03	0.00E+00	14.19
Welding Machine - 450A	3.55E-02	2.11E-02	4.03E-01	1.80E-02	5.07E+01	4.35E-04	4.01E-04	6.56E-04	0.00E+00	2.32
Dump Truck - 10CY	1.07E+00	7.57E-01	8.63E+00	4.95E-01	3.72E+03	2.88E-02	2.65E-02	3.44E-02	0.00E+00	165.38
Drill Rig (Bauer BG 40)	4.26E-01	3.01E-01	5.11E+00	2.61E-01	2.71E+03	1.41E-02	1.29E-02	2.51E-02	0.00E+00	120.54
Excavator - CAT 349	1.75E-01	1.23E-01	1.79E+00	9.83E-02	8.60E+02	5.06E-03	4.66E-03	7.95E-03	0.00E+00	38.22
Crawler Crane - 100 ton	1.43E-01	9.90E-02	1.03E+00	1.12E-01	3.66E+02	7.24E-03	6.66E-03	3.38E-03	0.00E+00	16.26
Generator - 210kW	3.18E-01	2.25E-01	2.70E+00	9.09E-02	1.32E+03	6.77E-03	6.23E-03	1.22E-02	0.00E+00	58.68
Wheel Loader - CAT l950	2.42E-01	1.67E-01	1.95E+00	1.44E-01	8.79E+02	7.50E-03	6.90E-03	8.12E-03	0.00E+00	39.07
Concrete Pump Truck	6.71E-02	4.64E-02	5.39E-01	3.03E-02	2.33E+02	1.80E-03	1.66E-03	2.15E-03	0.00E+00	10.34
Dump Truck - 10CY	9.58E-02	6.76E-02	7.70E-01	4.42E-02	3.32E+02	2.58E-03	2.37E-03	3.07E-03	0.00E+00	14.77
Air Compressor - 185cfm	2.88E-02	1.74E-02	8.84E-01	2.46E-02	1.32E+02	1.58E-03	1.46E-03	1.22E-03	0.00E+00	5.88
Excavator - CAT 349	3.11E-01	2.20E-01	3.19E+00	1.75E-01	1.53E+03	9.01E-03	8.29E-03	1.41E-02	0.00E+00	68.04
Generator - 210kW	3.18E-01	2.25E-01	2.70E+00	9.09E-02	1.32E+03	6.77E-03	6.23E-03	1.22E-02	0.00E+00	58.68
Crawler Crane - 100 ton	1.89E-01	1.31E-01	1.36E+00	1.48E-01	4.83E+02	9.55E-03	8.79E-03	4.46E-03	0.00E+00	21.44
Wheel Loader - CAT l950	1.21E-01	8.35E-02	9.73E-01	7.19E-02	4.40E+02	3.75E-03	3.45E-03	4.06E-03	0.00E+00	19.54
Excavator - CAT 301	1.11E-01	6.70E-02	1.44E+00	6.55E-02	2.00E+02	1.68E-03	1.55E-03	1.85E-03	0.00E+00	8.90
Dump Truck - 10CY	9.81E-01	6.92E-01	7.89E+00	4.52E-01	3.40E+03	2.64E-02	2.43E-02	3.14E-02	0.00E+00	151.21

Backbone Pipeline Construction

	Mitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
Crawler Crane - 100 ton	2.55E-01	1.76E-01	1.83E+00	2.00E-01	6.51E+02	1.29E-02	1.19E-02	6.01E-03	0.00E+00	28.95
Excavator - CAT 349	1.75E-01	1.23E-01	1.79E+00	9.83E-02	8.60E+02	5.06E-03	4.66E-03	7.95E-03	0.00E+00	38.22
Vibratory Hammer	1.28E-01	8.84E-02	1.41E+00	9.19E-02	6.98E+02	4.68E-03	4.31E-03	6.45E-03	0.00E+00	31.04
Generator - 210kW	3.18E-01	2.25E-01	2.70E+00	9.09E-02	1.32E+03	6.77E-03	6.23E-03	1.22E-02	0.00E+00	58.68
Welding Machine - 450A	8.07E-02	4.80E-02	9.17E-01	4.10E-02	1.15E+02	9.91E-04	9.11E-04	1.49E-03	0.00E+00	5.28
Telehandler, 12k	7.91E-02	5.47E-02	1.68E+00	4.82E-02	3.02E+02	3.61E-03	3.32E-03	2.79E-03	0.00E+00	13.43
Hydraulic Crane 50 ton	2.66E-01	1.84E-01	1.91E+00	2.08E-01	6.80E+02	1.35E-02	1.24E-02	6.27E-03	0.00E+00	30.20
Road Header										
Jacking Frame										
Locomotive 12ton/120hp	1.09E-01	7.56E-02	2.05E+00	6.10E-02	3.31E+02	3.58E-03	3.30E-03	3.06E-03	0.00E+00	14.71
Wheel Loader - CAT l966	3.99E-01	2.81E-01	3.19E+00	2.21E-01	1.36E+03	1.25E-02	1.15E-02	1.26E-02	0.00E+00	60.45
Air Compressor - 1200cfm	2.37E-01	1.67E-01	3.02E+00	8.57E-02	1.61E+03	5.98E-03	5.51E-03	1.48E-02	0.00E+00	71.36
Telehandler, 15t	2.23E-01	1.54E-01	4.73E+00	1.36E-01	8.51E+02	1.49E-02	1.37E-02	7.86E-03	0.00E+00	37.83
Welding Machine - 450A	1.84E-01	1.10E-01	2.10E+00	9.37E-02	2.64E+02	2.26E-03	2.08E-03	3.41E-03	0.00E+00	12.08
Dewtering Pumps										
Water Treatment Plant										
Ventilation Fan - 100HP										
Dump Truck - 10CY	4.60E-01	3.25E-01	3.70E+00	2.12E-01	1.59E+03	1.24E-02	1.14E-02	1.47E-02	0.00E+00	70.88
Light Plant Genset, 7.5kW	6.80E-02	4.04E-02	8.80E-01	4.49E-02	1.34E+02	9.50E-04	8.74E-04	1.73E-03	0.00E+00	6.09
Generator - 400kW	1.70E+00	1.20E+00	1.28E+01	4.76E-01	6.01E+03	4.42E-02	4.06E-02	5.56E-02	0.00E+00	267.30
Hydraulic Crane 50 ton	2.66E-01	1.84E-01	1.91E+00	2.08E-01	6.80E+02	1.35E-02	1.24E-02	6.27E-03	0.00E+00	30.20
Welding Machine - 450A	5.68E-01	3.38E-01	6.45E+00	2.88E-01	8.12E+02	6.97E-03	6.41E-03	1.05E-02	0.00E+00	37.16
Generator - 210kW	7.64E-01	5.39E-01	6.48E+00	2.18E-01	3.17E+03	1.62E-02	1.49E-02	2.93E-02	0.00E+00	140.83
Wheel Loader - CAT l966	3.99E-01	2.81E-01	3.19E+00	2.21E-01	1.36E+03	1.25E-02	1.15E-02	1.26E-02	0.00E+00	60.45
Telehandler, 15t	2.23E-01	1.54E-01	4.73E+00	1.36E-01	8.51E+02	1.49E-02	1.37E-02	7.86E-03	0.00E+00	37.83
Dewtering Pumps										
Water Treatment Plant										
Ventilation Fan - 100HP										
Air Compressor - 750cfm	1.84E-01	1.27E-01	2.52E+00	7.19E-02	1.33E+03	4.86E-03	4.47E-03	1.23E-02	0.00E+00	58.92
Light Plant Genset, 7.5kW	6.80E-02	4.04E-02	8.80E-01	4.49E-02	1.34E+02	9.50E-04	8.74E-04	1.73E-03	0.00E+00	6.09
Hydraulic Crane 50 ton	1.33E-01	9.20E-02	9.55E-01	1.04E-01	3.40E+02	6.73E-03	6.19E-03	3.14E-03	0.00E+00	15.10
Generator - 210kW	3.82E-01	2.70E-01	3.24E+00	1.09E-01	1.58E+03	8.12E-03	7.47E-03	1.46E-02	0.00E+00	70.41
Wheel Loader - CAT l966	1.99E-01	1.41E-01	1.59E+00	1.11E-01	6.80E+02	6.27E-03	5.77E-03	6.28E-03	0.00E+00	30.22
Telehandler, 15t	1.11E-01	7.70E-02	2.36E+00	6.79E-02	4.26E+02	7.45E-03	6.86E-03	3.93E-03	0.00E+00	18.92
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	7.08E-02	4.89E-02	9.72E-01	2.77E-02	5.11E+02	1.87E-03	1.72E-03	4.72E-03	0.00E+00	22.70

Backbone Pipeline Construction

	Mitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
Hydraulic Crane 50 ton	2.66E-01	1.84E-01	1.91E+00	2.08E-01	6.80E+02	1.35E-02	1.24E-02	6.27E-03	0.00E+00	30.20
MTBM										
Jacking Frame										
Wheel Loader - CAT l966	3.99E-01	2.81E-01	3.19E+00	2.21E-01	1.36E+03	1.25E-02	1.15E-02	1.26E-02	0.00E+00	60.45
Telehandler, 15t	2.23E-01	1.54E-01	4.73E+00	1.36E-01	8.51E+02	1.49E-02	1.37E-02	7.86E-03	0.00E+00	37.83
Air Compressor - 1200cfm	2.37E-01	1.67E-01	3.02E+00	8.57E-02	1.61E+03	5.98E-03	5.51E-03	1.48E-02	0.00E+00	71.36
Welding Machine - 450A	1.06E-01	6.33E-02	1.21E+00	5.41E-02	1.52E+02	1.31E-03	1.20E-03	1.97E-03	0.00E+00	6.97
Ventilation Fan - 100HP										
Water Treatment Plant										
Dewtering Pumps										
Slurry Separation Plant										
Slurry Mixing System										
Light Plant Genset, 7.5kW	6.80E-02	4.04E-02	8.80E-01	4.49E-02	1.34E+02	9.50E-04	8.74E-04	1.73E-03	0.00E+00	6.09
Dump Truck - 10CY	4.60E-01	3.25E-01	3.70E+00	2.12E-01	1.59E+03	1.24E-02	1.14E-02	1.47E-02	0.00E+00	70.88
Generator - 210kW	7.64E-01	5.39E-01	6.48E+00	2.18E-01	3.17E+03	1.62E-02	1.49E-02	2.93E-02	0.00E+00	140.83
Generator - 750kW	2.00E+00	1.41E+00	1.48E+01	2.03E+00	7.06E+03	7.00E-02	6.44E-02	6.53E-02	0.00E+00	313.98
Hydraulic Crane 50 ton	2.66E-01	1.84E-01	1.91E+00	2.08E-01	6.80E+02	1.35E-02	1.24E-02	6.27E-03	0.00E+00	30.20
Welding Machine - 450A	7.03E-01	4.18E-01	7.98E+00	3.57E-01	1.00E+03	8.62E-03	7.93E-03	1.30E-02	0.00E+00	45.99
Generator - 210kW	7.64E-01	5.39E-01	6.48E+00	2.18E-01	3.17E+03	1.62E-02	1.49E-02	2.93E-02	0.00E+00	140.83
Wheel Loader - CAT l966	3.99E-01	2.81E-01	3.19E+00	2.21E-01	1.36E+03	1.25E-02	1.15E-02	1.26E-02	0.00E+00	60.45
Telehandler, 15t	2.23E-01	1.54E-01	4.73E+00	1.36E-01	8.51E+02	1.49E-02	1.37E-02	7.86E-03	0.00E+00	37.83
Dewtering Pumps										
Water Treatment Plant										
Ventilation Fan - 100HP										
Air Compressor - 750cfm	1.42E-01	9.78E-02	1.94E+00	5.54E-02	1.02E+03	3.75E-03	3.45E-03	9.44E-03	0.00E+00	45.39
Light Plant Genset, 7.5kW	6.80E-02	4.04E-02	8.80E-01	4.49E-02	1.34E+02	9.50E-04	8.74E-04	1.73E-03	0.00E+00	6.09
Hydraulic Crane 50 ton	1.33E-01	9.20E-02	9.55E-01	1.04E-01	3.40E+02	6.73E-03	6.19E-03	3.14E-03	0.00E+00	15.10
Generator - 210kW	3.82E-01	2.70E-01	3.24E+00	1.09E-01	1.58E+03	8.12E-03	7.47E-03	1.46E-02	0.00E+00	70.41
Wheel Loader - CAT l966	1.99E-01	1.41E-01	1.59E+00	1.11E-01	6.80E+02	6.27E-03	5.77E-03	6.28E-03	0.00E+00	30.22
Telehandler, 15t	1.11E-01	7.70E-02	2.36E+00	6.79E-02	4.26E+02	7.45E-03	6.86E-03	3.93E-03	0.00E+00	18.92
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	7.08E-02	4.89E-02	9.72E-01	2.77E-02	5.11E+02	1.87E-03	1.72E-03	4.72E-03	0.00E+00	22.70

Backbone Pipeline Construction

	Mitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
Crawler Crane 100ton/100'	3.27E-01	2.26E-01	2.35E+00	2.57E-01	8.36E+02	1.66E-02	1.52E-02	7.72E-03	0.00E+00	37.17
Wheel Loader - CAT l966	3.99E-01	2.81E-01	3.19E+00	2.21E-01	1.36E+03	1.25E-02	1.15E-02	1.26E-02	0.00E+00	60.45
EPBM										
Telehandler, 12k	1.81E-01	1.25E-01	3.84E+00	1.10E-01	6.91E+02	8.24E-03	7.59E-03	6.38E-03	0.00E+00	30.70
Grout Plant 12 cy/hr										
Locomotive 12ton/120hp	2.19E-01	1.51E-01	4.09E+00	1.22E-01	6.62E+02	7.17E-03	6.59E-03	6.11E-03	0.00E+00	29.42
Generator - 210kW	7.64E-01	5.39E-01	6.48E+00	2.18E-01	3.17E+03	1.62E-02	1.49E-02	2.93E-02	0.00E+00	140.83
Generator - 1450kW	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Air Compressor - 1200cfm	2.37E-01	1.67E-01	3.02E+00	8.57E-02	1.61E+03	5.98E-03	5.51E-03	1.48E-02	0.00E+00	71.36
Welding Machine - 450A	1.06E-01	6.33E-02	1.21E+00	5.41E-02	1.52E+02	1.31E-03	1.20E-03	1.97E-03	0.00E+00	6.97
Light Plant Genset, 7.5kW	6.80E-02	4.04E-02	8.80E-01	4.49E-02	1.34E+02	9.50E-04	8.74E-04	1.73E-03	0.00E+00	6.09
Dewtering Pumps										
Water Treatment Plant										
Ventilation Fan - 100HP										
Dump Truck - 10CY	6.90E-01	4.87E-01	5.54E+00	3.18E-01	2.39E+03	1.85E-02	1.71E-02	2.21E-02	0.00E+00	106.32
Excavator - CAT 305	5.17E-01	3.13E-01	1.76E+00	6.73E-02	9.24E+01	8.31E-03	7.65E-03	8.39E-04	0.00E+00	4.11
Hydraulic Crane 50 ton	2.66E-01	1.84E-01	1.91E+00	2.08E-01	6.80E+02	1.35E-02	1.24E-02	6.27E-03	0.00E+00	30.20
Pipeline Carrier	1.72E-01	1.19E-01	4.06E+00	1.45E-01	6.22E+02	4.80E-03	4.41E-03	5.75E-03	0.00E+00	27.65
Generator - 210kW	7.64E-01	5.39E-01	6.48E+00	2.18E-01	3.17E+03	1.62E-02	1.49E-02	2.93E-02	0.00E+00	140.83
Wheel Loader - CAT l966	3.99E-01	2.81E-01	3.19E+00	2.21E-01	1.36E+03	1.25E-02	1.15E-02	1.26E-02	0.00E+00	60.45
Telehandler, 15t	2.23E-01	1.54E-01	4.73E+00	1.36E-01	8.51E+02	1.49E-02	1.37E-02	7.86E-03	0.00E+00	37.83
Grout Plant 12 cy/hr										
Dewtering Pumps										
Water Treatment Plant										
Welding Machine - 450A	5.68E-01	3.38E-01	6.45E+00	2.88E-01	8.12E+02	6.97E-03	6.41E-03	1.05E-02	0.00E+00	37.16
Ventilation Fan - 100HP										
Air Compressor - 750cfm	1.42E-01	9.78E-02	1.94E+00	5.54E-02	1.02E+03	3.75E-03	3.45E-03	9.44E-03	0.00E+00	45.39
Light Plant Genset, 7.5kW	6.80E-02	4.04E-02	8.80E-01	4.49E-02	1.34E+02	9.50E-04	8.74E-04	1.73E-03	0.00E+00	6.09
Hydraulic Crane 50 ton	1.33E-01	9.20E-02	9.55E-01	1.04E-01	3.40E+02	6.73E-03	6.19E-03	3.14E-03	0.00E+00	15.10
Generator - 210kW	3.82E-01	2.70E-01	3.24E+00	1.09E-01	1.58E+03	8.12E-03	7.47E-03	1.46E-02	0.00E+00	70.41
Wheel Loader - CAT l966	1.99E-01	1.41E-01	1.59E+00	1.11E-01	6.80E+02	6.27E-03	5.77E-03	6.28E-03	0.00E+00	30.22
Telehandler, 15t	1.11E-01	7.70E-02	2.36E+00	6.79E-02	4.26E+02	7.45E-03	6.86E-03	3.93E-03	0.00E+00	18.92
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	7.08E-02	4.89E-02	9.72E-01	2.77E-02	5.11E+02	1.87E-03	1.72E-03	4.72E-03	0.00E+00	22.70
Excavator - CAT 329	8.43E-02	5.83E-02	8.63E-01	4.64E-02	4.15E+02	2.44E-03	2.24E-03	3.83E-03	0.00E+00	18.42
Wheel Loader - CAT l950	1.04E-01	7.16E-02	8.34E-01	6.17E-02	3.77E+02	3.21E-03	2.96E-03	3.48E-03	0.00E+00	16.74
Generator - 210kW	2.55E-01	1.80E-01	2.16E+00	7.27E-02	1.06E+03	5.41E-03	4.98E-03	9.76E-03	0.00E+00	46.94
Hydraulic Crane 50 ton	9.98E-02	6.90E-02	7.17E-01	7.82E-02	2.55E+02	5.04E-03	4.64E-03	2.35E-03	0.00E+00	11.33
Welding Machine - 450A	3.55E-02	2.11E-02	4.03E-01	1.80E-02	5.07E+01	4.35E-04	4.01E-04	6.56E-04	0.00E+00	2.32

Backbone Pipeline Construction

	Mitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
Excavator - CAT 329	8.43E-02	5.83E-02	8.63E-01	4.64E-02	4.15E+02	2.44E-03	2.24E-03	3.83E-03	0.00E+00	18.42
Generator - 210kW	2.55E-01	1.80E-01	2.16E+00	7.27E-02	1.06E+03	5.41E-03	4.98E-03	9.76E-03	0.00E+00	46.94
Hydraulic Crane 50 ton	9.98E-02	6.90E-02	7.17E-01	7.82E-02	2.55E+02	5.04E-03	4.64E-03	2.35E-03	0.00E+00	11.33
Wheel Loader - CAT l950	1.04E-01	7.16E-02	8.34E-01	6.17E-02	3.77E+02	3.21E-03	2.96E-03	3.48E-03	0.00E+00	16.74
Air Compressor - 185cfm	1.26E-02	7.65E-03	3.89E-01	1.08E-02	5.82E+01	6.96E-04	6.40E-04	5.38E-04	0.00E+00	2.59
Hydraulic Crane 50 ton	9.98E-02	6.90E-02	7.17E-01	7.82E-02	2.55E+02	5.04E-03	4.64E-03	2.35E-03	0.00E+00	11.33
Wheel Loader - CAT l966	1.40E-01	9.88E-02	1.13E+00	8.51E-02	5.09E+02	4.34E-03	4.00E-03	4.71E-03	0.00E+00	22.64
Generator - 210kW	2.55E-01	1.80E-01	2.16E+00	7.27E-02	1.06E+03	5.41E-03	4.98E-03	9.76E-03	0.00E+00	46.94
Air Compressor - 185cfm	1.26E-02	7.65E-03	3.89E-01	1.08E-02	5.82E+01	6.96E-04	6.40E-04	5.38E-04	0.00E+00	2.59
Excavator - CAT 349	3.00E-01	2.12E-01	3.07E+00	1.69E-01	1.47E+03	8.68E-03	7.98E-03	1.36E-02	0.00E+00	65.52
Welding Machine - 450A	3.55E-02	2.11E-02	4.03E-01	1.80E-02	5.07E+01	4.35E-04	4.01E-04	6.56E-04	0.00E+00	2.32
Dump Truck - 10CY	3.83E-01	2.70E-01	3.08E+00	1.77E-01	1.33E+03	1.03E-02	9.48E-03	1.23E-02	0.00E+00	59.07
Drill Rig (Bauer BG 40)	4.26E-01	3.01E-01	5.11E+00	2.61E-01	2.71E+03	1.41E-02	1.29E-02	2.51E-02	0.00E+00	120.54
Crawler Crane - 100 ton	1.89E-01	1.31E-01	1.36E+00	1.48E-01	4.83E+02	9.55E-03	8.79E-03	4.46E-03	0.00E+00	21.44
Generator - 210kW	3.18E-01	2.25E-01	2.70E+00	9.09E-02	1.32E+03	6.77E-03	6.23E-03	1.22E-02	0.00E+00	58.68
Wheel Loader - CAT l950	2.42E-01	1.67E-01	1.95E+00	1.44E-01	8.79E+02	7.50E-03	6.90E-03	8.12E-03	0.00E+00	39.07
Concrete Pump Truck	1.72E-01	1.19E-01	1.38E+00	7.75E-02	5.95E+02	4.61E-03	4.25E-03	5.50E-03	0.00E+00	26.46
Dump Truck - 10CY	9.58E-02	6.76E-02	7.70E-01	4.42E-02	3.32E+02	2.58E-03	2.37E-03	3.07E-03	0.00E+00	14.77
Excavator - CAT 349	1.75E-01	1.23E-01	1.79E+00	9.83E-02	8.60E+02	5.06E-03	4.66E-03	7.95E-03	0.00E+00	38.22
Air Compressor - 185cfm	2.88E-02	1.74E-02	8.84E-01	2.46E-02	1.32E+02	1.58E-03	1.46E-03	1.22E-03	0.00E+00	5.88
Excavator - CAT 349	3.11E-01	2.20E-01	3.19E+00	1.75E-01	1.53E+03	9.01E-03	8.29E-03	1.41E-02	0.00E+00	68.04
Generator - 210kW	3.18E-01	2.25E-01	2.70E+00	9.09E-02	1.32E+03	6.77E-03	6.23E-03	1.22E-02	0.00E+00	58.68
Crawler Crane - 100 ton	1.89E-01	1.31E-01	1.36E+00	1.48E-01	4.83E+02	9.55E-03	8.79E-03	4.46E-03	0.00E+00	21.44
Wheel Loader - CAT l950	1.21E-01	8.35E-02	9.73E-01	7.19E-02	4.40E+02	3.75E-03	3.45E-03	4.06E-03	0.00E+00	19.54
Excavator - CAT 301	1.11E-01	6.70E-02	1.44E+00	6.55E-02	2.00E+02	1.68E-03	1.55E-03	1.85E-03	0.00E+00	8.90
Dump Truck - 10CY	9.81E-01	6.92E-01	7.89E+00	4.52E-01	3.40E+03	2.64E-02	2.43E-02	3.14E-02	0.00E+00	151.21
Crawler Crane - 100 ton	1.89E-01	1.31E-01	1.36E+00	1.48E-01	4.83E+02	9.55E-03	8.79E-03	4.46E-03	0.00E+00	21.44
Vibratory Hammer	1.28E-01	8.84E-02	1.41E+00	9.19E-02	6.98E+02	4.68E-03	4.31E-03	6.45E-03	0.00E+00	31.04
Generator - 210kW	3.18E-01	2.25E-01	2.70E+00	9.09E-02	1.32E+03	6.77E-03	6.23E-03	1.22E-02	0.00E+00	58.68
Welding Machine - 450A	1.14E-01	6.76E-02	1.29E+00	5.77E-02	1.62E+02	1.39E-03	1.28E-03	2.10E-03	0.00E+00	7.43
Telehandler, 12k	7.91E-02	5.47E-02	1.68E+00	4.82E-02	3.02E+02	3.61E-03	3.32E-03	2.79E-03	0.00E+00	13.43
Excavator - CAT 349	1.75E-01	1.23E-01	1.79E+00	9.83E-02	8.60E+02	5.06E-03	4.66E-03	7.95E-03	0.00E+00	38.22

Backbone Pipeline Construction

	Mitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
Hydraulic Crane 50 ton	2.66E-01	1.84E-01	1.91E+00	2.08E-01	6.80E+02	1.35E-02	1.24E-02	6.27E-03	0.00E+00	30.20
Road Header/excavator arm										
Jacking Frame										
Locomotive 12ton/120hp	1.09E-01	7.56E-02	2.05E+00	6.10E-02	3.31E+02	3.58E-03	3.30E-03	3.06E-03	0.00E+00	14.71
Wheel Loader - CAT l966	3.73E-01	2.63E-01	3.01E+00	2.27E-01	1.36E+03	1.16E-02	1.07E-02	1.25E-02	0.00E+00	60.38
Air Compressor - 1200cfm	2.37E-01	1.67E-01	3.02E+00	8.57E-02	1.61E+03	5.98E-03	5.51E-03	1.48E-02	0.00E+00	71.36
Telehandler, 15t	2.23E-01	1.54E-01	4.73E+00	1.36E-01	8.51E+02	1.49E-02	1.37E-02	7.86E-03	0.00E+00	37.83
Welding Machine - 450A	2.84E-01	1.69E-01	3.23E+00	1.44E-01	4.06E+02	3.48E-03	3.20E-03	5.25E-03	0.00E+00	18.58
Dewtering Pumps										
Water Treatment Plant										
Ventilation Fan - 100HP										
Dump Truck - 10CY	2.30E-01	1.62E-01	1.85E+00	1.06E-01	7.97E+02	6.18E-03	5.69E-03	7.37E-03	0.00E+00	35.44
Light Plant Genset, 7.5kW	2.02E-01	1.20E-01	2.62E+00	1.34E-01	3.97E+02	2.83E-03	2.60E-03	5.13E-03	0.00E+00	18.12
Generator - 400kW	1.70E+00	1.20E+00	1.28E+01	4.76E-01	6.01E+03	4.42E-02	4.06E-02	5.56E-02	0.00E+00	267.30
Hydraulic Crane 50 ton	2.66E-01	1.84E-01	1.91E+00	2.08E-01	6.80E+02	1.35E-02	1.24E-02	6.27E-03	0.00E+00	30.20
Welding Machine - 450A	5.68E-01	3.38E-01	6.45E+00	2.88E-01	8.12E+02	6.97E-03	6.41E-03	1.05E-02	0.00E+00	37.16
Generator - 210kW	7.64E-01	5.39E-01	6.48E+00	2.18E-01	3.17E+03	1.62E-02	1.49E-02	2.93E-02	0.00E+00	140.83
Ventilation Fan - 100HP										
Wheel Loader - CAT l966	3.73E-01	2.63E-01	3.01E+00	2.27E-01	1.36E+03	1.16E-02	1.07E-02	1.25E-02	0.00E+00	60.38
Telehandler, 15t	2.23E-01	1.54E-01	4.73E+00	1.36E-01	8.51E+02	1.49E-02	1.37E-02	7.86E-03	0.00E+00	37.83
Dewtering Pumps										
Water Treatment Plant										
Air Compressor - 750cfm	1.84E-01	1.27E-01	2.52E+00	7.19E-02	1.33E+03	4.86E-03	4.47E-03	1.23E-02	0.00E+00	58.92
Light Plant Genset, 7.5kW	6.80E-02	4.04E-02	8.80E-01	4.49E-02	1.34E+02	9.50E-04	8.74E-04	1.73E-03	0.00E+00	6.09
Hydraulic Crane 50 ton	1.33E-01	9.20E-02	9.55E-01	1.04E-01	3.40E+02	6.73E-03	6.19E-03	3.14E-03	0.00E+00	15.10
Generator - 210kW	3.82E-01	2.70E-01	3.24E+00	1.09E-01	1.58E+03	8.12E-03	7.47E-03	1.46E-02	0.00E+00	70.41
Wheel Loader - CAT l966	1.87E-01	1.32E-01	1.50E+00	1.13E-01	6.79E+02	5.79E-03	5.33E-03	6.27E-03	0.00E+00	30.19
Telehandler, 15t	1.11E-01	7.70E-02	2.36E+00	6.79E-02	4.26E+02	7.45E-03	6.86E-03	3.93E-03	0.00E+00	18.92
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	7.08E-02	4.89E-02	9.72E-01	2.77E-02	5.11E+02	1.87E-03	1.72E-03	4.72E-03	0.00E+00	22.70

Backbone Pipeline Construction

	Mitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
Hydraulic Crane 50 ton	2.66E-01	1.84E-01	1.91E+00	2.08E-01	6.80E+02	1.35E-02	1.24E-02	6.27E-03	0.00E+00	30.20
Road Header/excavator arm										
Shield with Jacking Frame										
Wheel Loader - CAT l966	3.73E-01	2.63E-01	3.01E+00	2.27E-01	1.36E+03	1.16E-02	1.07E-02	1.25E-02	0.00E+00	60.38
Air Compressor - 1200cfm	2.37E-01	1.67E-01	3.02E+00	8.57E-02	1.61E+03	5.98E-03	5.51E-03	1.48E-02	0.00E+00	71.36
Welding Machine - 450A	1.06E-01	6.33E-02	1.21E+00	5.41E-02	1.52E+02	1.31E-03	1.20E-03	1.97E-03	0.00E+00	6.97
Ventilation Fan - 100HP										
Dump Truck - 10CY	2.30E-01	1.62E-01	1.85E+00	1.06E-01	7.97E+02	6.18E-03	5.69E-03	7.37E-03	0.00E+00	35.44
Generator - 400kW	1.70E+00	1.20E+00	1.28E+01	4.76E-01	6.01E+03	4.42E-02	4.06E-02	5.56E-02	0.00E+00	267.30
Locomotive 12ton/120hp	2.19E-01	1.51E-01	4.09E+00	1.22E-01	6.62E+02	7.17E-03	6.59E-03	6.11E-03	0.00E+00	29.42
Grout Plant 12 cy/hr										
Dewtering Pumps										
Water Treatment Plant										
Light Plant Genset, 7.5kW	6.80E-02	4.04E-02	8.80E-01	4.49E-02	1.34E+02	9.50E-04	8.74E-04	1.73E-03	0.00E+00	6.09
Welding Machine - 450A	1.06E-01	6.33E-02	1.21E+00	5.41E-02	1.52E+02	1.31E-03	1.20E-03	1.97E-03	0.00E+00	6.97
Telehandler, 12k	1.81E-01	1.25E-01	3.84E+00	1.10E-01	6.91E+02	8.24E-03	7.59E-03	6.38E-03	0.00E+00	30.70
Hydraulic Crane 50 ton	2.66E-01	1.84E-01	1.91E+00	2.08E-01	6.80E+02	1.35E-02	1.24E-02	6.27E-03	0.00E+00	30.20
Welding Machine - 450A	2.13E-01	1.27E-01	2.42E+00	1.08E-01	3.04E+02	2.61E-03	2.40E-03	3.94E-03	0.00E+00	13.94
Generator - 210kW	7.64E-01	5.39E-01	6.48E+00	2.18E-01	3.17E+03	1.62E-02	1.49E-02	2.93E-02	0.00E+00	140.83
Pipeline Carrier	1.72E-01	1.19E-01	4.06E+00	1.45E-01	6.22E+02	4.80E-03	4.41E-03	5.75E-03	0.00E+00	27.65
Ventilation Fan - 100HP										
Dewtering Pumps										
Water Treatment Plant										
Wheel Loader - CAT l966	3.73E-01	2.63E-01	3.01E+00	2.27E-01	1.36E+03	1.16E-02	1.07E-02	1.25E-02	0.00E+00	60.38
Telehandler, 15t	2.23E-01	1.54E-01	4.73E+00	1.36E-01	8.51E+02	1.49E-02	1.37E-02	7.86E-03	0.00E+00	37.83
Air Compressor - 750cfm	1.42E-01	9.78E-02	1.94E+00	5.54E-02	1.02E+03	3.75E-03	3.45E-03	9.44E-03	0.00E+00	45.39
Light Plant Genset, 7.5kW	6.80E-02	4.04E-02	8.80E-01	4.49E-02	1.34E+02	9.50E-04	8.74E-04	1.73E-03	0.00E+00	6.09
Hydraulic Crane 50 ton	1.33E-01	9.20E-02	9.55E-01	1.04E-01	3.40E+02	6.73E-03	6.19E-03	3.14E-03	0.00E+00	15.10
Generator - 210kW	3.82E-01	2.70E-01	3.24E+00	1.09E-01	1.58E+03	8.12E-03	7.47E-03	1.46E-02	0.00E+00	70.41
Wheel Loader - CAT l966	1.87E-01	1.32E-01	1.50E+00	1.13E-01	6.79E+02	5.79E-03	5.33E-03	6.27E-03	0.00E+00	30.19
Telehandler, 15t	1.11E-01	7.70E-02	2.36E+00	6.79E-02	4.26E+02	7.45E-03	6.86E-03	3.93E-03	0.00E+00	18.92
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	7.08E-02	4.89E-02	9.72E-01	2.77E-02	5.11E+02	1.87E-03	1.72E-03	4.72E-03	0.00E+00	22.70

Backbone Pipeline Construction

	Mitigated Daily Emissions (lbs/day)									
EQUIPMENT TYPE	CH4	ROG	CO	NOX	CO2	PM10	PM2.5	SOX	N2O	Gal Diesel Fuel / Day
Crawler Crane 100ton/100'	3.27E-01	2.26E-01	2.35E+00	2.57E-01	8.36E+02	1.66E-02	1.52E-02	7.72E-03	0.00E+00	37.17
Wheel Loader - CAT l966	3.73E-01	2.63E-01	3.01E+00	2.27E-01	1.36E+03	1.16E-02	1.07E-02	1.25E-02	0.00E+00	60.38
EPBM										
Telehandler, 12k	1.81E-01	1.25E-01	3.84E+00	1.10E-01	6.91E+02	8.24E-03	7.59E-03	6.38E-03	0.00E+00	30.70
Grout Plant 12 cy/hr										
Locomotive 12ton/120hp	2.19E-01	1.51E-01	4.09E+00	1.22E-01	6.62E+02	7.17E-03	6.59E-03	6.11E-03	0.00E+00	29.42
Generator - 210kW	7.64E-01	5.39E-01	6.48E+00	2.18E-01	3.17E+03	1.62E-02	1.49E-02	2.93E-02	0.00E+00	140.83
Generator - 1450kW	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
Air Compressor - 1200cfm	2.37E-01	1.67E-01	3.02E+00	8.57E-02	1.61E+03	5.98E-03	5.51E-03	1.48E-02	0.00E+00	71.36
Welding Machine - 450A	1.06E-01	6.33E-02	1.21E+00	5.41E-02	1.52E+02	1.31E-03	1.20E-03	1.97E-03	0.00E+00	6.97
Light Plant Genset, 7.5kW	6.80E-02	4.04E-02	8.80E-01	4.49E-02	1.34E+02	9.50E-04	8.74E-04	1.73E-03	0.00E+00	6.09
Ventilation Fan - 100HP										
Dewtering Pumps										
Water Treatment Plant										
Dump Truck - 10CY	6.90E-01	4.87E-01	5.54E+00	3.18E-01	2.39E+03	1.85E-02	1.71E-02	2.21E-02	0.00E+00	106.32
Excavator - CAT 305	5.17E-01	3.13E-01	1.76E+00	6.73E-02	9.24E+01	8.31E-03	7.65E-03	8.39E-04	0.00E+00	4.11
Hydraulic Crane 50 ton	2.66E-01	1.84E-01	1.91E+00	2.08E-01	6.80E+02	1.35E-02	1.24E-02	6.27E-03	0.00E+00	30.20
Pipeline Carrier	1.39E-01	9.58E-02	1.05E+00	3.81E-02	4.91E+02	2.46E-03	2.26E-03	4.54E-03	0.00E+00	21.82
Generator - 210kW	7.64E-01	5.39E-01	6.48E+00	2.18E-01	3.17E+03	1.62E-02	1.49E-02	2.93E-02	0.00E+00	140.83
Wheel Loader - CAT l966	3.73E-01	2.63E-01	3.01E+00	2.27E-01	1.36E+03	1.16E-02	1.07E-02	1.25E-02	0.00E+00	60.38
Welding Machine - 450A	2.13E-01	1.27E-01	2.42E+00	1.08E-01	3.04E+02	2.61E-03	2.40E-03	3.94E-03	0.00E+00	13.94
Telehandler, 15t	2.23E-01	1.54E-01	4.73E+00	1.36E-01	8.51E+02	1.49E-02	1.37E-02	7.86E-03	0.00E+00	37.83
Ventilation Fan - 100HP										
Dewtering Pumps										
Water Treatment Plant										
Air Compressor - 750cfm	1.42E-01	9.78E-02	1.94E+00	5.54E-02	1.02E+03	3.75E-03	3.45E-03	9.44E-03	0.00E+00	45.39
Light Plant Genset, 7.5kW	6.80E-02	4.04E-02	8.80E-01	4.49E-02	1.34E+02	9.50E-04	8.74E-04	1.73E-03	0.00E+00	6.09
Hydraulic Crane 50 ton	1.33E-01	9.20E-02	9.55E-01	1.04E-01	3.40E+02	6.73E-03	6.19E-03	3.14E-03	0.00E+00	15.10
Generator - 210kW	3.82E-01	2.70E-01	3.24E+00	1.09E-01	1.58E+03	8.12E-03	7.47E-03	1.46E-02	0.00E+00	70.41
Wheel Loader - CAT l966	1.87E-01	1.32E-01	1.50E+00	1.13E-01	6.79E+02	5.79E-03	5.33E-03	6.27E-03	0.00E+00	30.19
Telehandler, 15t	1.11E-01	7.70E-02	2.36E+00	6.79E-02	4.26E+02	7.45E-03	6.86E-03	3.93E-03	0.00E+00	18.92
Ventilation Fan - 100HP										
Grout Plant 12 cy/hr										
Air Compressor - 750cfm	7.08E-02	4.89E-02	9.72E-01	2.77E-02	5.11E+02	1.87E-03	1.72E-03	4.72E-03	0.00E+00	22.70

On-site Construction PM10 Emissions

Dust from Material Movement

$EF_D = k \times (0.0032) \times \{[(U/5)^{1.3}]/[(M/2)^{1.4}]\}$

Where,

EF = emission factor (lb/ton)
k = particle size multiplier.
U = mean wind speed
M = material moisture content (%)

k_{PM10} =	0.35	$k_{PM2.5}$ =	0.053
U =	3.5	M =	12
EF_{DPM10} =	5.73E-05	$EF_{DPM2.5}$ =	8.68E-06

E = EF x TP

Where:

E = Emissions (lb)
EF = emission factor (lb/ton)
TP = throughput of loaded and unloaded materials (ton)

Note: 1.26 assumed short tons per cubic yard conversion

Source: CalEEMod Appendix C - Section 4.4 Dust From Material Movement

		Vol Exc/Day	TP/day	E_{PM10}	$E_{PM2.5}$
Reach 1	CM-1	1,165	1,473	0.08	0.01
	CM-4A	27	34	0.00	0.00
	CM-4B	16	20	0.00	0.00
Reach 2	CM-1	777	982	0.06	0.01
	CM-4A	2	2	0.00	0.00
	CM-4B	44	56	0.00	0.00
Reach 3	CM-1/2/3	1,295	1,637	0.09	0.01
	CM-4A	8	11	0.00	0.00
	CM-4B	17	21	0.00	0.00
Reach 4	CM-1/3	1,295	1,637	0.09	0.01
	CM-4B	2	2	0.00	0.00
	CM-4C	28	35	0.00	0.00
Reach 5	CM-1/2	1,295	1,637	0.09	0.01
	CM-4A	7	9	0.00	0.00
	CM-4B	11	13	0.00	0.00
	CM-4C	32	41	0.00	0.00
Reach 6	CM-4F	135	171	0.01	0.00
Reach 7	CM-1/2	1,288	1,628	0.09	0.01
	CM-4E	19	24	0.00	0.00
	CM-4F	103	130	0.01	0.00
Reach 8	CM-1/2/3	1,288	1,628	0.09	0.01
	CM-4D	102	129	0.01	0.00
	CM-4E	9	12	0.00	0.00

Backbone Pipeline Construction

Offroad Emissions by Construction Method

Construction Method	Unmitigated Daily Emissions (lbs/day)										Mitigated Daily Emissions (lbs/day)									
	ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O	Gal Diesel Fuel / Day	ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O	Gal Diesel Fuel / Day
CM-1 Roadways	8.55	60.00	75.06	0.20	2.49	2.29	20,910	7.07	-	930.64	4.79	3.79	75.06	0.20	0.21	0.19	20,910	7.07	-	930.64
CM-2 SCE Easement, CM-3A LAFCD Easement	8.65	56.99	73.00	0.20	2.45	2.25	20,911	7.16	-	930.18	4.86	3.63	73.00	0.20	0.21	0.19	20,911	7.16	-	930.18
CM-4A Pipe Jacking	4.40	23.88	34.38	0.12	1.15	1.06	12,834	3.64	-	570.89	2.54	1.54	34.38	0.12	0.11	0.10	12,834	3.64	-	570.89
CM-4B Microtunnel	5.46	49.21	39.96	0.15	1.50	1.38	16,610	4.52	-	738.58	3.16	3.21	39.96	0.15	0.15	0.14	16,610	4.52	-	738.58
CM-4C Traditional Tunneling	4.24	23.35	32.36	0.10	1.14	1.05	11,094	3.51	-	493.40	2.39	1.50	32.36	0.10	0.10	0.09	11,094	3.51	-	493.40
CM-4D Pipe Jacking	4.37	24.82	35.22	0.12	1.14	1.05	12,441	3.62	-	553.92	2.49	1.58	35.22	0.12	0.11	0.10	12,441	3.62	-	553.92
CM-4E Shield Tunneling with Ribs and Lagging	4.21	23.16	33.83	0.11	1.11	1.02	12,246	3.48	-	544.82	2.42	1.49	33.83	0.11	0.10	0.09	12,246	3.48	-	544.82
CM-4F Traditional Tunneling	4.21	23.44	32.18	0.10	1.13	1.04	11,092	3.48	-	493.33	2.38	1.50	32.18	0.10	0.09	0.09	11,092	3.48	-	493.33
CM1/2/3 Max	8.65	60.00	75.06	0.20	2.49	2.29	20,911	7.16	-	930.64	4.86	3.79	75.06	0.20	0.21	0.19	20,911	7.16	-	930.64

Backbone Pipeline Construction

Offroad Emissions by Construction Method		Unmitigated Daily Emissions (lbs/day)									
CONSTRUCTION METHOD	**ACTIVITY**	**ROG**	**NOX**	**CO**	**SOX**	**PM10**	**PM2.5**	**CO2**	**CH4**	**N2O**	**Fuel / Day**
CM-1 Roadways	Traffic Control Crew	0.15	1.38	1.63	0.00	0.07	0.07	216	0.13	-	9.60
Assumes all activities can occur concurrently.	Sawcut Crew	0.29	2.46	3.01	0.01	0.06	0.05	401	0.24	-	18.32
	Demolition Crew	0.65	3.80	5.71	0.02	0.15	0.13	2,021	0.53	-	89.81
	Paving Crew	0.58	4.61	5.14	0.01	0.20	0.19	1,582	0.48	-	70.31
	Shoring Crew	0.45	3.99	4.98	0.01	0.16	0.15	1,105	0.37	-	49.26
	Pipeline Crew	2.89	23.36	28.31	0.06	0.93	0.86	6,759	2.40	-	301.02
	Utility Relocation Crew	0.69	3.54	5.25	0.01	0.17	0.16	1,586	0.57	-	70.51
	Conduit Duct Bank	2.84	16.86	21.02	0.07	0.75	0.69	7,241	2.35	-	321.81
	Max Day	**8.55**	**60.00**	**75.06**	**0.20**	**2.49**	**2.29**	**20,910**	**7.07**	**-**	**930.64**
CM-2 SCE Easement, CM-3A LAFCD Easement	Shoring Crew	0.45	3.99	4.98	0.01	0.16	0.15	1,105	0.37	-	49.26
Assumes all activities can occur concurrently	Pipeline Crew	2.89	23.36	28.31	0.06	0.93	0.86	6,759	2.40	-	301.02
	Water Truck Crew	0.30	1.72	1.97	0.01	0.07	0.06	851	0.25	-	37.80
	Utility Relocation Crew	0.69	3.54	5.25	0.01	0.17	0.16	1,586	0.57	-	70.51
	Temporary Gravel Roadway Crew	0.57	2.68	4.33	0.01	0.14	0.13	1,196	0.47	-	53.16
	Site Restoration Crew	0.91	4.85	7.14	0.02	0.22	0.21	2,174	0.75	-	96.62
	Conduit Duct Bank	2.84	16.86	21.02	0.07	0.75	0.69	7,241	2.35	-	321.81
	Max Day	**8.65**	**56.99**	**73.00**	**0.20**	**2.45**	**2.25**	**20,911**	**7.16**	**-**	**930.18**
CM-4A Pipe Jacking	General Mobilization and Demobilization	0.82	5.41	7.31	0.02	0.23	0.22	2,563	0.68	-	113.96
Assumes only one activity at a time.	Site Preparation	0.85	5.79	8.06	0.02	0.26	0.24	2,676	0.70	-	119.01
	Backfill Shaft and Site Restoration	2.46	15.54	19.30	0.07	0.63	0.58	7,607	2.03	-	338.16
	Shaft Support of Excavation Secant Piles	1.78	11.97	13.89	0.06	0.45	0.41	6,702	1.47	-	297.87
	Shaft Excavation	2.49	15.93	18.42	0.07	0.62	0.57	7,508	2.06	-	333.68
	Shaft Support of Excavation Sheet Piles	1.25	8.88	10.33	0.04	0.37	0.34	3,948	1.04	-	175.60
	Pipe Jacking	4.40	23.88	34.38	0.12	1.15	1.06	12,834	3.64	-	570.89
	Carrier Pipeline Installation	2.98	19.05	26.16	0.08	0.78	0.72	8,331	2.47	-	371.48
	Carrier Pipeline Backfill	1.08	6.44	9.13	0.03	0.30	0.28	3,540	0.90	-	157.35
	Max Day	**4.40**	**23.88**	**34.38**	**0.12**	**1.15**	**1.06**	**12,834**	**3.64**	**-**	**570.89**
CM-4B Microtunnel	General Mobilization and Demobilization	0.82	5.41	7.31	0.02	0.23	0.22	2,563	0.68	-	113.96
Assumes only one activity at a time.	Site Preparation	0.85	5.79	8.06	0.02	0.26	0.24	2,676	0.70	-	119.01
	Backfill Shaft and Site Restoration	2.46	15.54	19.30	0.07	0.63	0.58	7,607	2.03	-	338.16
	Shaft Support of Excavation Secant Piles	1.78	11.97	13.89	0.06	0.45	0.41	6,702	1.47	-	297.87
	Shaft Excavation	2.49	15.93	18.42	0.07	0.62	0.57	7,508	2.06	-	333.68
	Shaft Support of Excavation Sheet Piles	1.25	8.88	10.33	0.04	0.37	0.34	3,948	1.04	-	175.60
	Tunnel Excavation	5.46	49.21	39.96	0.15	1.50	1.38	16,610	4.52	-	738.58
	Carrier Pipeline Installation	3.09	20.01	27.11	0.08	0.80	0.74	8,219	2.56	-	366.78
	Carrier Pipeline Backfill	1.08	6.44	9.13	0.03	0.30	0.28	3,540	0.90	-	157.35
	Max Day	**5.46**	**49.21**	**39.96**	**0.15**	**1.50**	**1.38**	**16,610**	**4.52**	**-**	**738.58**
CM-4C Traditional Tunneling	General Mobilization and Demobilization	0.82	5.41	7.31	0.02	0.23	0.22	2,563	0.68	-	113.96
Assumes only one activity at a time.	Site Preparation	0.85	5.79	8.06	0.02	0.26	0.24	2,676	0.70	-	119.01
	Backfill Shaft and Site Restoration	2.46	15.54	19.30	0.07	0.63	0.58	7,607	2.03	-	338.16
	Shaft Support of Excavation Secant Piles	1.78	11.97	13.89	0.06	0.45	0.41	6,702	1.47	-	297.87
	Shaft Excavation	2.49	15.93	18.42	0.07	0.62	0.57	7,508	2.06	-	333.68
	Shaft Support of Excavation Sheet Piles	1.25	8.88	10.33	0.04	0.37	0.34	3,948	1.04	-	175.60
	Tunnel Excavation	4.24	23.35	32.36	0.10	1.14	1.05	11,094	3.51	-	493.40
	Carrier Pipeline Installation	3.13	21.03	29.64	0.08	0.84	0.77	8,648	2.60	-	385.60
	Carrier Pipeline Backfill	1.08	6.44	9.13	0.03	0.30	0.28	3,540	0.90	-	157.35
	Max Day	**4.24**	**23.35**	**32.36**	**0.10**	**1.14**	**1.05**	**11,094**	**3.51**	**-**	**493.40**
CM-4D Pipe Jacking	General Mobilization and Demobilization	0.70	4.31	4.98	0.02	0.17	0.16	2,153	0.58	-	95.76
Assumes only one activity at a time.	Site Preparation	0.67	4.19	4.96	0.02	0.18	0.16	2,161	0.55	-	96.02
	Backfill Shaft and Site Restoration	1.48	9.37	10.94	0.04	0.36	0.33	4,733	1.23	-	210.40
	Shaft Support of Excavation Secant Piles	1.96	13.25	15.05	0.07	0.50	0.46	7,182	1.62	-	319.18
	Shaft Excavation	2.49	15.93	18.42	0.07	0.62	0.57	7,508	2.06	-	333.68
	Shaft Support of Excavation Sheet Piles	1.21	8.37	10.23	0.04	0.34	0.31	3,826	1.00	-	170.25
	Pipe Jacking	4.37	24.82	35.22	0.12	1.14	1.05	12,441	3.62	-	553.92
	Carrier Pipeline Installation	2.95	19.13	25.98	0.08	0.77	0.71	8,329	2.45	-	371.41
	Carrier Pipeline Backfill	1.07	6.48	9.04	0.03	0.30	0.28	3,540	0.88	-	157.31
	Max Day	**4.37**	**24.82**	**35.22**	**0.12**	**1.14**	**1.05**	**12,441**	**3.62**	**-**	**553.92**
CM-4E Shield Tunneling with Ribs and Lagging	General Mobilization and Demobilization	0.70	4.31	4.98	0.02	0.17	0.16	2,153	0.58	-	95.76
Assumes only one activity at a time.	Site Preparation	0.67	4.19	4.96	0.02	0.18	0.16	2,161	0.55	-	96.02
	Backfill Shaft and Site Restoration	1.48	9.37	10.94	0.04	0.36	0.33	4,733	1.23	-	210.40
	Shaft Support of Excavation Secant Piles	1.96	13.25	15.05	0.07	0.50	0.46	7,182	1.62	-	319.18
	Shaft Excavation	2.49	15.93	18.42	0.07	0.62	0.57	7,508	2.06	-	333.68
	Shaft Support of Excavation Sheet Piles	1.21	8.37	10.23	0.04	0.34	0.31	3,826	1.00	-	170.25
	Tunnel Excavation	4.21	23.16	33.83	0.11	1.11	1.02	12,246	3.48	-	544.82
	Carrier Pipeline Installation	2.68	17.92	25.43	0.08	0.74	0.68	8,139	2.22	-	362.30
	Carrier Pipeline Backfill	1.07	6.48	9.04	0.03	0.30	0.28	3,540	0.88	-	157.31
	Max Day	**4.21**	**23.16**	**33.83**	**0.11**	**1.11**	**1.02**	**12,246**	**3.48**	**-**	**544.82**
CM-4F Traditional Tunneling	General Mobilization and Demobilization	0.70	4.31	4.98	0.02	0.17	0.16	2,153	0.58	-	95.76
Assumes only one activity at a time.	Site Preparation	0.67	4.19	4.96	0.02	0.18	0.16	2,161	0.55	-	96.02
	Backfill Shaft and Site Restoration	1.48	9.37	10.94	0.04	0.36	0.33	4,733	1.23	-	210.40
	Shaft Support of Excavation Secant Piles	1.96	13.25	15.05	0.07	0.50	0.46	7,182	1.62	-	319.18
	Shaft Excavation	2.49	15.93	18.42	0.07	0.62	0.57	7,508	2.06	-	333.68
	Shaft Support of Excavation Sheet Piles	1.21	8.37	10.23	0.04	0.34	0.31	3,826	1.00	-	170.25
	Tunnel Excavation	4.21	23.44	32.18	0.10	1.13	1.04	11,092	3.48	-	493.33
	Carrier Pipeline Installation	2.64	16.27	22.42	0.08	0.71	0.65	8,008	2.19	-	356.48
	Carrier Pipeline Backfill	1.07	6.48	9.04	0.03	0.30	0.28	3,540	0.88	-	157.31
	Max Day	**4.21**	**23.44**	**32.18**	**0.10**	**1.13**	**1.04**	**11,092**	**3.48**	**-**	**493.33**

Backbone Pipeline Construction

Offroad Emissions by Construction Method		Mitigated Daily Emissions (lbs/day)									
CONSTRUCTION METHOD	ACTIVITY	ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O	Fuel / Day
CM-1 Roadways	Traffic Control Crew	0.08	0.09	1.63	0.00	0.00	0.00	216	0.13	-	9.60
Assumes all activities can occur concurrently.	Sawcut Crew	0.14	0.14	3.01	0.01	0.00	0.00	401	0.24	-	18.32
	Demolition Crew	0.38	0.25	5.71	0.02	0.01	0.01	2,021	0.53	-	89.81
	Paving Crew	0.33	0.29	5.14	0.01	0.02	0.01	1,582	0.48	-	70.31
	Shoring Crew	0.25	0.25	4.98	0.01	0.01	0.01	1,105	0.37	-	49.26
	Pipeline Crew	1.61	1.47	28.31	0.06	0.08	0.07	6,759	2.40	-	301.02
	Utility Relocation Crew	0.39	0.23	5.25	0.01	0.01	0.01	1,586	0.57	-	70.51
	Conduit Duct Bank	1.61	1.08	21.02	0.07	0.06	0.06	7,241	2.35	-	321.81
	Max Day	**4.79**	**3.79**	**75.06**	**0.20**	**0.21**	**0.19**	**20,910**	**7.07**	**-**	**930.64**
CM-2 SCE Easement, CM-3A LAFCD Easement	Shoring Crew	0.25	0.25	4.98	0.01	0.01	0.01	1,105	0.37	-	49.26
Assumes all activities can occur concurrently	Pipeline Crew	1.61	1.47	28.31	0.06	0.08	0.07	6,759	2.40	-	301.02
	Water Truck Crew	0.17	0.11	1.97	0.01	0.01	0.01	851	0.25	-	37.80
	Utility Relocation Crew	0.39	0.23	5.25	0.01	0.01	0.01	1,586	0.57	-	70.51
	Temporary Gravel Roadway Crew	0.32	0.17	4.33	0.01	0.01	0.01	1,196	0.47	-	53.16
	Site Restoration Crew	0.51	0.31	7.14	0.02	0.02	0.02	2,174	0.75	-	96.62
	Conduit Duct Bank	1.61	1.08	21.02	0.07	0.06	0.06	7,241	2.35	-	321.81
	Max Day	**4.86**	**3.63**	**73.00**	**0.20**	**0.21**	**0.19**	**20,911**	**7.16**	**-**	**930.18**
CM-4A Pipe Jacking	General Mobilization and Demobilization	0.47	0.35	7.31	0.02	0.02	0.02	2,563	0.68	-	113.96
Assumes only one activity at a time.	Site Preparation	0.48	0.37	8.06	0.02	0.02	0.02	2,676	0.70	-	119.01
	Backfill Shaft and Site Restoration	1.42	1.01	19.30	0.07	0.06	0.06	7,607	2.03	-	338.16
	Shaft Support of Excavation Secant Piles	1.03	0.78	13.89	0.06	0.05	0.04	6,702	1.47	-	297.87
	Shaft Excavation	1.44	1.03	18.42	0.07	0.06	0.05	7,508	2.06	-	333.68
	Shaft Support of Excavation Sheet Piles	0.72	0.57	10.33	0.04	0.03	0.03	3,948	1.04	-	175.60
	Pipe Jacking	2.54	1.54	34.38	0.12	0.11	0.10	12,834	3.64	-	570.89
	Carrier Pipeline Installation	1.66	1.19	26.16	0.08	0.07	0.06	8,331	2.47	-	371.48
	Carrier Pipeline Backfill	0.63	0.42	9.13	0.03	0.03	0.03	3,540	0.90	-	157.35
	Max Day	**2.54**	**1.54**	**34.38**	**0.12**	**0.11**	**0.10**	**12,834**	**3.64**	**-**	**570.89**
CM-4B Microtunnel	General Mobilization and Demobilization	0.47	0.35	7.31	0.02	0.02	0.02	2,563	0.68	-	113.96
Assumes only one activity at a time.	Site Preparation	0.48	0.37	8.06	0.02	0.02	0.02	2,676	0.70	-	119.01
	Backfill Shaft and Site Restoration	1.42	1.01	19.30	0.07	0.06	0.06	7,607	2.03	-	338.16
	Shaft Support of Excavation Secant Piles	1.03	0.78	13.89	0.06	0.05	0.04	6,702	1.47	-	297.87
	Shaft Excavation	1.44	1.03	18.42	0.07	0.06	0.05	7,508	2.06	-	333.68
	Shaft Support of Excavation Sheet Piles	0.72	0.57	10.33	0.04	0.03	0.03	3,948	1.04	-	175.60
	Tunnel Excavation	3.16	3.21	39.96	0.15	0.15	0.14	16,610	4.52	-	738.58
	Carrier Pipeline Installation	1.71	1.24	27.11	0.08	0.07	0.06	8,219	2.56	-	366.78
	Carrier Pipeline Backfill	0.63	0.42	9.13	0.03	0.03	0.03	3,540	0.90	-	157.35
	Max Day	**3.16**	**3.21**	**39.96**	**0.15**	**0.15**	**0.14**	**16,610**	**4.52**	**-**	**738.58**
CM-4C Traditional Tunneling	General Mobilization and Demobilization	0.47	0.35	7.31	0.02	0.02	0.02	2,563	0.68	-	113.96
Assumes only one activity at a time.	Site Preparation	0.48	0.37	8.06	0.02	0.02	0.02	2,676	0.70	-	119.01
	Backfill Shaft and Site Restoration	1.42	1.01	19.30	0.07	0.06	0.06	7,607	2.03	-	338.16
	Shaft Support of Excavation Secant Piles	1.03	0.78	13.89	0.06	0.05	0.04	6,702	1.47	-	297.87
	Shaft Excavation	1.44	1.03	18.42	0.07	0.06	0.05	7,508	2.06	-	333.68
	Shaft Support of Excavation Sheet Piles	0.72	0.57	10.33	0.04	0.03	0.03	3,948	1.04	-	175.60
	Tunnel Excavation	2.39	1.50	32.36	0.10	0.10	0.09	11,094	3.51	-	493.40
	Carrier Pipeline Installation	1.75	1.32	29.64	0.08	0.07	0.07	8,648	2.60	-	385.60
	Carrier Pipeline Backfill	0.63	0.42	9.13	0.03	0.03	0.03	3,540	0.90	-	157.35
	Max Day	**2.39**	**1.50**	**32.36**	**0.10**	**0.10**	**0.09**	**11,094**	**3.51**	**-**	**493.40**
CM-4D Pipe Jacking	General Mobilization and Demobilization	0.40	0.28	4.98	0.02	0.02	0.02	2,153	0.58	-	95.76
Assumes only one activity at a time.	Site Preparation	0.39	0.27	4.96	0.02	0.02	0.02	2,161	0.55	-	96.02
	Backfill Shaft and Site Restoration	0.86	0.61	10.94	0.04	0.03	0.03	4,733	1.23	-	210.40
	Shaft Support of Excavation Secant Piles	1.13	0.86	15.05	0.07	0.05	0.05	7,182	1.62	-	319.18
	Shaft Excavation	1.44	1.03	18.42	0.07	0.06	0.05	7,508	2.06	-	333.68
	Shaft Support of Excavation Sheet Piles	0.69	0.54	10.23	0.04	0.03	0.03	3,826	1.00	-	170.25
	Pipe Jacking	2.49	1.58	35.22	0.12	0.11	0.10	12,441	3.62	-	553.92
	Carrier Pipeline Installation	1.65	1.19	25.98	0.08	0.07	0.06	8,329	2.45	-	371.41
	Carrier Pipeline Backfill	0.62	0.42	9.04	0.03	0.03	0.03	3,540	0.88	-	157.31
	Max Day	**2.49**	**1.58**	**35.22**	**0.12**	**0.11**	**0.10**	**12,441**	**3.62**	**-**	**553.92**
CM-4E Shield Tunneling with Ribs and Lagging	General Mobilization and Demobilization	0.40	0.28	4.98	0.02	0.02	0.02	2,153	0.58	-	95.76
Assumes only one activity at a time.	Site Preparation	0.39	0.27	4.96	0.02	0.02	0.02	2,161	0.55	-	96.02
	Backfill Shaft and Site Restoration	0.86	0.61	10.94	0.04	0.03	0.03	4,733	1.23	-	210.40
	Shaft Support of Excavation Secant Piles	1.13	0.86	15.05	0.07	0.05	0.05	7,182	1.62	-	319.18
	Shaft Excavation	1.44	1.03	18.42	0.07	0.06	0.05	7,508	2.06	-	333.68
	Shaft Support of Excavation Sheet Piles	0.69	0.54	10.23	0.04	0.03	0.03	3,826	1.00	-	170.25
	Tunnel Excavation	2.42	1.49	33.83	0.11	0.10	0.09	12,246	3.48	-	544.82
	Carrier Pipeline Installation	1.52	1.14	25.43	0.08	0.07	0.06	8,139	2.22	-	362.30
	Carrier Pipeline Backfill	0.62	0.42	9.04	0.03	0.03	0.03	3,540	0.88	-	157.31
	Max Day	**2.42**	**1.49**	**33.83**	**0.11**	**0.10**	**0.09**	**12,246**	**3.48**	**-**	**544.82**
CM-4F Traditional Tunneling	General Mobilization and Demobilization	0.40	0.28	4.98	0.02	0.02	0.02	2,153	0.58	-	95.76
Assumes only one activity at a time.	Site Preparation	0.39	0.27	4.96	0.02	0.02	0.02	2,161	0.55	-	96.02
	Backfill Shaft and Site Restoration	0.86	0.61	10.94	0.04	0.03	0.03	4,733	1.23	-	210.40
	Shaft Support of Excavation Secant Piles	1.13	0.86	15.05	0.07	0.05	0.05	7,182	1.62	-	319.18
	Shaft Excavation	1.44	1.03	18.42	0.07	0.06	0.05	7,508	2.06	-	333.68
	Shaft Support of Excavation Sheet Piles	0.69	0.54	10.23	0.04	0.03	0.03	3,826	1.00	-	170.25
	Tunnel Excavation	2.38	1.50	32.18	0.10	0.09	0.09	11,092	3.48	-	493.33
	Carrier Pipeline Installation	1.50	1.04	22.42	0.08	0.07	0.06	8,008	2.19	-	356.48
	Carrier Pipeline Backfill	0.62	0.42	9.04	0.03	0.03	0.03	3,540	0.88	-	157.31
	Max Day	**2.38**	**1.50**	**32.18**	**0.10**	**0.09**	**0.09**	**11,092**	**3.48**	**-**	**493.33**

Backbone Pipeline Construction

	Emissison Factors									Fuel Usage			
	ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O	Diesel (gal/mi)	Gas (gal/mi)	Elec (kWh/mi)	NG (gal/mi)
LDA_Mix (lbs/trip)	1.95E-03	5.20E-04	6.08E-03	1.50E-06	4.33E-06	3.98E-06	1.51E-01	1.38E-04	6.66E-05				
LDA_Mix (lbs/mile)	2.36E-05	1.05E-04	1.70E-03	6.11E-06	4.07E-05	1.43E-05	6.18E-01	6.07E-06	1.06E-05	5.56E-05	3.35E-02	2.28E-02	0.00E+00
HDT_Mix (lbs/trip)	7.82E-04	3.93E-03	5.88E-03	3.62E-06	2.64E-06	2.51E-06	4.04E-01	1.06E-04	1.06E-04				
HDT_Mix (lbs/mile)	6.36E-05	1.97E-03	1.12E-03	2.05E-05	2.37E-04	9.62E-05	2.20E+00	6.00E-05	2.75E-04	7.72E-02	2.70E-02	1.47E-02	3.44E-03

				Unmitigated Daily Emissions (lbs/day)									Fuel Usage			
				ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O	Diesel (gal)	Gas (gal)	Elec (kWh)	NG (gal)
Reach 1	CM-1	Worker Trips	52	0.10	0.03	0.32	0.00	0.00	0.00	7.87E+00	7.16E-03	3.46E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	2,421	0.06	0.25	4.12	0.01	0.10	0.03	1.50E+03	1.47E-02	2.57E-02	1.35E-01	8.10E+01	5.53E+01	0.00E+00
		Truck Trips	409	0.32	1.61	2.40	0.00	0.00	0.00	1.65E+02	4.33E-02	4.32E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	6,489	0.41	12.77	7.30	0.13	1.54	0.62	1.43E+04	3.90E-01	1.79E+00	5.01E+02	1.75E+02	9.56E+01	2.23E+01
		Total		0.89	14.66	14.14	0.15	1.64	0.66	1.59E+04	4.55E-01	1.86E+00	5.01E+02	2.56E+02	1.51E+02	2.23E+01
	CM-4A	Worker Trips	57	0.11	0.03	0.35	0.00	0.00	0.00	8.69E+00	7.90E-03	3.82E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	2,780	0.07	0.29	4.73	0.02	0.11	0.04	1.72E+03	1.69E-02	2.95E-02	1.55E-01	9.30E+01	6.35E+01	0.00E+00
		Truck Trips	14	0.01	0.06	0.08	0.00	0.00	0.00	5.77E+00	1.51E-03	1.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	714	0.05	1.41	0.80	0.01	0.17	0.07	1.57E+03	4.29E-02	1.97E-01	5.51E+01	1.93E+01	1.05E+01	2.46E+00
		Total		0.23	1.78	5.96	0.03	0.28	0.11	3.30E+03	6.91E-02	2.31E-01	5.53E+01	1.12E+02	7.40E+01	2.46E+00
	CM-4B	Worker Trips	37	0.07	0.02	0.22	0.00	0.00	0.00	5.58E+00	5.07E-03	2.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	1,663	0.04	0.17	2.83	0.01	0.07	0.02	1.03E+03	1.01E-02	1.77E-02	9.25E-02	5.56E+01	3.80E+01	0.00E+00
		Truck Trips	8	0.01	0.03	0.05	0.00	0.00	0.00	3.34E+00	8.75E-04	8.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	413	0.03	0.81	0.46	0.01	0.10	0.04	9.08E+02	2.48E-02	1.14E-01	3.19E+01	1.12E+01	6.09E+00	1.42E+00
		Total		0.14	1.04	3.57	0.02	0.17	0.06	1.94E+03	4.08E-02	1.35E-01	3.20E+01	6.68E+01	4.41E+01	1.42E+00
Reach 2	CM-1	Worker Trips	42	0.08	0.02	0.25	0.00	0.00	0.00	6.31E+00	5.74E-03	2.77E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	1,904	0.04	0.20	3.24	0.01	0.08	0.03	1.18E+03	1.16E-02	2.02E-02	1.06E-01	6.37E+01	4.35E+01	0.00E+00
		Truck Trips	321	0.25	1.26	1.89	0.00	0.00	0.00	1.30E+02	3.40E-02	3.39E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	5,092	0.32	10.02	5.73	0.10	1.21	0.49	1.12E+04	3.06E-01	1.40E+00	3.93E+02	1.38E+02	7.50E+01	1.75E+01
		Total		0.70	11.51	11.11	0.12	1.29	0.52	1.25E+04	3.57E-01	1.46E+00	3.93E+02	2.01E+02	1.18E+02	1.75E+01
	CM-4A	Worker Trips	7	0.01	0.00	0.04	0.00	0.00	0.00	1.12E+00	1.02E-03	4.92E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	279	0.01	0.03	0.48	0.00	0.01	0.00	1.73E+02	1.70E-03	2.97E-03	1.55E-02	9.35E+00	6.38E+00	0.00E+00
		Truck Trips	1	0.00	0.01	0.01	0.00	0.00	0.00	5.30E-01	1.39E-04	1.39E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	66	0.00	0.13	0.07	0.00	0.02	0.01	1.44E+02	3.94E-03	1.81E-02	5.06E+00	1.77E+00	9.66E-01	2.26E-01
		Total		0.03	0.17	0.60	0.00	0.03	0.01	3.19E+02	6.79E-03	2.17E-02	5.08E+00	1.11E+01	7.35E+00	2.26E-01
	CM-4B	Worker Trips	84	0.16	0.04	0.51	0.00	0.00	0.00	1.28E+01	1.16E-02	5.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	4,033	0.10	0.42	6.86	0.02	0.16	0.06	2.49E+03	2.45E-02	4.28E-02	2.24E-01	1.35E+02	9.21E+01	0.00E+00
		Truck Trips	12	0.01	0.05	0.07	0.00	0.00	0.00	5.04E+00	1.32E-03	1.32E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	624	0.04	1.23	0.70	0.01	0.15	0.06	1.37E+03	3.74E-02	1.72E-01	4.82E+01	1.69E+01	9.19E+00	2.15E+00
		Total		0.31	1.74	8.15	0.04	0.31	0.12	3.88E+03	7.48E-02	2.21E-01	4.84E+01	1.52E+02	1.01E+02	2.15E+00
Reach 3	CM-1/2/3	Worker Trips	6	0.01	0.00	0.04	0.00	0.00	0.00	9.39E-01	8.54E-04	4.13E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	220	0.01	0.02	0.37	0.00	0.01	0.00	1.36E+02	1.34E-03	2.34E-03	1.22E-02	7.36E+00	5.03E+00	0.00E+00
		Truck Trips	206	0.16	0.81	1.21	0.00	0.00	0.00	8.30E+01	2.18E-02	2.17E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	3,172	0.20	6.24	3.57	0.07	0.75	0.31	6.97E+03	1.90E-01	8.73E-01	2.45E+02	8.57E+01	4.67E+01	1.09E+01
		Total		0.38	7.08	5.19	0.07	0.76	0.31	7.19E+03	2.14E-01	8.98E-01	2.45E+02	9.31E+01	5.17E+01	1.09E+01
	CM-4A	Worker Trips	20	0.04	0.01	0.12	0.00	0.00	0.00	3.00E+00	2.73E-03	1.32E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	900	0.02	0.09	1.53	0.01	0.04	0.01	5.56E+02	5.46E-03	9.56E-03	5.01E-02	3.01E+01	2.06E+01	0.00E+00
		Truck Trips	4	0.00	0.02	0.03	0.00	0.00	0.00	1.80E+00	4.72E-04	4.71E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	223	0.01	0.44	0.25	0.00	0.05	0.02	4.90E+02	1.34E-02	6.14E-02	1.72E+01	6.02E+00	3.28E+00	7.67E-01
		Total		0.08	0.56	1.93	0.01	0.09	0.03	1.05E+03	2.20E-02	7.27E-02	1.73E+01	3.61E+01	2.38E+01	7.67E-01
	CM-4B	Worker Trips	24	0.05	0.01	0.15	0.00	0.00	0.00	3.61E+00	3.28E-03	1.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	1,012	0.02	0.11	1.72	0.01	0.04	0.01	6.26E+02	6.14E-03	1.07E-02	5.63E-02	3.39E+01	2.31E+01	0.00E+00
		Truck Trips	4	0.00	0.02	0.02	0.00	0.00	0.00	1.55E+00	4.07E-04	4.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	192	0.01	0.38	0.22	0.00	0.05	0.02	4.22E+02	1.15E-02	5.29E-02	1.48E+01	5.19E+00	2.83E+00	6.61E-01
		Total		0.09	0.51	2.10	0.01	0.09	0.03	1.05E+03	2.14E-02	6.56E-02	1.49E+01	3.91E+01	2.60E+01	6.61E-01
Reach 4	CM-1/3	Worker Trips	9	0.02	0.00	0.05	0.00	0.00	0.00	1.32E+00	1.20E-03	5.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	346	0.01	0.04	0.59	0.00	0.01	0.00	2.14E+02	2.10E-03	3.68E-03	1.93E-02	1.16E+01	7.91E+00	0.00E+00
		Truck Trips	70	0.06	0.28	0.41	0.00	0.00	0.00	2.84E+01	7.45E-03	7.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	1,116	0.07	2.20	1.25	0.02	0.26	0.11	2.45E+03	6.70E-02	3.07E-01	8.62E+01	3.02E+01	1.64E+01	3.84E+00
		Total		0.15	2.51	2.31	0.03	0.28	0.11	2.70E+03	7.77E-02	3.19E-01	8.62E+01	4.17E+01	2.43E+01	3.84E+00
	CM-4B	Worker Trips	8	0.01	0.00	0.05	0.00	0.00	0.00	1.15E+00	1.05E-03	5.07E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	201	0.00	0.02	0.34	0.00	0.01	0.00	1.24E+02	1.22E-03	2.13E-03	1.12E-02	6.71E+00	4.58E+00	0.00E+00
		Truck Trips	1	0.00	0.00	0.00	0.00	0.00	0.00	3.04E-01	7.98E-05	7.97E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	38	0.00	0.07	0.04	0.00	0.01	0.00	8.28E+01	2.26E-03	1.04E-02	2.91E+00	1.02E+00	5.55E-01	1.30E-01
		Total		0.02	0.10	0.43	0.00	0.02	0.01	2.08E+02	4.61E-03	1.31E-02	2.92E+00	7.73E+00	5.14E+00	1.30E-01
	CM-4C	Worker Trips	21	0.04	0.01	0.13	0.00	0.00	0.00	3.13E+00	2.85E-03	1.38E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	944	0.02	0.10	1.61	0.01	0.04	0.01	5.84E+02	5.73E-03	1.00E-02	5.25E-02	3.16E+01	2.16E+01	0.00E+00
		Truck Trips	5	0.00	0.02	0.03	0.00	0.00	0.00	2.01E+00	5.26E-04	5.25E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	248	0.02	0.49	0.28	0.01	0.06	0.02	5.46E+02	1.49E-02	6.84E-02	1.92E+01	6.71E+00	3.66E+00	8.55E-01
		Total		0.08	0.62	2.04	0.01	0.10	0.04	1.13E+03	2.40E-02	8.03E-02	1.92E+01	3.83E+01	2.52E+01	8.55E-01

Backbone Pipeline Construction

				Unmitigated Daily Emissions (lbs/day)									Fuel Usage			
				ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O	Diesel (gal)	Gas (gal)	Elec (kWh)	NG (gal)
Reach 5	CM-1/2	Worker Trips	36	0.07	0.02	0.22	0.00	0.00	0.00	5.39E+00	4.91E-03	2.37E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	1,692	0.04	0.18	2.88	0.01	0.07	0.02	1.05E+03	1.03E-02	1.80E-02	9.41E-02	5.66E+01	3.86E+01	0.00E+00
		Truck Trips	372	0.29	1.46	2.19	0.00	0.00	0.00	1.50E+02	3.94E-02	3.93E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	5,805	0.37	11.43	6.53	0.12	1.38	0.56	1.28E+04	3.49E-01	1.60E+00	4.48E+02	1.57E+02	8.55E+01	2.00E+01
		Total		0.77	13.09	11.81	0.13	1.45	0.58	1.40E+04	4.03E-01	1.66E+00	4.48E+02	2.13E+02	1.24E+02	2.00E+01
	CM-4A	Worker Trips	18	0.04	0.01	0.11	0.00	0.00	0.00	2.73E+00	2.49E-03	1.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	813	0.02	0.09	1.38	0.00	0.03	0.01	5.03E+02	4.93E-03	8.63E-03	4.52E-02	2.72E+01	1.86E+01	0.00E+00
		Truck Trips	4	0.00	0.02	0.02	0.00	0.00	0.00	1.63E+00	4.27E-04	4.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	202	0.01	0.40	0.23	0.00	0.05	0.02	4.43E+02	1.21E-02	5.55E-02	1.56E+01	5.45E+00	2.97E+00	6.94E-01
		Total		0.07	0.51	1.74	0.01	0.08	0.03	9.50E+02	1.99E-02	6.58E-02	1.56E+01	3.27E+01	2.15E+01	6.94E-01
	CM-4B	Worker Trips	30	0.06	0.02	0.18	0.00	0.00	0.00	4.55E+00	4.14E-03	2.00E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	1,324	0.03	0.14	2.25	0.01	0.05	0.02	8.19E+02	8.04E-03	1.41E-02	7.37E-02	4.43E+01	3.02E+01	0.00E+00
		Truck Trips	6	0.00	0.02	0.04	0.00	0.00	0.00	2.41E+00	6.33E-04	6.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	299	0.02	0.59	0.34	0.01	0.07	0.03	6.56E+02	1.79E-02	8.23E-02	2.31E+01	8.07E+00	4.40E+00	1.03E+00
		Total		0.11	0.77	2.81	0.01	0.12	0.05	1.48E+03	3.07E-02	9.90E-02	2.31E+01	5.24E+01	3.47E+01	1.03E+00
	CM-4C	Worker Trips	22	0.04	0.01	0.14	0.00	0.00	0.00	3.38E+00	3.07E-03	1.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	1,027	0.02	0.11	1.75	0.01	0.04	0.01	6.35E+02	6.23E-03	1.09E-02	5.71E-02	3.44E+01	2.35E+01	0.00E+00
		Truck Trips	5	0.00	0.02	0.03	0.00	0.00	0.00	2.06E+00	5.41E-04	5.40E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	256	0.02	0.50	0.29	0.01	0.06	0.02	5.61E+02	1.53E-02	7.03E-02	1.97E+01	6.90E+00	3.76E+00	8.79E-01
		Total		0.09	0.64	2.20	0.01	0.10	0.04	1.20E+03	2.52E-02	8.33E-02	1.98E+01	4.13E+01	2.72E+01	8.79E-01
Reach 6	CM-4F	Worker Trips	54	0.11	0.03	0.33	0.00	0.00	0.00	8.17E+00	7.43E-03	3.59E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	2,610	0.06	0.27	4.44	0.02	0.11	0.04	1.61E+03	1.58E-02	2.77E-02	1.45E-01	8.73E+01	5.96E+01	0.00E+00
		Truck Trips	16	0.01	0.06	0.09	0.00	0.00	0.00	6.50E+00	1.70E-03	1.70E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	805	0.05	1.58	0.91	0.02	0.19	0.08	1.77E+03	4.83E-02	2.22E-01	6.22E+01	2.18E+01	1.19E+01	2.77E+00
		Total		0.23	1.95	5.77	0.03	0.30	0.11	3.40E+03	7.33E-02	2.55E-01	6.23E+01	1.09E+02	7.15E+01	2.77E+00
Reach 7	CM-1/2	Worker Trips	27	0.05	0.01	0.16	0.00	0.00	0.00	4.07E+00	3.70E-03	1.79E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	983	0.02	0.10	1.67	0.01	0.04	0.01	6.08E+02	5.97E-03	1.04E-02	5.47E-02	3.29E+01	2.25E+01	0.00E+00
		Truck Trips	324	0.25	1.27	1.90	0.00	0.00	0.00	1.31E+02	3.43E-02	3.42E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	4,955	0.32	9.76	5.57	0.10	1.18	0.48	1.09E+04	2.98E-01	1.36E+00	3.83E+02	1.34E+02	7.30E+01	1.71E+01
		Total		0.64	11.14	9.31	0.11	1.22	0.49	1.16E+04	3.41E-01	1.41E+00	3.83E+02	1.67E+02	9.54E+01	1.71E+01
	CM-4E	Worker Trips	43	0.08	0.02	0.26	0.00	0.00	0.00	6.49E+00	5.91E-03	2.86E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	2,055	0.05	0.21	3.49	0.01	0.08	0.03	1.27E+03	1.25E-02	2.18E-02	1.14E-01	6.88E+01	4.69E+01	0.00E+00
		Truck Trips	9	0.01	0.03	0.05	0.00	0.00	0.00	3.55E+00	9.30E-04	9.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	439	0.03	0.87	0.49	0.01	0.10	0.04	9.66E+02	2.64E-02	1.21E-01	3.39E+01	1.19E+01	6.47E+00	1.51E+00
		Total		0.17	1.14	4.30	0.02	0.19	0.07	2.25E+03	4.57E-02	1.47E-01	3.40E+01	8.06E+01	5.34E+01	1.51E+00
	CM-4F	Worker Trips	67	0.13	0.03	0.41	0.00	0.00	0.00	1.01E+01	9.20E-03	4.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	3,250	0.08	0.34	5.53	0.02	0.13	0.05	2.01E+03	1.97E-02	3.45E-02	1.81E-01	1.09E+02	7.42E+01	0.00E+00
		Truck Trips	14	0.01	0.05	0.08	0.00	0.00	0.00	5.46E+00	1.43E-03	1.43E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	676	0.04	1.33	0.76	0.01	0.16	0.06	1.48E+03	4.06E-02	1.86E-01	5.22E+01	1.83E+01	9.95E+00	2.32E+00
		Total		0.26	1.76	6.77	0.03	0.29	0.11	3.51E+03	7.09E-02	2.26E-01	5.24E+01	1.27E+02	8.42E+01	2.32E+00
Reach 8	CM-1/2/3	Worker Trips	43	0.08	0.02	0.26	0.00	0.00	0.00	6.56E+00	5.97E-03	2.89E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	1,718	0.04	0.18	2.92	0.01	0.07	0.02	1.06E+03	1.04E-02	1.82E-02	9.56E-02	5.75E+01	3.92E+01	0.00E+00
		Truck Trips	616	0.48	2.42	3.62	0.00	0.00	0.00	2.49E+02	6.52E-02	6.51E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	4,536	0.29	8.93	5.10	0.09	1.08	0.44	9.97E+03	2.72E-01	1.25E+00	3.50E+02	1.23E+02	6.68E+01	1.56E+01
		Total		0.90	11.55	11.91	0.11	1.15	0.46	1.13E+04	3.54E-01	1.34E+00	3.50E+02	1.80E+02	1.06E+02	1.56E+01
	CM-4D	Worker Trips	145	0.28	0.08	0.88	0.00	0.00	0.00	2.19E+01	2.00E-02	9.65E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	7,161	0.17	0.75	12.18	0.04	0.29	0.10	4.43E+03	4.34E-02	7.60E-02	3.98E-01	2.40E+02	1.64E+02	0.00E+00
		Truck Trips	29	0.02	0.11	0.17	0.00	0.00	0.00	1.16E+01	3.04E-03	3.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	1,434	0.09	2.82	1.61	0.03	0.34	0.14	3.15E+03	8.61E-02	3.95E-01	1.11E+02	3.87E+01	2.11E+01	4.93E+00
		Total		0.57	3.76	14.84	0.07	0.63	0.24	7.61E+03	1.53E-01	4.84E-01	1.11E+02	2.78E+02	1.85E+02	4.93E+00
	CM-4E	Worker Trips	53	0.10	0.03	0.32	0.00	0.00	0.00	7.96E+00	7.24E-03	3.50E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Worker VMT	2,538	0.06	0.27	4.32	0.02	0.10	0.04	1.57E+03	1.54E-02	2.70E-02	1.41E-01	8.49E+01	5.80E+01	0.00E+00
		Truck Trips	6	0.00	0.02	0.03	0.00	0.00	0.00	2.33E+00	6.12E-04	6.11E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		Truck VMT	289	0.02	0.57	0.33	0.01	0.07	0.03	6.35E+02	1.74E-02	7.96E-02	2.23E+01	7.81E+00	4.26E+00	9.95E-01
		Total		0.19	0.88	5.00	0.02	0.17	0.06	2.21E+03	4.06E-02	1.11E-01	2.25E+01	9.27E+01	6.22E+01	9.95E-01

Backbone Pipeline Construction

			Unmitigated Daily Emissions (lbs/day)									
			ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O	CO2e
Reach 1	CM-1	Offroad	8.55	60.00	75.06	0.20	2.49	2.29	20910.19	7.07	0.00	21087.04
		Onroad	0.89	14.66	14.14	0.15	1.64	0.66	15925.36	0.45	1.86	16490.68
		Dust					0.08	0.01				
		Total	9.44	74.66	89.19	0.35	4.21	2.96	36835.56	7.53	1.86	37577.72
	CM-4A	Offroad	4.40	23.88	34.38	0.12	1.15	1.06	12833.81	3.64	0.00	12924.90
		Onroad	0.23	1.78	5.96	0.03	0.28	0.11	3301.43	0.07	0.23	3372.12
		Dust					0.00	0.00				
		Total	4.64	25.66	40.35	0.15	1.44	1.17	16135.24	3.71	0.23	16297.02
	CM-4B	Offroad	5.46	49.21	39.96	0.15	1.50	1.38	16610.28	4.52	0.00	16723.22
		Onroad	0.14	1.04	3.57	0.02	0.17	0.06	1944.79	0.04	0.13	1985.96
		Dust					0.00	0.00				
		Total	5.61	50.24	43.52	0.17	1.67	1.44	18555.07	4.56	0.13	18709.18
Reach 2	CM-1	Offroad	8.55	60.00	75.06	0.20	2.49	2.29	20910.19	7.07	0.00	21087.04
		Onroad	0.70	11.51	11.11	0.12	1.29	0.52	12500.49	0.36	1.46	12944.16
		Dust					0.06	0.01				
		Total	9.25	71.50	86.16	0.31	3.83	2.82	33410.68	7.43	1.46	34031.20
	CM-4A	Offroad	4.40	23.88	34.38	0.12	1.15	1.06	12833.81	3.64	0.00	12924.90
		Onroad	0.03	0.17	0.60	0.00	0.03	0.01	318.50	0.01	0.02	325.12
		Dust					0.00	0.00				
		Total	4.43	24.05	34.98	0.12	1.18	1.07	13152.31	3.65	0.02	13250.02
	CM-4B	Offroad	5.46	49.21	39.96	0.15	1.50	1.38	16610.28	4.52	0.00	16723.22
		Onroad	0.31	1.74	8.15	0.04	0.31	0.12	3881.57	0.07	0.22	3949.44
		Dust					0.00	0.00				
		Total	5.77	50.95	48.10	0.19	1.82	1.50	20491.85	4.59	0.22	20672.66
Reach 3	CM-1/2/3	Offroad	8.65	60.00	75.06	0.20	2.49	2.29	20911.28	7.16	0.00	21090.24
		Onroad	0.38	7.08	5.19	0.07	0.76	0.31	7189.37	0.21	0.90	7462.30
		Dust					0.09	0.01				
		Total	9.03	67.07	80.24	0.26	3.35	2.61	28100.66	7.37	0.90	28552.54
	CM-4A	Offroad	4.40	23.88	34.38	0.12	1.15	1.06	12833.81	3.64	0.00	12924.90
		Onroad	0.08	0.56	1.93	0.01	0.09	0.03	1051.00	0.02	0.07	1073.22
		Dust					0.00	0.00				
		Total	4.48	24.44	36.31	0.13	1.24	1.09	13884.81	3.67	0.07	13998.12
	CM-4B	Offroad	5.46	49.21	39.96	0.15	1.50	1.38	16610.28	4.52	0.00	16723.22
		Onroad	0.09	0.51	2.10	0.01	0.09	0.03	1053.03	0.02	0.07	1073.12
		Dust					0.00	0.00				
		Total	5.55	49.72	42.06	0.16	1.59	1.41	17663.31	4.54	0.07	17796.34
Reach 4	CM-1/3	Offroad	8.65	60.00	75.06	0.20	2.49	2.29	20911.28	7.16	0.00	21090.24
		Onroad	0.15	2.51	2.31	0.03	0.28	0.11	2695.13	0.08	0.32	2792.10
		Dust					0.09	0.01				
		Total	8.80	62.51	77.37	0.22	2.86	2.42	23606.41	7.24	0.32	23882.34
	CM-4B	Offroad	5.46	49.21	39.96	0.15	1.50	1.38	16610.28	4.52	0.00	16723.22
		Onroad	0.02	0.10	0.43	0.00	0.02	0.01	208.29	0.00	0.01	212.31
		Dust					0.00	0.00				
		Total	5.49	49.31	40.39	0.16	1.52	1.39	16818.57	4.52	0.01	16935.53
	CM-4C (2 headings)	Offroad	8.48	46.70	64.72	0.21	2.27	2.09	22187.10	7.01	0.00	22362.45
		Onroad	0.08	0.62	2.04	0.01	0.10	0.04	1134.90	0.02	0.08	1159.44
		Dust					0.00	0.00				
		Total	8.56	47.31	66.76	0.22	2.37	2.13	23321.99	7.04	0.08	23521.89

Backbone Pipeline Construction

			Unmitigated Daily Emissions (lbs/day)									
			ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O	CO2e
Reach 5	CM-1/2	Offroad	8.65	60.00	75.06	0.20	2.49	2.29	20911.28	7.16	0.00	21090.24
		Onroad	0.77	13.09	11.81	0.13	1.45	0.58	13955.72	0.40	1.66	14459.88
		Dust					0.09	0.01				
		Total	9.42	73.08	86.86	0.33	4.03	2.89	34867.00	7.56	1.66	35550.12
	CM-4A	Offroad	4.40	23.88	34.38	0.12	1.15	1.06	12833.81	3.64	0.00	12924.90
		Onroad	0.07	0.51	1.74	0.01	0.08	0.03	949.92	0.02	0.07	970.01
		Dust					0.00	0.00				
		Total	4.47	24.39	36.13	0.13	1.23	1.09	13783.73	3.66	0.07	13894.91
	CM-4B	Offroad	5.46	49.21	39.96	0.15	1.50	1.38	16610.28	4.52	0.00	16723.22
		Onroad	0.11	0.77	2.81	0.01	0.12	0.05	1482.14	0.03	0.10	1512.40
		Dust					0.00	0.00				
		Total	5.58	49.97	42.76	0.17	1.63	1.43	18092.42	4.55	0.10	18235.62
	CM-4C	Offroad	4.24	23.35	32.36	0.10	1.14	1.05	11093.55	3.51	0.00	11181.22
		Onroad	0.09	0.64	2.20	0.01	0.10	0.04	1201.71	0.03	0.08	1227.16
		Dust					0.00	0.00				
		Total	4.33	23.99	34.56	0.12	1.24	1.08	12295.26	3.53	0.08	12408.38
Reach 6	CM-4F (2 headings)	Offroad	8.42	46.87	64.36	0.21	2.25	2.07	22183.98	6.96	0.00	22358.07
		Onroad	0.23	1.95	5.77	0.03	0.30	0.11	3396.48	0.07	0.25	3474.19
		Dust					0.01	0.00				
		Total	8.65	48.82	70.13	0.24	2.56	2.19	25580.46	7.04	0.25	25832.26
Reach 7	CM-1/2	Offroad	8.65	60.00	75.06	0.20	2.49	2.29	20911.28	7.16	0.00	21090.24
		Onroad	0.64	11.14	9.31	0.11	1.22	0.49	11629.79	0.34	1.41	12058.76
		Dust					0.09	0.01				
		Total	9.30	71.14	84.37	0.31	3.80	2.80	32541.08	7.50	1.41	33148.99
	CM-4E	Offroad	4.21	23.16	33.83	0.11	1.11	1.02	12245.87	3.48	0.00	12332.97
		Onroad	0.17	1.14	4.30	0.02	0.19	0.07	2246.23	0.05	0.15	2291.07
		Dust					0.00	0.00				
		Total	4.38	24.30	38.14	0.14	1.30	1.09	14492.11	3.53	0.15	14624.04
	CM-4F	Offroad	4.21	23.44	32.18	0.10	1.13	1.04	11091.99	3.48	0.00	11179.03
		Onroad	0.26	1.76	6.77	0.03	0.29	0.11	3509.35	0.07	0.23	3578.60
		Dust					0.01	0.00				
		Total	4.47	25.19	38.95	0.14	1.43	1.15	14601.34	3.55	0.23	14757.63
Reach 8	CM-1/2/3	Offroad	8.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Onroad	0.90	11.55	11.91	0.11	1.15	0.46	11282.28	0.35	1.34	11688.98
		Dust					0.09	0.01				
		Total	9.55	11.55	11.91	0.11	1.24	0.48	11282.28	0.35	1.34	11688.98
	CM-4D (2 headings)	Offroad	8.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Onroad	0.57	3.76	14.84	0.07	0.63	0.24	7611.06	0.15	0.48	7758.97
		Dust					0.01	0.00				
		Total	9.31	3.76	14.84	0.07	0.64	0.24	7611.06	0.15	0.48	7758.97
	CM-4E (2 headings)	Offroad	4.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Onroad	0.19	0.88	5.00	0.02	0.17	0.06	2214.60	0.04	0.11	2248.58
		Dust					0.00	0.00				
		Total	4.40	0.88	5.00	0.02	0.17	0.06	2214.60	0.04	0.11	2248.58

Backbone Pipeline Construction

			Mitigated Daily Emissions (lbs/day)									
			ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O	CO2e
Reach 1	CM-1	Offroad	4.79	3.79	75.06	0.20	0.21	0.19	20910.19	7.07	0.00	21087.04
		Onroad	0.89	14.66	14.14	0.15	1.64	0.66	15925.36	0.45	1.86	16490.68
		Dust					0.08	0.01				
		Total	5.68	18.45	89.19	0.35	1.93	0.86	36835.56	7.53	1.86	37577.72
	CM-4A	Offroad	2.54	1.54	34.38	0.12	0.11	0.10	12833.81	3.64	0.00	12924.90
		Onroad	0.23	1.78	5.96	0.03	0.28	0.11	3301.43	0.07	0.23	3372.12
		Dust					0.00	0.00				
		Total	2.77	3.32	40.35	0.15	0.39	0.21	16135.24	3.71	0.23	16297.02
	CM-4B	Offroad	3.16	3.21	39.96	0.15	0.15	0.14	16610.28	4.52	0.00	16723.22
		Onroad	0.14	1.04	3.57	0.02	0.17	0.06	1944.79	0.04	0.13	1985.96
		Dust					0.00	0.00				
		Total	3.31	4.25	43.52	0.17	0.31	0.20	18555.07	4.56	0.13	18709.18
Reach 2	CM-1	Offroad	4.79	3.79	75.06	0.20	0.21	0.19	20910.19	7.07	0.00	21087.04
		Onroad	0.70	11.51	11.11	0.12	1.29	0.52	12500.49	0.36	1.46	12944.16
		Dust					0.06	0.01				
		Total	5.49	15.30	86.16	0.31	1.55	0.72	33410.68	7.43	1.46	34031.20
	CM-4A	Offroad	2.54	1.54	34.38	0.12	0.11	0.10	12833.81	3.64	0.00	12924.90
		Onroad	0.03	0.17	0.60	0.00	0.03	0.01	318.50	0.01	0.02	325.12
		Dust					0.00	0.00				
		Total	2.56	1.71	34.98	0.12	0.14	0.11	13152.31	3.65	0.02	13250.02
	CM-4B	Offroad	3.16	3.21	39.96	0.15	0.15	0.14	16610.28	4.52	0.00	16723.22
		Onroad	0.31	1.74	8.15	0.04	0.31	0.12	3881.57	0.07	0.22	3949.44
		Dust					0.00	0.00				
		Total	3.47	4.96	48.10	0.19	0.46	0.25	20491.85	4.59	0.22	20672.66
Reach 3	CM-1/2/3	Offroad	4.86	3.79	75.06	0.20	0.21	0.19	20911.28	7.16	0.00	21090.24
		Onroad	0.38	7.08	5.19	0.07	0.76	0.31	7189.37	0.21	0.90	7462.30
		Dust					0.09	0.01				
		Total	5.24	10.87	80.24	0.26	1.06	0.51	28100.66	7.37	0.90	28552.54
	CM-4A	Offroad	2.54	1.54	34.38	0.12	0.11	0.10	12833.81	3.64	0.00	12924.90
		Onroad	0.08	0.56	1.93	0.01	0.09	0.03	1051.00	0.02	0.07	1073.22
		Dust					0.00	0.00				
		Total	2.61	2.10	36.31	0.13	0.20	0.14	13884.81	3.67	0.07	13998.12
	CM-4B	Offroad	3.16	3.21	39.96	0.15	0.15	0.14	16610.28	4.52	0.00	16723.22
		Onroad	0.09	0.51	2.10	0.01	0.09	0.03	1053.03	0.02	0.07	1073.12
		Dust					0.00	0.00				
		Total	3.25	3.73	42.06	0.16	0.24	0.17	17663.31	4.54	0.07	17796.34
Reach 4	CM-1/3	Offroad	4.86	3.79	75.06	0.20	0.21	0.19	20911.28	7.16	0.00	21090.24
		Onroad	0.15	2.51	2.31	0.03	0.28	0.11	2695.13	0.08	0.32	2792.10
		Dust					0.09	0.01				
		Total	5.01	6.30	77.37	0.22	0.58	0.32	23606.41	7.24	0.32	23882.34
	CM-4B	Offroad	3.16	3.21	39.96	0.15	0.15	0.14	16610.28	4.52	0.00	16723.22
		Onroad	0.02	0.10	0.43	0.00	0.02	0.01	208.29	0.00	0.01	212.31
		Dust					0.00	0.00				
		Total	3.18	3.32	40.39	0.16	0.16	0.14	16818.57	4.52	0.01	16935.53
	CM-4C (2 headings)	Offroad	4.79	3.00	64.72	0.21	0.19	0.18	22187.10	7.01	0.00	22362.45
		Onroad	0.08	0.62	2.04	0.01	0.10	0.04	1134.90	0.02	0.08	1159.44
		Dust					0.00	0.00				
		Total	4.87	3.61	66.76	0.22	0.29	0.21	23321.99	7.04	0.08	23521.89

Backbone Pipeline Construction

			Mitigated Daily Emissions (lbs/day)									
			ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O	CO2e
Reach 5	CM-1/2	Offroad	4.86	3.79	75.06	0.20	0.21	0.19	20911.28	7.16	0.00	21090.24
		Onroad	0.77	13.09	11.81	0.13	1.45	0.58	13955.72	0.40	1.66	14459.88
		Dust					0.09	0.01				
		Total	5.63	16.88	86.86	0.33	1.75	0.79	34867.00	7.56	1.66	35550.12
	CM-4A	Offroad	2.54	1.54	34.38	0.12	0.11	0.10	12833.81	3.64	0.00	12924.90
		Onroad	0.07	0.51	1.74	0.01	0.08	0.03	949.92	0.02	0.07	970.01
		Dust					0.00	0.00				
		Total	2.61	2.05	36.13	0.13	0.19	0.13	13783.73	3.66	0.07	13894.91
	CM-4B	Offroad	3.16	3.21	39.96	0.15	0.15	0.14	16610.28	4.52	0.00	16723.22
		Onroad	0.11	0.77	2.81	0.01	0.12	0.05	1482.14	0.03	0.10	1512.40
		Dust					0.00	0.00				
		Total	3.28	3.98	42.76	0.17	0.27	0.18	18092.42	4.55	0.10	18235.62
	CM-4C	Offroad	2.39	1.50	32.36	0.10	0.10	0.09	11093.55	3.51	0.00	11181.22
		Onroad	0.09	0.64	2.20	0.01	0.10	0.04	1201.71	0.03	0.08	1227.16
		Dust					0.00	0.00				
		Total	2.48	2.14	34.56	0.12	0.20	0.13	12295.26	3.53	0.08	12408.38
Reach 6	CM-4F (2 headings)	Offroad	4.75	3.01	64.36	0.21	0.19	0.17	22183.98	6.96	0.00	22358.07
		Onroad	0.23	1.95	5.77	0.03	0.30	0.11	3396.48	0.07	0.25	3474.19
		Dust					0.01	0.00				
		Total	4.98	4.96	70.13	0.24	0.50	0.29	25580.46	7.04	0.25	25832.26
Reach 7	CM-1/2	Offroad	4.86	3.79	75.06	0.20	0.21	0.19	20911.28	7.16	0.00	21090.24
		Onroad	0.64	11.14	9.31	0.11	1.22	0.49	11629.79	0.34	1.41	12058.76
		Dust					0.09	0.01				
		Total	5.50	14.94	84.37	0.31	1.52	0.70	32541.08	7.50	1.41	33148.99
	CM-4E	Offroad	2.42	1.49	33.83	0.11	0.10	0.09	12245.87	3.48	0.00	12332.97
		Onroad	0.17	1.14	4.30	0.02	0.19	0.07	2246.23	0.05	0.15	2291.07
		Dust					0.00	0.00				
		Total	2.59	2.63	38.14	0.14	0.29	0.16	14492.11	3.53	0.15	14624.04
	CM-4F	Offroad	2.38	1.50	32.18	0.10	0.09	0.09	11091.99	3.48	0.00	11179.03
		Onroad	0.26	1.76	6.77	0.03	0.29	0.11	3509.35	0.07	0.23	3578.60
		Dust					0.01	0.00				
		Total	2.64	3.26	38.95	0.14	0.40	0.20	14601.34	3.55	0.23	14757.63
Reach 8	CM-1/2/3	Offroad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Onroad	0.90	11.55	11.91	0.11	1.15	0.46	11282.28	0.35	1.34	11688.98
		Dust					0.09	0.01				
		Total	0.90	11.55	11.91	0.11	1.24	0.48	11282.28	0.35	1.34	11688.98
	CM-4D (2 headings)	Offroad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Onroad	0.57	3.76	14.84	0.07	0.63	0.24	7611.06	0.15	0.48	7758.97
		Dust					0.01	0.00				
		Total	0.57	3.76	14.84	0.07	0.64	0.24	7611.06	0.15	0.48	7758.97
	CM-4E (2 headings)	Offroad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Onroad	0.19	0.88	5.00	0.02	0.17	0.06	2214.60	0.04	0.11	2248.58
		Dust					0.00	0.00				
		Total	0.19	0.88	5.00	0.02	0.17	0.06	2214.60	0.04	0.11	2248.58

Backbone Pipeline Construction

			Daily Fuel Usage			
			Diesel (gal)	Gas (gal)	Elec (kWh)	NG (gal)
Reach 1	CM-1	Offroad	930.64	0.00	0.00	0.00
		Onroad	501.18	256.35	150.87	22.33
		Total	1431.82	256.35	150.87	22.33
	CM-4A	Offroad	570.89	0.00	0.00	0.00
		Onroad	55.28	112.31	74.01	2.46
		Total	626.17	112.31	74.01	2.46
	CM-4B	Offroad	738.58	0.00	0.00	0.00
		Onroad	32.00	66.81	44.07	1.42
		Total	770.58	66.81	44.07	1.42
Reach 2	CM-1	Offroad	930.64	0.00	0.00	0.00
		Onroad	393.31	201.32	118.50	17.52
		Total	1323.95	201.32	118.50	17.52
	CM-4A	Offroad	570.89	0.00	0.00	0.00
		Onroad	5.08	11.12	7.35	0.23
		Total	575.97	11.12	7.35	0.23
	CM-4B	Offroad	738.58	0.00	0.00	0.00
		Onroad	48.38	151.81	101.31	2.15
		Total	786.97	151.81	101.31	2.15
Reach 3	CM-1/2/3	Offroad	930.64	0.00	0.00	0.00
		Onroad	244.97	93.09	51.75	10.92
		Total	1175.61	93.09	51.75	10.92
	CM-4A	Offroad	570.89	0.00	0.00	0.00
		Onroad	17.27	36.14	23.84	0.77
		Total	588.16	36.14	23.84	0.77
	CM-4B	Offroad	738.58	0.00	0.00	0.00
		Onroad	14.89	39.06	25.95	0.66
		Total	753.47	39.06	25.95	0.66
Reach 4	CM-1/3	Offroad	930.64	0.00	0.00	0.00
		Onroad	86.18	41.74	24.34	3.84
		Total	1016.82	41.74	24.34	3.84
	CM-4B	Offroad	738.58	0.00	0.00	0.00
		Onroad	2.92	7.73	5.14	0.13
		Total	741.50	7.73	5.14	0.13
	CM-4C (2 headings)	Offroad	986.80	0.00	0.00	0.00
		Onroad	19.24	38.32	25.23	0.85
		Total	1006.04	38.32	25.23	0.85
Reach 5	CM-1/2	Offroad	930.64	0.00	0.00	0.00
		Onroad	448.37	213.48	124.15	19.98
		Total	1379.02	213.48	124.15	19.98
	CM-4A	Offroad	570.89	0.00	0.00	0.00
		Onroad	15.61	32.66	21.54	0.69
		Total	586.50	32.66	21.54	0.69
	CM-4B	Offroad	738.58	0.00	0.00	0.00
		Onroad	23.15	52.39	34.65	1.03
		Total	761.73	52.39	34.65	1.03
	CM-4C	Offroad	493.40	0.00	0.00	0.00
		Onroad	19.79	41.27	27.22	0.88
		Total	513.19	41.27	27.22	0.88
Reach 6	CM-4F (2 headings)	Offroad	986.66	0.00	0.00	0.00
		Onroad	62.30	109.07	71.47	2.77
		Total	1048.96	109.07	71.47	2.77
Reach 7	CM-1/2	Offroad	930.64	0.00	0.00	0.00
		Onroad	382.71	166.81	95.45	17.05
		Total	1313.35	166.81	95.45	17.05
	CM-4E	Offroad	544.82	0.00	0.00	0.00
		Onroad	34.05	80.65	53.42	1.51
		Total	578.87	80.65	53.42	1.51
	CM-4F	Offroad	493.33	0.00	0.00	0.00
		Onroad	52.35	127.01	84.19	2.32
		Total	545.68	127.01	84.19	2.32
Reach 8	CM-1/2/3	Offroad	930.64	0.00	0.00	0.00
		Onroad	350.34	180.04	106.04	15.61
		Total	1280.99	180.04	106.04	15.61
	CM-4D (2 headings)	Offroad	1107.84	0.00	0.00	0.00
		Onroad	111.13	278.36	184.69	4.93
		Total	1218.96	278.36	184.69	4.93
	CM-4E (2 headings)	Offroad	544.82	0.00	0.00	0.00
		Onroad	22.46	92.74	62.24	0.99
		Total	567.28	92.74	62.24	0.99

Advanced Water Purification Facility Construction Detailed Report

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1.1. Basic Project Information

Data Field	Value
Project Name	Advanced Water Purification Facility Construction
Construction Start Date	12/15/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	16.0
Location	33.801579318263805, -118.27928918797846
County	Los Angeles-South Coast
City	Carson
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4633
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

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
User Defined Industrial	1.00	User Defined Unit	56.0	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

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

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.74	7.34	63.9	63.4	0.20	2.45	11.0	13.2	2.25	1.96	4.03	—	24,647	24,647	1.13	1.52	21.4	25,148
Mit.	2.28	2.14	18.1	96.7	0.20	0.47	11.0	11.4	0.46	1.96	2.36	—	24,647	24,647	1.13	1.52	21.4	25,148
% Reduced	74%	71%	72%	-52%	—	81%	—	14%	80%	—	41%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.58	8.27	69.4	72.5	0.19	2.64	9.80	11.0	2.43	1.78	2.92	—	21,128	21,128	0.85	1.42	0.52	21,250
Mit.	2.61	2.71	15.0	109	0.19	0.53	9.80	10.0	0.52	1.78	2.00	—	21,128	21,128	0.85	1.42	0.52	21,250
% Reduced	73%	67%	78%	-50%	—	80%	—	9%	79%	—	32%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.63	4.77	41.2	41.5	0.11	1.58	3.31	4.13	1.45	0.59	1.47	—	11,791	11,791	0.48	0.51	3.09	11,841
Mit.	1.48	1.45	8.23	62.7	0.11	0.31	3.31	3.46	0.30	0.59	0.75	—	11,791	11,791	0.48	0.51	3.09	11,841
% Reduced	74%	70%	80%	-51%	—	81%	—	16%	79%	—	49%	—	—	—	—	—	—	—

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.03	0.87	7.52	7.57	0.02	0.29	0.60	0.75	0.26	0.11	0.27	—	1,952	1,952	0.08	0.08	0.51	1,960
Mit.	0.27	0.26	1.50	11.4	0.02	0.06	0.60	0.63	0.05	0.11	0.14	—	1,952	1,952	0.08	0.08	0.51	1,960
% Reduced	74%	70%	80%	-51%	—	81%	—	16%	79%	—	49%	—	—	—	—	—	—	—
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	8.22	6.53	58.7	59.3	0.20	2.25	11.0	13.2	2.08	1.96	4.03	—	24,647	24,647	1.13	1.52	21.4	25,148
2027	5.74	4.82	42.4	45.2	0.10	1.69	0.47	2.15	1.55	0.08	1.63	—	11,442	11,442	0.46	0.10	0.83	11,484
2028	4.42	3.71	34.6	31.9	0.08	1.34	0.00	1.34	1.23	0.00	1.23	—	8,569	8,569	0.35	0.07	0.00	8,598
2029	8.74	7.34	63.9	63.4	0.17	2.45	0.00	2.45	2.25	0.00	2.25	—	17,941	17,941	0.73	0.15	0.00	18,002

2030	5.54	4.62	38.2	43.0	0.12	1.46	0.34	1.80	1.34	0.09	1.44	—	13,137	13,137	0.53	0.26	2.69	13,229
2031	0.13	0.11	0.99	1.82	< 0.005	0.03	0.03	0.06	0.03	0.01	0.04	—	288	288	0.01	< 0.005	0.07	289
2032	0.13	0.11	0.99	1.81	< 0.005	0.03	0.03	0.06	0.03	0.01	0.04	—	287	287	0.01	< 0.005	0.06	288
2033	2.85	2.39	14.7	28.8	0.06	0.59	0.44	1.02	0.54	0.08	0.62	—	7,137	7,137	0.28	0.06	0.36	7,161
2034	2.40	2.02	13.1	24.0	0.06	0.51	0.00	0.51	0.47	0.00	0.47	—	6,229	6,229	0.25	0.05	0.00	6,251
2035	1.39	1.17	7.14	13.5	0.03	0.26	0.00	0.26	0.24	0.00	0.24	—	3,593	3,593	0.15	0.03	0.00	3,605
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	2.49	1.98	18.6	13.9	0.05	0.85	7.69	8.55	0.79	1.25	2.03	—	5,666	5,666	0.26	0.38	0.15	5,786
2026	5.13	4.31	33.0	40.9	0.11	1.31	9.80	11.0	1.20	1.78	2.92	—	14,381	14,381	0.71	1.42	0.52	14,824
2027	5.23	4.39	39.7	38.6	0.10	1.55	0.34	1.68	1.43	0.05	1.46	—	10,396	10,396	0.42	0.09	0.01	10,433
2028	5.20	4.37	38.7	38.5	0.10	1.50	0.13	1.63	1.38	0.03	1.41	—	10,386	10,386	0.42	0.09	0.01	10,423
2029	9.58	8.27	69.4	72.5	0.19	2.64	0.54	3.18	2.43	0.14	2.57	—	21,128	21,128	0.85	0.34	0.09	21,250
2030	5.59	4.93	38.3	43.7	0.12	1.46	0.54	2.00	1.34	0.14	1.49	—	13,317	13,317	0.53	0.26	0.08	13,409
2031	4.48	3.76	30.3	33.7	0.09	1.18	0.03	1.21	1.08	0.01	1.09	—	9,658	9,658	0.39	0.08	< 0.005	9,691
2032	0.97	0.82	5.17	10.2	0.02	0.21	0.35	0.57	0.20	0.06	0.25	—	2,350	2,350	0.09	0.02	0.01	2,357
2033	2.09	1.76	10.4	19.6	0.05	0.41	0.35	0.55	0.38	0.06	0.40	—	5,310	5,310	0.21	0.04	0.01	5,328
2034	2.40	2.02	13.1	24.0	0.06	0.51	0.10	0.51	0.47	0.02	0.47	—	6,229	6,229	0.25	0.05	< 0.005	6,251
2035	1.39	1.17	7.14	13.5	0.03	0.26	0.00	0.26	0.24	0.00	0.24	—	3,593	3,593	0.15	0.03	0.00	3,605
2036	1.36	1.14	6.86	13.4	0.03	0.24	0.00	0.24	0.23	0.00	0.23	—	3,593	3,593	0.15	0.03	0.00	3,605
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.08	0.07	0.62	0.46	< 0.005	0.03	0.26	0.28	0.03	0.04	0.07	—	189	189	0.01	0.01	0.08	193
2026	3.09	2.47	21.9	22.9	0.07	0.83	3.31	4.13	0.76	0.59	1.36	—	9,107	9,107	0.41	0.51	3.09	9,272
2027	2.36	1.98	17.4	18.6	0.04	0.69	0.20	0.90	0.64	0.04	0.67	—	4,696	4,696	0.19	0.04	0.15	4,713
2028	3.27	2.74	25.3	23.7	0.06	0.98	0.02	1.00	0.90	< 0.005	0.91	—	6,376	6,376	0.26	0.05	0.02	6,398
2029	5.63	4.77	41.2	41.5	0.11	1.58	0.09	1.67	1.45	0.02	1.47	—	11,791	11,791	0.48	0.12	0.26	11,841
2030	3.45	2.93	23.8	25.8	0.07	0.91	0.12	1.03	0.84	0.03	0.87	—	7,702	7,702	0.31	0.10	0.33	7,740

2031	0.84	0.70	5.71	6.64	0.02	0.22	0.02	0.24	0.20	< 0.005	0.21	—	1,813	1,813	0.07	0.02	0.02	1,819
2032	0.16	0.14	1.00	1.92	< 0.005	0.04	0.05	0.09	0.03	0.01	0.04	—	389	389	0.02	< 0.005	0.02	391
2033	1.10	0.92	5.72	11.2	0.02	0.23	0.20	0.43	0.21	0.03	0.24	—	2,730	2,730	0.11	0.02	0.07	2,739
2034	1.13	0.95	5.92	10.8	0.03	0.23	< 0.005	0.23	0.21	< 0.005	0.21	—	2,869	2,869	0.12	0.02	< 0.005	2,879
2035	0.99	0.83	5.10	9.63	0.02	0.19	0.00	0.19	0.17	0.00	0.17	—	2,566	2,566	0.10	0.02	0.00	2,575
2036	0.10	0.09	0.51	1.00	< 0.005	0.02	0.00	0.02	0.02	0.00	0.02	—	267	267	0.01	< 0.005	0.00	268
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.02	0.01	0.11	0.08	< 0.005	0.01	0.05	0.05	< 0.005	0.01	0.01	—	31.2	31.2	< 0.005	< 0.005	0.01	31.9
2026	0.56	0.45	4.00	4.18	0.01	0.15	0.60	0.75	0.14	0.11	0.25	—	1,508	1,508	0.07	0.08	0.51	1,535
2027	0.43	0.36	3.18	3.40	0.01	0.13	0.04	0.16	0.12	0.01	0.12	—	777	777	0.03	0.01	0.03	780
2028	0.60	0.50	4.62	4.33	0.01	0.18	< 0.005	0.18	0.16	< 0.005	0.17	—	1,056	1,056	0.04	0.01	< 0.005	1,059
2029	1.03	0.87	7.52	7.57	0.02	0.29	0.02	0.30	0.26	< 0.005	0.27	—	1,952	1,952	0.08	0.02	0.04	1,960
2030	0.63	0.53	4.34	4.71	0.01	0.17	0.02	0.19	0.15	0.01	0.16	—	1,275	1,275	0.05	0.02	0.05	1,281
2031	0.15	0.13	1.04	1.21	< 0.005	0.04	< 0.005	0.04	0.04	< 0.005	0.04	—	300	300	0.01	< 0.005	< 0.005	301
2032	0.03	0.03	0.18	0.35	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	64.4	64.4	< 0.005	< 0.005	< 0.005	64.7
2033	0.20	0.17	1.04	2.05	< 0.005	0.04	0.04	0.08	0.04	0.01	0.04	—	452	452	0.02	< 0.005	0.01	454
2034	0.21	0.17	1.08	1.97	< 0.005	0.04	< 0.005	0.04	0.04	< 0.005	0.04	—	475	475	0.02	< 0.005	< 0.005	477
2035	0.18	0.15	0.93	1.76	< 0.005	0.03	0.00	0.03	0.03	0.00	0.03	—	425	425	0.02	< 0.005	0.00	426
2036	0.02	0.02	0.09	0.18	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	—	44.2	44.2	< 0.005	< 0.005	0.00	44.4

2.3. Construction Emissions by Year, Mitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	2.28	1.77	18.1	89.8	0.20	0.40	11.0	11.4	0.40	1.96	2.36	—	24,647	24,647	1.13	1.52	21.4	25,148
2027	1.55	1.46	8.20	63.7	0.10	0.31	0.47	0.78	0.30	0.08	0.38	—	11,442	11,442	0.46	0.10	0.83	11,484

2028	1.09	1.03	5.98	46.6	0.08	0.23	0.00	0.23	0.22	0.00	0.22	—	8,569	8,569	0.35	0.07	0.00	8,598
2029	2.25	2.14	12.3	96.7	0.17	0.47	0.00	0.47	0.46	0.00	0.46	—	17,941	17,941	0.73	0.15	0.00	18,002
2030	1.55	1.44	9.24	66.0	0.12	0.32	0.34	0.66	0.31	0.09	0.41	—	13,137	13,137	0.53	0.26	2.69	13,229
2031	0.03	0.03	0.13	1.93	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	288	288	0.01	< 0.005	0.07	289
2032	0.03	0.03	0.13	1.92	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	287	287	0.01	< 0.005	0.06	288
2033	0.91	0.86	4.76	41.0	0.06	0.18	0.44	0.62	0.18	0.08	0.25	—	7,137	7,137	0.28	0.06	0.36	7,161
2034	0.79	0.76	4.38	35.7	0.06	0.17	0.00	0.17	0.16	0.00	0.16	—	6,229	6,229	0.25	0.05	0.00	6,251
2035	0.48	0.45	2.64	20.4	0.03	0.10	0.00	0.10	0.10	0.00	0.10	—	3,593	3,593	0.15	0.03	0.00	3,605
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.53	0.39	4.51	19.5	0.05	0.09	7.69	7.79	0.09	1.25	1.34	—	5,666	5,666	0.26	0.38	0.15	5,786
2026	1.25	1.23	13.5	64.3	0.11	0.22	9.80	10.0	0.22	1.78	2.00	—	14,381	14,381	0.71	1.42	0.52	14,824
2027	1.42	1.34	7.73	56.5	0.10	0.29	0.34	0.42	0.28	0.05	0.31	—	10,396	10,396	0.42	0.09	0.01	10,433
2028	1.42	1.34	7.72	56.5	0.10	0.29	0.13	0.42	0.28	0.03	0.31	—	10,386	10,386	0.42	0.09	0.01	10,423
2029	2.61	2.71	15.0	109	0.19	0.53	0.54	1.07	0.52	0.14	0.66	—	21,128	21,128	0.85	0.34	0.09	21,250
2030	1.59	1.75	9.34	66.6	0.12	0.32	0.54	0.86	0.31	0.14	0.45	—	13,317	13,317	0.53	0.26	0.08	13,409
2031	1.19	1.14	6.50	52.0	0.09	0.25	0.03	0.28	0.24	0.01	0.25	—	9,658	9,658	0.39	0.08	< 0.005	9,691
2032	0.24	0.24	1.12	13.8	0.02	0.04	0.35	0.40	0.04	0.06	0.10	—	2,350	2,350	0.09	0.02	0.01	2,357
2033	0.72	0.68	3.90	29.8	0.05	0.15	0.35	0.40	0.14	0.06	0.17	—	5,310	5,310	0.21	0.04	0.01	5,328
2034	0.79	0.76	4.38	35.7	0.06	0.17	0.10	0.25	0.16	0.02	0.17	—	6,229	6,229	0.25	0.05	< 0.005	6,251
2035	0.48	0.45	2.64	20.4	0.03	0.10	0.00	0.10	0.10	0.00	0.10	—	3,593	3,593	0.15	0.03	0.00	3,605
2036	0.48	0.45	2.64	20.4	0.03	0.10	0.00	0.10	0.10	0.00	0.10	—	3,593	3,593	0.15	0.03	0.00	3,605
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.02	0.01	0.15	0.65	< 0.005	< 0.005	0.26	0.26	< 0.005	0.04	0.04	—	189	189	0.01	0.01	0.08	193
2026	0.85	0.68	6.63	34.9	0.07	0.15	3.31	3.46	0.15	0.59	0.75	—	9,107	9,107	0.41	0.51	3.09	9,272
2027	0.63	0.60	3.35	26.2	0.04	0.13	0.20	0.33	0.12	0.04	0.16	—	4,696	4,696	0.19	0.04	0.15	4,713
2028	0.82	0.78	4.51	34.7	0.06	0.17	0.02	0.19	0.17	< 0.005	0.17	—	6,376	6,376	0.26	0.05	0.02	6,398

2029	1.48	1.45	8.23	62.7	0.11	0.31	0.09	0.40	0.30	0.02	0.32	—	11,791	11,791	0.48	0.12	0.26	11,841
2030	0.94	0.92	5.32	40.0	0.07	0.19	0.12	0.31	0.19	0.03	0.22	—	7,702	7,702	0.31	0.10	0.33	7,740
2031	0.22	0.21	1.20	9.91	0.02	0.05	0.02	0.06	0.04	< 0.005	0.05	—	1,813	1,813	0.07	0.02	0.02	1,819
2032	0.04	0.04	0.18	2.37	< 0.005	0.01	0.05	0.06	0.01	0.01	0.02	—	389	389	0.02	< 0.005	0.02	391
2033	0.34	0.32	1.76	15.8	0.02	0.07	0.20	0.27	0.07	0.03	0.10	—	2,730	2,730	0.11	0.02	0.07	2,739
2034	0.38	0.36	2.08	16.3	0.03	0.08	< 0.005	0.08	0.08	< 0.005	0.08	—	2,869	2,869	0.12	0.02	< 0.005	2,879
2035	0.34	0.32	1.89	14.5	0.02	0.07	0.00	0.07	0.07	0.00	0.07	—	2,566	2,566	0.10	0.02	0.00	2,575
2036	0.04	0.03	0.20	1.51	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	—	267	267	0.01	< 0.005	0.00	268
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	< 0.005	< 0.005	0.03	0.12	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	31.2	31.2	< 0.005	< 0.005	0.01	31.9
2026	0.16	0.12	1.21	6.37	0.01	0.03	0.60	0.63	0.03	0.11	0.14	—	1,508	1,508	0.07	0.08	0.51	1,535
2027	0.12	0.11	0.61	4.77	0.01	0.02	0.04	0.06	0.02	0.01	0.03	—	777	777	0.03	0.01	0.03	780
2028	0.15	0.14	0.82	6.33	0.01	0.03	< 0.005	0.03	0.03	< 0.005	0.03	—	1,056	1,056	0.04	0.01	< 0.005	1,059
2029	0.27	0.26	1.50	11.4	0.02	0.06	0.02	0.07	0.05	< 0.005	0.06	—	1,952	1,952	0.08	0.02	0.04	1,960
2030	0.17	0.17	0.97	7.30	0.01	0.04	0.02	0.06	0.03	0.01	0.04	—	1,275	1,275	0.05	0.02	0.05	1,281
2031	0.04	0.04	0.22	1.81	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	—	300	300	0.01	< 0.005	< 0.005	301
2032	0.01	0.01	0.03	0.43	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	64.4	64.4	< 0.005	< 0.005	< 0.005	64.7
2033	0.06	0.06	0.32	2.88	< 0.005	0.01	0.04	0.05	0.01	0.01	0.02	—	452	452	0.02	< 0.005	0.01	454
2034	0.07	0.07	0.38	2.97	< 0.005	0.01	< 0.005	0.02	0.01	< 0.005	0.01	—	475	475	0.02	< 0.005	< 0.005	477
2035	0.06	0.06	0.34	2.65	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	—	425	425	0.02	< 0.005	0.00	426
2036	0.01	0.01	0.04	0.28	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	—	44.2	44.2	< 0.005	< 0.005	0.00	44.4

3. Construction Emissions Details

3.1. ID7 (2025) - Unmitigated

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

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

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.27	1.91	15.8	12.2	0.03	0.82	—	0.82	0.76	—	0.76	—	3,318	3,318	0.13	0.03	—	3,329
Demolition	—	—	—	—	—	—	6.97	6.97	—	1.06	1.06	—	—	—	—	—	—	—
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	0.08	0.06	0.52	0.41	< 0.005	0.03	—	0.03	0.03	—	0.03	—	110	110	< 0.005	< 0.005	—	111
Demolition	—	—	—	—	—	—	0.23	0.23	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.07	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	18.3	18.3	< 0.005	< 0.005	—	18.3
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	131	131	0.01	< 0.005	0.01	133
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.17	0.03	2.83	1.07	0.01	0.03	0.59	0.62	0.03	0.16	0.19	—	2,218	2,218	0.12	0.35	0.13	2,325
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.42	4.42	< 0.005	< 0.005	0.01	4.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	73.8	73.8	< 0.005	0.01	0.07	77.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.73	0.73	< 0.005	< 0.005	< 0.005	0.74
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.2	12.2	< 0.005	< 0.005	0.01	12.8

3.2. ID7 (2025) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	0.31	1.63	17.8	0.03	0.06	—	0.06	0.06	—	0.06	—	3,318	3,318	0.13	0.03	—	3,329
Demolition	—	—	—	—	—	—	6.97	6.97	—	1.06	1.06	—	—	—	—	—	—	—

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	0.01	0.01	0.05	0.59	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	110	110	< 0.005	< 0.005	—	111
Demolition	—	—	—	—	—	—	0.23	0.23	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.3	18.3	< 0.005	< 0.005	—	18.3
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	131	131	0.01	< 0.005	0.01	133
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.17	0.03	2.83	1.07	0.01	0.03	0.59	0.62	0.03	0.16	0.19	—	2,218	2,218	0.12	0.35	0.13	2,325
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.42	4.42	< 0.005	< 0.005	0.01	4.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	73.8	73.8	< 0.005	0.01	0.07	77.4

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.73	0.73	< 0.005	< 0.005	< 0.005	0.74
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.2	12.2	< 0.005	< 0.005	0.01	12.8

3.3. ID7 (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.22	1.86	14.9	12.1	0.03	0.79	—	0.79	0.73	—	0.73	—	3,317	3,317	0.13	0.03	—	3,329
Demolition	—	—	—	—	—	—	6.97	6.97	—	1.06	1.06	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.22	1.86	14.9	12.1	0.03	0.79	—	0.79	0.73	—	0.73	—	3,317	3,317	0.13	0.03	—	3,329
Demolition	—	—	—	—	—	—	6.97	6.97	—	1.06	1.06	—	—	—	—	—	—	—
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	0.59	0.49	3.94	3.21	0.01	0.21	—	0.21	0.19	—	0.19	—	876	876	0.04	0.01	—	879

Demolition	—	—	—	—	—	—	1.84	1.84	—	0.28	0.28	—	—	—	—	—	—	—
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	0.11	0.09	0.72	0.59	< 0.005	0.04	—	0.04	0.04	—	0.04	—	145	145	0.01	< 0.005	—	146
Demolition	—	—	—	—	—	—	0.34	0.34	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.65	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	135	135	0.01	< 0.005	0.46	137
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.16	0.03	2.62	1.03	0.01	0.03	0.59	0.62	0.03	0.16	0.19	—	2,177	2,177	0.12	0.35	4.88	2,288
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.55	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	128	128	0.01	< 0.005	0.01	130
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.15	0.03	2.72	1.04	0.01	0.03	0.59	0.62	0.03	0.16	0.19	—	2,178	2,178	0.12	0.35	0.13	2,284
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.4	34.4	< 0.005	< 0.005	0.05	34.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	0.01	0.73	0.27	< 0.005	0.01	0.16	0.16	0.01	0.04	0.05	—	575	575	0.03	0.09	0.55	604
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.70	5.70	< 0.005	< 0.005	0.01	5.78

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.13	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	95.2	95.2	0.01	0.02	0.09	100.0

3.4. ID7 (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	0.31	1.63	17.8	0.03	0.06	—	0.06	0.06	—	0.06	—	3,317	3,317	0.13	0.03	—	3,329
Demolition	—	—	—	—	—	—	6.97	6.97	—	1.06	1.06	—	—	—	—	—	—	—
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	0.31	1.63	17.8	0.03	0.06	—	0.06	0.06	—	0.06	—	3,317	3,317	0.13	0.03	—	3,329
Demolition	—	—	—	—	—	—	6.97	6.97	—	1.06	1.06	—	—	—	—	—	—	—
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	0.08	0.08	0.43	4.71	0.01	0.02	—	0.02	0.02	—	0.02	—	876	876	0.04	0.01	—	879
Demolition	—	—	—	—	—	—	1.84	1.84	—	0.28	0.28	—	—	—	—	—	—	—

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	0.08	0.86	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	145	145	0.01	< 0.005	—	146
Demolition	—	—	—	—	—	—	0.34	0.34	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.65	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	135	135	0.01	< 0.005	0.46	137
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.16	0.03	2.62	1.03	0.01	0.03	0.59	0.62	0.03	0.16	0.19	—	2,177	2,177	0.12	0.35	4.88	2,288
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.55	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	128	128	0.01	< 0.005	0.01	130
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.15	0.03	2.72	1.04	0.01	0.03	0.59	0.62	0.03	0.16	0.19	—	2,178	2,178	0.12	0.35	0.13	2,284
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.4	34.4	< 0.005	< 0.005	0.05	34.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	0.01	0.73	0.27	< 0.005	0.01	0.16	0.16	0.01	0.04	0.05	—	575	575	0.03	0.09	0.55	604
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.70	5.70	< 0.005	< 0.005	0.01	5.78
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.13	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	95.2	95.2	0.01	0.02	0.09	100.0

3.5. ID8 (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.11	0.93	7.23	9.91	0.02	0.33	—	0.33	0.30	—	0.30	—	2,232	2,232	0.09	0.02	—	2,240
Dust From Material Movement	—	—	—	—	—	—	0.23	0.23	—	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.11	0.93	7.23	9.91	0.02	0.33	—	0.33	0.30	—	0.30	—	2,232	2,232	0.09	0.02	—	2,240
Dust From Material Movement	—	—	—	—	—	—	0.23	0.23	—	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.33	2.54	3.48	0.01	0.11	—	0.11	0.11	—	0.11	—	783	783	0.03	0.01	—	786
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	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	0.07	0.06	0.46	0.63	< 0.005	0.02	—	0.02	0.02	—	0.02	—	130	130	0.01	< 0.005	—	130
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.65	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	135	135	0.01	< 0.005	0.46	137
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.46	0.10	7.69	3.03	0.04	0.08	1.74	1.83	0.08	0.48	0.56	—	6,394	6,394	0.35	1.02	14.3	6,722
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.55	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	128	128	0.01	< 0.005	0.01	130
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.45	0.10	8.00	3.06	0.04	0.08	1.74	1.83	0.08	0.48	0.56	—	6,397	6,397	0.35	1.02	0.37	6,710
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.20	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	45.7	45.7	< 0.005	< 0.005	0.07	46.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.16	0.03	2.84	1.07	0.02	0.03	0.61	0.64	0.03	0.17	0.20	—	2,243	2,243	0.12	0.36	2.16	2,355
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.57	7.57	< 0.005	< 0.005	0.01	7.67
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.03	0.01	0.52	0.19	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	371	371	0.02	0.06	0.36	390

3.6. ID8 (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.21	1.10	13.4	0.02	0.04	—	0.04	0.04	—	0.04	—	2,232	2,232	0.09	0.02	—	2,240
Dust From Material Movement	—	—	—	—	—	—	0.23	0.23	—	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.21	1.10	13.4	0.02	0.04	—	0.04	0.04	—	0.04	—	2,232	2,232	0.09	0.02	—	2,240
Dust From Material Movement	—	—	—	—	—	—	0.23	0.23	—	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.07	0.38	4.69	0.01	0.01	—	0.01	0.01	—	0.01	—	783	783	0.03	0.01	—	786

Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.86	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	130	130	0.01	< 0.005	—	130
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.65	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	135	135	0.01	< 0.005	0.46	137
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.46	0.10	7.69	3.03	0.04	0.08	1.74	1.83	0.08	0.48	0.56	—	6,394	6,394	0.35	1.02	14.3	6,722
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.55	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	128	128	0.01	< 0.005	0.01	130
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.45	0.10	8.00	3.06	0.04	0.08	1.74	1.83	0.08	0.48	0.56	—	6,397	6,397	0.35	1.02	0.37	6,710
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.20	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	45.7	45.7	< 0.005	< 0.005	0.07	46.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.16	0.03	2.84	1.07	0.02	0.03	0.61	0.64	0.03	0.17	0.20	—	2,243	2,243	0.12	0.36	2.16	2,355

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.57	7.57	< 0.005	< 0.005	0.01	7.67
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	0.01	0.52	0.19	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	371	371	0.02	0.06	0.36	390

3.7. ID43 (2032) - 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	0.95	0.79	5.15	9.87	0.02	0.21	—	0.21	0.20	—	0.20	—	2,233	2,233	0.09	0.02	—	2,241
Dust From Material Movement	—	—	—	—	—	—	0.22	0.22	—	0.02	0.02	—	—	—	—	—	—	—
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	0.11	0.09	0.60	1.16	< 0.005	0.03	—	0.03	0.02	—	0.02	—	262	262	0.01	< 0.005	—	263
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	0.02	0.02	0.11	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	43.4	43.4	< 0.005	< 0.005	—	43.6
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.37	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	116	116	< 0.005	< 0.005	0.01	117
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	13.9	13.9	< 0.005	< 0.005	0.01	14.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.29	2.29	< 0.005	< 0.005	< 0.005	2.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. ID43 (2032) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.21	1.10	13.4	0.02	0.04	—	0.04	0.04	—	0.04	—	2,233	2,233	0.09	0.02	—	2,241
Dust From Material Movement	—	—	—	—	—	—	0.22	0.22	—	0.02	0.02	—	—	—	—	—	—	—
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	0.13	1.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	262	262	0.01	< 0.005	—	263
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	< 0.005	< 0.005	0.02	0.29	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	43.4	43.4	< 0.005	< 0.005	—	43.6
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.37	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	116	116	< 0.005	< 0.005	0.01	117
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	13.9	13.9	< 0.005	< 0.005	0.01	14.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.29	2.29	< 0.005	< 0.005	< 0.005	2.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. ID43 (2033) - 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	0.93	0.78	4.94	9.86	0.02	0.20	—	0.20	0.18	—	0.18	—	2,233	2,233	0.09	0.02	—	2,241
Dust From Material Movement	—	—	—	—	—	—	0.22	0.22	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.23	0.46	< 0.005	0.01	—	0.01	0.01	—	0.01	—	105	105	< 0.005	< 0.005	—	105
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.4	17.4	< 0.005	< 0.005	—	17.4
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.35	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	115	115	< 0.005	< 0.005	0.01	115

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.47	5.47	< 0.005	< 0.005	< 0.005	5.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.91	0.91	< 0.005	< 0.005	< 0.005	0.91
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. ID43 (2033) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.21	1.10	13.4	0.02	0.04	—	0.04	0.04	—	0.04	—	2,233	2,233	0.09	0.02	—	2,241
Dust From Material Movement	—	—	—	—	—	—	0.22	0.22	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.63	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	105	105	< 0.005	< 0.005	—	105
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.4	17.4	< 0.005	< 0.005	—	17.4
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.35	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	115	115	< 0.005	< 0.005	0.01	115
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.47	5.47	< 0.005	< 0.005	< 0.005	5.48
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.91	0.91	< 0.005	< 0.005	< 0.005	0.91
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. ID9 (2026) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.08	3.42	26.1	30.1	0.09	1.02	—	1.02	0.94	—	0.94	—	9,882	9,882	0.40	0.08	—	9,916
Dust From Material Movement	—	—	—	—	—	—	0.83	0.83	—	0.09	0.09	—	—	—	—	—	—	—
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	4.08	3.42	26.1	30.1	0.09	1.02	—	1.02	0.94	—	0.94	—	9,882	9,882	0.40	0.08	—	9,916
Dust From Material Movement	—	—	—	—	—	—	0.83	0.83	—	0.09	0.09	—	—	—	—	—	—	—
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	1.72	1.44	11.0	12.7	0.04	0.43	—	0.43	0.39	—	0.39	—	4,170	4,170	0.17	0.03	—	4,184
Dust From Material Movement	—	—	—	—	—	—	0.35	0.35	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	0.26	2.01	2.32	0.01	0.08	—	0.08	0.07	—	0.07	—	690	690	0.03	0.01	—	693
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.11	1.78	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	373	373	0.02	0.01	1.26	378
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.12	1.52	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	353	353	0.02	0.01	0.03	358
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.67	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	151	151	0.01	0.01	0.23	153
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	25.0	25.0	< 0.005	< 0.005	0.04	25.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. ID9 (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.94	0.94	4.86	51.5	0.09	0.19	—	0.19	0.19	—	0.19	—	9,882	9,882	0.40	0.08	—	9,916
Dust From Material Movement	—	—	—	—	—	—	0.83	0.83	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.94	0.94	4.86	51.5	0.09	0.19	—	0.19	0.19	—	0.19	—	9,882	9,882	0.40	0.08	—	9,916

Dust From Material Movement	—	—	—	—	—	—	0.83	0.83	—	0.09	0.09	—	—	—	—	—	—	—
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	0.39	0.39	2.05	21.7	0.04	0.08	—	0.08	0.08	—	0.08	—	4,170	4,170	0.17	0.03	—	4,184
Dust From Material Movement	—	—	—	—	—	—	0.35	0.35	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.07	0.37	3.96	0.01	0.01	—	0.01	0.01	—	0.01	—	690	690	0.03	0.01	—	693
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.11	1.78	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	373	373	0.02	0.01	1.26	378
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.11	0.10	0.12	1.52	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	353	353	0.02	0.01	0.03	358
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.67	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	151	151	0.01	0.01	0.23	153
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	25.0	25.0	< 0.005	< 0.005	0.04	25.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. ID38 (2031) - 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	0.12	0.10	0.98	1.70	< 0.005	0.03	—	0.03	0.03	—	0.03	—	257	257	0.01	< 0.005	—	258
Dust From Material Movement	—	—	—	—	—	—	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.12	0.10	0.98	1.70	< 0.005	0.03	—	0.03	0.03	—	0.03	—	257	257	0.01	< 0.005	—	258
Dust From Material Movement	—	—	—	—	—	—	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	0.07	0.06	0.56	0.96	< 0.005	0.02	—	0.02	0.02	—	0.02	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	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	0.01	0.01	0.10	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.1	31.1	< 0.005	< 0.005	0.07	31.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.5	29.5	< 0.005	< 0.005	< 0.005	29.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.9	16.9	< 0.005	< 0.005	0.02	17.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.80	2.80	< 0.005	< 0.005	< 0.005	2.84
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. ID38 (2031) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.13	1.81	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	257	257	0.01	< 0.005	—	258
Dust From Material Movement	—	—	—	—	—	—	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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.13	1.81	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	257	257	0.01	< 0.005	—	258
Dust From Material Movement	—	—	—	—	—	—	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	0.01	0.01	0.07	1.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	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	< 0.005	< 0.005	0.01	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.1	31.1	< 0.005	< 0.005	0.07	31.2

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.5	29.5	< 0.005	< 0.005	< 0.005	29.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.9	16.9	< 0.005	< 0.005	0.02	17.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.80	2.80	< 0.005	< 0.005	< 0.005	2.84
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. ID38 (2032) - 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	0.12	0.10	0.98	1.70	< 0.005	0.03	—	0.03	0.03	—	0.03	—	257	257	0.01	< 0.005	—	258

Dust From Material Movement	—	—	—	—	—	—	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.98	1.70	< 0.005	0.03	—	0.03	0.03	—	0.03	—	257	257	0.01	< 0.005	—	258
Dust From Material Movement	—	—	—	—	—	—	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	0.05	0.04	0.39	0.67	< 0.005	0.01	—	0.01	0.01	—	0.01	—	102	102	< 0.005	< 0.005	—	102
Dust From Material Movement	—	—	—	—	—	—	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	0.01	0.01	0.07	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.8	16.8	< 0.005	< 0.005	—	16.9
Dust From Material Movement	—	—	—	—	—	—	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	30.7	30.7	< 0.005	< 0.005	0.06	30.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.1	29.1	< 0.005	< 0.005	< 0.005	29.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.7	11.7	< 0.005	< 0.005	0.01	11.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.93	1.93	< 0.005	< 0.005	< 0.005	1.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. ID38 (2032) - Mitigated

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

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

Off-Road Equipment	0.02	0.02	0.13	1.81	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	257	257	0.01	< 0.005	—	258
Dust From Material Movement	—	—	—	—	—	—	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.13	1.81	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	257	257	0.01	< 0.005	—	258
Dust From Material Movement	—	—	—	—	—	—	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	0.01	0.01	0.05	0.72	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	102	102	< 0.005	< 0.005	—	102
Dust From Material Movement	—	—	—	—	—	—	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	< 0.005	< 0.005	0.01	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.8	16.8	< 0.005	< 0.005	—	16.9
Dust From Material Movement	—	—	—	—	—	—	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	30.7	30.7	< 0.005	< 0.005	0.06	30.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.1	29.1	< 0.005	< 0.005	< 0.005	29.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.7	11.7	< 0.005	< 0.005	0.01	11.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.93	1.93	< 0.005	< 0.005	< 0.005	1.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. ID10 (2026) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.89	0.75	6.21	8.73	0.02	0.29	—	0.29	0.27	—	0.27	—	1,700	1,700	0.07	0.01	—	1,706
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
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	0.11	0.09	0.78	1.09	< 0.005	0.04	—	0.04	0.03	—	0.03	—	213	213	0.01	< 0.005	—	214
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	0.02	0.02	0.14	0.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.3	35.3	< 0.005	< 0.005	—	35.4
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.55	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	128	128	0.01	< 0.005	0.01	130
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.3	16.3	< 0.005	< 0.005	0.02	16.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.70	2.70	< 0.005	< 0.005	< 0.005	2.74
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.18. ID10 (2026) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.16	0.83	10.8	0.02	0.03	—	0.03	0.03	—	0.03	—	1,700	1,700	0.07	0.01	—	1,706

Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
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	0.10	1.35	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	213	213	0.01	< 0.005	—	214
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	< 0.005	< 0.005	0.02	0.25	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	35.3	35.3	< 0.005	< 0.005	—	35.4
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.55	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	128	128	0.01	< 0.005	0.01	130
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.3	16.3	< 0.005	< 0.005	0.02	16.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.70	2.70	< 0.005	< 0.005	< 0.005	2.74
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. ID10 (2027) - 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	0.86	0.72	5.80	8.74	0.02	0.26	—	0.26	0.24	—	0.24	—	1,701	1,701	0.07	0.01	—	1,707
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.86	0.72	5.80	8.74	0.02	0.26	—	0.26	0.24	—	0.24	—	1,701	1,701	0.07	0.01	—	1,707

Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
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	0.39	0.33	2.61	3.94	0.01	0.12	—	0.12	0.11	—	0.11	—	766	766	0.03	0.01	—	768
Dust From Material Movement	—	—	—	—	—	—	0.09	0.09	—	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	0.07	0.06	0.48	0.72	< 0.005	0.02	—	0.02	0.02	—	0.02	—	127	127	0.01	< 0.005	—	127
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	0.04	0.04	0.03	0.60	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	133	133	0.01	< 0.005	0.41	135
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.04	0.03	0.04	0.51	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	126	126	< 0.005	< 0.005	0.01	127
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.24	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	57.5	57.5	< 0.005	< 0.005	0.08	58.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.53	9.53	< 0.005	< 0.005	0.01	9.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.20. ID10 (2027) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.16	0.83	10.8	0.02	0.03	—	0.03	0.03	—	0.03	—	1,701	1,701	0.07	0.01	—	1,707
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.16	0.16	0.83	10.8	0.02	0.03	—	0.03	0.03	—	0.03	—	1,701	1,701	0.07	0.01	—	1,707
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.07	0.38	4.85	0.01	0.01	—	0.01	0.01	—	0.01	—	766	766	0.03	0.01	—	768
Dust From Material Movement	—	—	—	—	—	—	0.09	0.09	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.88	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	127	127	0.01	< 0.005	—	127
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	0.04	0.04	0.03	0.60	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	133	133	0.01	< 0.005	0.41	135
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.51	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	126	126	< 0.005	< 0.005	0.01	127
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.24	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	57.5	57.5	< 0.005	< 0.005	0.08	58.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.53	9.53	< 0.005	< 0.005	0.01	9.65
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.21. ID45 (2033) - 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	0.73	0.61	4.29	8.70	0.02	0.18	—	0.18	0.16	—	0.16	—	1,701	1,701	0.07	0.01	—	1,707
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.73	0.61	4.29	8.70	0.02	0.18	—	0.18	0.16	—	0.16	—	1,701	1,701	0.07	0.01	—	1,707
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
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	0.33	0.28	1.94	3.93	0.01	0.08	—	0.08	0.07	—	0.07	—	769	769	0.03	0.01	—	772
Dust From Material Movement	—	—	—	—	—	—	0.09	0.09	—	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	0.35	0.72	< 0.005	0.01	—	0.01	0.01	—	0.01	—	127	127	0.01	< 0.005	—	128
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	0.03	0.02	0.02	0.41	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	121	121	< 0.005	< 0.005	0.20	121

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.35	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	115	115	< 0.005	< 0.005	0.01	115
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.17	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	52.6	52.6	< 0.005	< 0.005	0.04	52.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.71	8.71	< 0.005	< 0.005	0.01	8.74
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.22. ID45 (2033) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.16	0.83	10.8	0.02	0.03	—	0.03	0.03	—	0.03	—	1,701	1,701	0.07	0.01	—	1,707

Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.16	0.83	10.8	0.02	0.03	—	0.03	0.03	—	0.03	—	1,701	1,701	0.07	0.01	—	1,707
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.07	0.38	4.87	0.01	0.01	—	0.01	0.01	—	0.01	—	769	769	0.03	0.01	—	772
Dust From Material Movement	—	—	—	—	—	—	0.09	0.09	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.89	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	127	127	0.01	< 0.005	—	128
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	0.03	0.02	0.02	0.41	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	121	121	< 0.005	< 0.005	0.20	121
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.02	0.35	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	115	115	< 0.005	< 0.005	0.01	115
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.17	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	52.6	52.6	< 0.005	< 0.005	0.04	52.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.71	8.71	< 0.005	< 0.005	0.01	8.74
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.23. ID12-20 (2027) - 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	4.04	3.39	32.4	29.1	0.07	1.25	—	1.25	1.15	—	1.15	—	7,781	7,781	0.32	0.06	—	7,808
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	4.04	3.39	32.4	29.1	0.07	1.25	—	1.25	1.15	—	1.15	—	7,781	7,781	0.32	0.06	—	7,808
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	1.63	1.37	13.0	11.7	0.03	0.50	—	0.50	0.46	—	0.46	—	3,137	3,137	0.13	0.03	—	3,148
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	0.30	0.25	2.38	2.14	0.01	0.09	—	0.09	0.08	—	0.08	—	519	519	0.02	< 0.005	—	521
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.24. ID12-20 (2027) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.96	5.58	42.3	0.07	0.21	—	0.21	0.21	—	0.21	—	7,781	7,781	0.32	0.06	—	7,808
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	1.01	0.96	5.58	42.3	0.07	0.21	—	0.21	0.21	—	0.21	—	7,781	7,781	0.32	0.06	—	7,808
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	0.41	0.39	2.25	17.0	0.03	0.09	—	0.09	0.08	—	0.08	—	3,137	3,137	0.13	0.03	—	3,148
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.07	0.41	3.11	0.01	0.02	—	0.02	0.02	—	0.02	—	519	519	0.02	< 0.005	—	521
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.25. ID12-20 (2028) - 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	4.03	3.39	31.8	29.1	0.07	1.22	—	1.22	1.12	—	1.12	—	7,774	7,774	0.32	0.06	—	7,800
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	4.03	3.39	31.8	29.1	0.07	1.22	—	1.22	1.12	—	1.12	—	7,774	7,774	0.32	0.06	—	7,800
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	2.89	2.43	22.8	20.9	0.05	0.87	—	0.87	0.80	—	0.80	—	5,568	5,568	0.23	0.05	—	5,587
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	0.53	0.44	4.16	3.81	0.01	0.16	—	0.16	0.15	—	0.15	—	922	922	0.04	0.01	—	925
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.26. ID12-20 (2028) - Mitigated

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

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

Off-Road Equipment	1.01	0.96	5.58	42.3	0.07	0.21	—	0.21	0.21	—	0.21	—	7,774	7,774	0.32	0.06	—	7,800
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	1.01	0.96	5.58	42.3	0.07	0.21	—	0.21	0.21	—	0.21	—	7,774	7,774	0.32	0.06	—	7,800
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	0.72	0.69	4.00	30.3	0.05	0.15	—	0.15	0.15	—	0.15	—	5,568	5,568	0.23	0.05	—	5,587
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	0.13	0.13	0.73	5.53	0.01	0.03	—	0.03	0.03	—	0.03	—	922	922	0.04	0.01	—	925
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.27. ID12-20 (2029) - 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	3.87	3.25	29.3	28.6	0.07	1.12	—	1.12	1.03	—	1.03	—	7,774	7,774	0.32	0.06	—	7,801
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	3.87	3.25	29.3	28.6	0.07	1.12	—	1.12	1.03	—	1.03	—	7,774	7,774	0.32	0.06	—	7,801
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	2.77	2.32	21.0	20.4	0.05	0.80	—	0.80	0.74	—	0.74	—	5,553	5,553	0.23	0.05	—	5,572
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	0.51	0.42	3.83	3.73	0.01	0.15	—	0.15	0.13	—	0.13	—	919	919	0.04	0.01	—	923
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.28. ID12-20 (2029) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.01	0.96	5.58	42.3	0.07	0.21	—	0.21	0.21	—	0.21	—	7,774	7,774	0.32	0.06	—	7,801
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	1.01	0.96	5.58	42.3	0.07	0.21	—	0.21	0.21	—	0.21	—	7,774	7,774	0.32	0.06	—	7,801
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	0.72	0.68	3.99	30.2	0.05	0.15	—	0.15	0.15	—	0.15	—	5,553	5,553	0.23	0.05	—	5,572
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	0.13	0.12	0.73	5.51	0.01	0.03	—	0.03	0.03	—	0.03	—	919	919	0.04	0.01	—	923
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.29. ID21&30 (2027) - 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	0.40	0.33	3.04	2.79	0.01	0.13	—	0.13	0.12	—	0.12	—	795	795	0.03	0.01	—	798
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.56	1.56	< 0.005	< 0.005	—	1.56
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	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.30. ID21&30 (2027) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.08	0.39	4.31	0.01	0.02	—	0.02	0.02	—	0.02	—	795	795	0.03	0.01	—	798
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.56	1.56	< 0.005	< 0.005	—	1.56
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	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.26	0.26	< 0.005	< 0.005	—	0.26
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.31. ID21&30 (2028) - 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	0.38	0.32	2.81	2.76	0.01	0.12	—	0.12	0.11	—	0.11	—	795	795	0.03	0.01	—	798
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	0.32	2.81	2.76	0.01	0.12	—	0.12	0.11	—	0.11	—	795	795	0.03	0.01	—	798
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	0.27	0.23	2.02	1.98	0.01	0.09	—	0.09	0.08	—	0.08	—	569	569	0.02	< 0.005	—	571
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.37	0.36	< 0.005	0.02	—	0.02	0.01	—	0.01	—	94.3	94.3	< 0.005	< 0.005	—	94.6
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.32. ID21&30 (2028) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.08	0.39	4.31	0.01	0.02	—	0.02	0.02	—	0.02	—	795	795	0.03	0.01	—	798
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.08	0.39	4.31	0.01	0.02	—	0.02	0.02	—	0.02	—	795	795	0.03	0.01	—	798
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.28	3.09	0.01	0.01	—	0.01	0.01	—	0.01	—	569	569	0.02	< 0.005	—	571

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	0.05	0.56	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	94.3	94.3	< 0.005	< 0.005	—	94.6
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.33. ID21&30 (2029) - 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	0.38	0.32	2.71	2.76	0.01	0.12	—	0.12	0.11	—	0.11	—	795	795	0.03	0.01	—	798
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	0.32	2.71	2.76	0.01	0.12	—	0.12	0.11	—	0.11	—	795	795	0.03	0.01	—	798
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	0.14	0.12	1.03	1.05	< 0.005	0.04	—	0.04	0.04	—	0.04	—	302	302	0.01	< 0.005	—	303
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.19	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	50.0	50.0	< 0.005	< 0.005	—	50.1
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.34. ID21&30 (2029) - Mitigated

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

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

Off-Road Equipment	0.08	0.08	0.39	4.31	0.01	0.02	—	0.02	0.02	—	0.02	—	795	795	0.03	0.01	—	798
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.08	0.39	4.31	0.01	0.02	—	0.02	0.02	—	0.02	—	795	795	0.03	0.01	—	798
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	0.03	0.03	0.15	1.64	< 0.005	0.01	—	0.01	0.01	—	0.01	—	302	302	0.01	< 0.005	—	303
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	0.03	0.30	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	50.0	50.0	< 0.005	< 0.005	—	50.1
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.35. ID26-29 (2029) - 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	4.49	3.77	31.8	32.1	0.09	1.21	—	1.21	1.11	—	1.11	—	9,371	9,371	0.38	0.08	—	9,403
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	4.49	3.77	31.8	32.1	0.09	1.21	—	1.21	1.11	—	1.11	—	9,371	9,371	0.38	0.08	—	9,403
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	2.50	2.10	17.7	17.9	0.05	0.67	—	0.67	0.62	—	0.62	—	5,227	5,227	0.21	0.04	—	5,245
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	0.46	0.38	3.24	3.26	0.01	0.12	—	0.12	0.11	—	0.11	—	865	865	0.04	0.01	—	868
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.36. ID26-29 (2029) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.16	1.11	6.37	50.1	0.09	0.24	—	0.24	0.24	—	0.24	—	9,371	9,371	0.38	0.08	—	9,403
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	1.16	1.11	6.37	50.1	0.09	0.24	—	0.24	0.24	—	0.24	—	9,371	9,371	0.38	0.08	—	9,403
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	0.65	0.62	3.55	27.9	0.05	0.14	—	0.14	0.13	—	0.13	—	5,227	5,227	0.21	0.04	—	5,245
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.11	0.65	5.10	0.01	0.02	—	0.02	0.02	—	0.02	—	865	865	0.04	0.01	—	868
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.37. ID26-29 (2030) - 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	4.41	3.70	30.4	31.9	0.09	1.17	—	1.17	1.07	—	1.07	—	9,372	9,372	0.38	0.08	—	9,404
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.41	3.70	30.4	31.9	0.09	1.17	—	1.17	1.07	—	1.07	—	9,372	9,372	0.38	0.08	—	9,404
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.15	2.64	21.7	22.8	0.06	0.83	—	0.83	0.77	—	0.77	—	6,694	6,694	0.27	0.05	—	6,717
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	0.57	0.48	3.97	4.16	0.01	0.15	—	0.15	0.14	—	0.14	—	1,108	1,108	0.04	0.01	—	1,112
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.38. ID26-29 (2030) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.16	1.11	6.37	50.1	0.09	0.24	—	0.24	0.24	—	0.24	—	9,372	9,372	0.38	0.08	—	9,404
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.16	1.11	6.37	50.1	0.09	0.24	—	0.24	0.24	—	0.24	—	9,372	9,372	0.38	0.08	—	9,404
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.79	4.55	35.8	0.06	0.17	—	0.17	0.17	—	0.17	—	6,694	6,694	0.27	0.05	—	6,717
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	0.15	0.14	0.83	6.53	0.01	0.03	—	0.03	0.03	—	0.03	—	1,108	1,108	0.04	0.01	—	1,112
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.39. ID26-29 (2031) - 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	4.35	3.65	29.3	31.9	0.09	1.15	—	1.15	1.05	—	1.05	—	9,371	9,371	0.38	0.08	—	9,404
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.77	0.64	5.15	5.61	0.02	0.20	—	0.20	0.19	—	0.19	—	1,651	1,651	0.07	0.01	—	1,656
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	0.14	0.12	0.94	1.02	< 0.005	0.04	—	0.04	0.03	—	0.03	—	273	273	0.01	< 0.005	—	274
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.40. ID26-29 (2031) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.16	1.11	6.37	50.1	0.09	0.24	—	0.24	0.24	—	0.24	—	9,371	9,371	0.38	0.08	—	9,404
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.20	0.20	1.12	8.83	0.02	0.04	—	0.04	0.04	—	0.04	—	1,651	1,651	0.07	0.01	—	1,656
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	0.04	0.20	1.61	< 0.005	0.01	—	0.01	0.01	—	0.01	—	273	273	0.01	< 0.005	—	274
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.41. ID48-53 (2033) - 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	1.45	1.21	7.77	13.6	0.03	0.30	—	0.30	0.28	—	0.28	—	3,593	3,593	0.15	0.03	—	3,605
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	1.45	1.21	7.77	13.6	0.03	0.30	—	0.30	0.28	—	0.28	—	3,593	3,593	0.15	0.03	—	3,605
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	0.49	0.41	2.63	4.59	0.01	0.10	—	0.10	0.09	—	0.09	—	1,216	1,216	0.05	0.01	—	1,221
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	0.09	0.08	0.48	0.84	< 0.005	0.02	—	0.02	0.02	—	0.02	—	201	201	0.01	< 0.005	—	202
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.42. ID48-53 (2033) - Mitigated

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

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

Off-Road Equipment	0.48	0.45	2.64	20.4	0.03	0.10	—	0.10	0.10	—	0.10	—	3,593	3,593	0.15	0.03	—	3,605
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.45	2.64	20.4	0.03	0.10	—	0.10	0.10	—	0.10	—	3,593	3,593	0.15	0.03	—	3,605
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.15	0.90	6.89	0.01	0.03	—	0.03	0.03	—	0.03	—	1,216	1,216	0.05	0.01	—	1,221
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.16	1.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	201	201	0.01	< 0.005	—	202
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.43. ID48-53 (2034) - 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	1.42	1.19	7.44	13.5	0.03	0.28	—	0.28	0.26	—	0.26	—	3,593	3,593	0.15	0.03	—	3,605
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	1.42	1.19	7.44	13.5	0.03	0.28	—	0.28	0.26	—	0.26	—	3,593	3,593	0.15	0.03	—	3,605
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	1.01	0.85	5.32	9.66	0.02	0.20	—	0.20	0.18	—	0.18	—	2,566	2,566	0.10	0.02	—	2,575
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	0.19	0.16	0.97	1.76	< 0.005	0.04	—	0.04	0.03	—	0.03	—	425	425	0.02	< 0.005	—	426
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.44. ID48-53 (2034) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.45	2.64	20.4	0.03	0.10	—	0.10	0.10	—	0.10	—	3,593	3,593	0.15	0.03	—	3,605
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.45	2.64	20.4	0.03	0.10	—	0.10	0.10	—	0.10	—	3,593	3,593	0.15	0.03	—	3,605
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	0.34	0.32	1.89	14.5	0.02	0.07	—	0.07	0.07	—	0.07	—	2,566	2,566	0.10	0.02	—	2,575
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	0.06	0.34	2.65	< 0.005	0.01	—	0.01	0.01	—	0.01	—	425	425	0.02	< 0.005	—	426
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.45. ID48-53 (2035) - 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	1.39	1.17	7.14	13.5	0.03	0.26	—	0.26	0.24	—	0.24	—	3,593	3,593	0.15	0.03	—	3,605
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	1.39	1.17	7.14	13.5	0.03	0.26	—	0.26	0.24	—	0.24	—	3,593	3,593	0.15	0.03	—	3,605
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	0.99	0.83	5.10	9.63	0.02	0.19	—	0.19	0.17	—	0.17	—	2,566	2,566	0.10	0.02	—	2,575
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	0.18	0.15	0.93	1.76	< 0.005	0.03	—	0.03	0.03	—	0.03	—	425	425	0.02	< 0.005	—	426
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.46. ID48-53 (2035) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.45	2.64	20.4	0.03	0.10	—	0.10	0.10	—	0.10	—	3,593	3,593	0.15	0.03	—	3,605
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.45	2.64	20.4	0.03	0.10	—	0.10	0.10	—	0.10	—	3,593	3,593	0.15	0.03	—	3,605
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	0.34	0.32	1.89	14.5	0.02	0.07	—	0.07	0.07	—	0.07	—	2,566	2,566	0.10	0.02	—	2,575
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	0.06	0.34	2.65	< 0.005	0.01	—	0.01	0.01	—	0.01	—	425	425	0.02	< 0.005	—	426
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.47. ID48-53 (2036) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.36	1.14	6.86	13.4	0.03	0.24	—	0.24	0.23	—	0.23	—	3,593	3,593	0.15	0.03	—	3,605
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	0.10	0.09	0.51	1.00	< 0.005	0.02	—	0.02	0.02	—	0.02	—	267	267	0.01	< 0.005	—	268
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	0.09	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	44.2	44.2	< 0.005	< 0.005	—	44.4
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.48. ID48-53 (2036) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.48	0.45	2.64	20.4	0.03	0.10	—	0.10	0.10	—	0.10	—	3,593	3,593	0.15	0.03	—	3,605
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.20	1.51	< 0.005	0.01	—	0.01	0.01	—	0.01	—	267	267	0.01	< 0.005	—	268
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	0.04	0.28	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	44.2	44.2	< 0.005	< 0.005	—	44.4
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.49. ID54 (2034) - 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	0.19	0.16	1.11	1.88	< 0.005	0.05	—	0.05	0.05	—	0.05	—	492	492	0.02	< 0.005	—	493
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.11	1.88	< 0.005	0.05	—	0.05	0.05	—	0.05	—	492	492	0.02	< 0.005	—	493
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	0.03	0.03	0.18	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	80.8	80.8	< 0.005	< 0.005	—	81.1
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	< 0.005	0.03	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.4	13.4	< 0.005	< 0.005	—	13.4
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.50. ID54 (2034) - Mitigated

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

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

Off-Road Equipment	0.05	0.05	0.24	2.81	< 0.005	0.01	—	0.01	0.01	—	0.01	—	492	492	0.02	< 0.005	—	493
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.24	2.81	< 0.005	0.01	—	0.01	0.01	—	0.01	—	492	492	0.02	< 0.005	—	493
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.46	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	80.8	80.8	< 0.005	< 0.005	—	81.1
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	0.01	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.4	13.4	< 0.005	< 0.005	—	13.4
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.51. ID32 (2030) - 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	1.07	0.89	6.63	10.6	0.02	0.29	—	0.29	0.26	—	0.26	—	2,637	2,637	0.11	0.02	—	2,646
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.73	1.16	< 0.005	0.03	—	0.03	0.03	—	0.03	—	289	289	0.01	< 0.005	—	290

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	0.13	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	47.8	47.8	< 0.005	< 0.005	—	48.0
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.07	0.03	1.14	0.56	0.01	0.01	0.34	0.35	0.01	0.09	0.10	—	1,129	1,129	0.04	0.16	2.69	1,180
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.01	< 0.005	0.13	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	124	124	< 0.005	0.02	0.13	129
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.5	20.5	< 0.005	< 0.005	0.02	21.4
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

3.52. ID32 (2030) - Mitigated

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

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

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.30	1.73	15.3	0.02	0.07	—	0.07	0.06	—	0.06	—	2,637	2,637	0.11	0.02	—	2,646
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.19	1.68	< 0.005	0.01	—	0.01	0.01	—	0.01	—	289	289	0.01	< 0.005	—	290
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	0.03	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	47.8	47.8	< 0.005	< 0.005	—	48.0
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.07	0.03	1.14	0.56	0.01	0.01	0.34	0.35	0.01	0.09	0.10	—	1,129	1,129	0.04	0.16	2.69	1,180
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.01	< 0.005	0.13	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	124	124	< 0.005	0.02	0.13	129
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.5	20.5	< 0.005	< 0.005	0.02	21.4
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

3.53. ID56 (2034) - 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	0.98	0.83	5.62	10.5	0.02	0.23	—	0.23	0.21	—	0.21	—	2,636	2,636	0.11	0.02	—	2,646
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.98	0.83	5.62	10.5	0.02	0.23	—	0.23	0.21	—	0.21	—	2,636	2,636	0.11	0.02	—	2,646
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.05	0.05	0.31	0.58	< 0.005	0.01	—	0.01	0.01	—	0.01	—	144	144	0.01	< 0.005	—	145
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	0.06	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.9	23.9	< 0.005	< 0.005	—	24.0
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.54. ID56 (2034) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.30	1.73	15.3	0.02	0.07	—	0.07	0.06	—	0.06	—	2,636	2,636	0.11	0.02	—	2,646
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.30	1.73	15.3	0.02	0.07	—	0.07	0.06	—	0.06	—	2,636	2,636	0.11	0.02	—	2,646
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	0.09	0.84	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	144	144	0.01	< 0.005	—	145
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.9	23.9	< 0.005	< 0.005	—	24.0
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.55. ID23 (2029) - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.09	0.92	6.97	10.6	0.02	0.30	—	0.30	0.28	—	0.28	—	2,636	2,636	0.11	0.02	—	2,645
Paving	—	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.24	1.89	< 0.005	0.05	—	0.05	0.05	—	0.05	—	470	470	0.02	< 0.005	—	471
Paving	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.23	0.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	77.7	77.7	< 0.005	< 0.005	—	78.0
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.67	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	182	182	< 0.005	0.01	0.01	185
Vendor	0.08	0.03	1.25	0.59	0.01	0.01	0.34	0.35	0.01	0.09	0.10	—	1,164	1,164	0.04	0.17	0.07	1,215
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.0	33.0	< 0.005	< 0.005	0.04	33.4
Vendor	0.01	< 0.005	0.22	0.10	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	207	207	0.01	0.03	0.22	216
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.46	5.46	< 0.005	< 0.005	0.01	5.53
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	34.3	34.3	< 0.005	< 0.005	0.04	35.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.56. ID23 (2029) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.30	1.73	15.3	0.02	0.07	—	0.07	0.06	—	0.06	—	2,636	2,636	0.11	0.02	—	2,645
Paving	—	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.31	2.73	< 0.005	0.01	—	0.01	0.01	—	0.01	—	470	470	0.02	< 0.005	—	471
Paving	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.06	0.50	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	77.7	77.7	< 0.005	< 0.005	—	78.0
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.67	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	182	182	< 0.005	0.01	0.01	185
Vendor	0.08	0.03	1.25	0.59	0.01	0.01	0.34	0.35	0.01	0.09	0.10	—	1,164	1,164	0.04	0.17	0.07	1,215
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	33.0	33.0	< 0.005	< 0.005	0.04	33.4
Vendor	0.01	< 0.005	0.22	0.10	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	207	207	0.01	0.03	0.22	216
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.46	5.46	< 0.005	< 0.005	0.01	5.53
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	34.3	34.3	< 0.005	< 0.005	0.04	35.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.57. ID23 (2030) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	0.89	6.63	10.6	0.02	0.29	—	0.29	0.26	—	0.26	—	2,637	2,637	0.11	0.02	—	2,646
Paving	—	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.00	1.59	< 0.005	0.04	—	0.04	0.04	—	0.04	—	397	397	0.02	< 0.005	—	399
Paving	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.18	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	65.8	65.8	< 0.005	< 0.005	—	66.0
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.63	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	180	180	< 0.005	0.01	0.01	182
Vendor	0.07	0.02	1.20	0.57	0.01	0.01	0.34	0.35	0.01	0.09	0.10	—	1,129	1,129	0.04	0.16	0.07	1,178

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.4	27.4	< 0.005	< 0.005	0.03	27.8
Vendor	0.01	< 0.005	0.18	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	170	170	0.01	0.02	0.17	178
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.54	4.54	< 0.005	< 0.005	< 0.005	4.60
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.2	28.2	< 0.005	< 0.005	0.03	29.4
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

3.58. ID23 (2030) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.30	1.73	15.3	0.02	0.07	—	0.07	0.06	—	0.06	—	2,637	2,637	0.11	0.02	—	2,646
Paving	—	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.26	2.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	397	397	0.02	< 0.005	—	399

Paving	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	65.8	65.8	< 0.005	< 0.005	—	66.0
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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.63	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	180	180	< 0.005	0.01	0.01	182
Vendor	0.07	0.02	1.20	0.57	0.01	0.01	0.34	0.35	0.01	0.09	0.10	—	1,129	1,129	0.04	0.16	0.07	1,178
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.4	27.4	< 0.005	< 0.005	0.03	27.8
Vendor	0.01	< 0.005	0.18	0.08	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	170	170	0.01	0.02	0.17	178
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.54	4.54	< 0.005	< 0.005	< 0.005	4.60
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.2	28.2	< 0.005	< 0.005	0.03	29.4
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

3.59. ID11 (2027) - 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	0.75	0.63	4.22	6.18	0.02	0.17	—	0.17	0.16	—	0.16	—	1,694	1,694	0.07	0.01	—	1,700
Architectural Coatings	—	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	0.63	4.22	6.18	0.02	0.17	—	0.17	0.16	—	0.16	—	1,694	1,694	0.07	0.01	—	1,700
Architectural Coatings	—	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	0.30	0.25	1.70	2.49	0.01	0.07	—	0.07	0.06	—	0.06	—	683	683	0.03	0.01	—	685
Architectural Coatings	—	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	0.06	0.05	0.31	0.45	< 0.005	0.01	—	0.01	0.01	—	0.01	—	113	113	< 0.005	< 0.005	—	113
Architectural Coatings	—	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.60	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	133	133	0.01	< 0.005	0.41	135
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.51	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	126	126	< 0.005	< 0.005	0.01	127
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51.5	51.5	< 0.005	< 0.005	0.07	52.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.53	8.53	< 0.005	< 0.005	0.01	8.64
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.60. ID11 (2027) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.27	1.71	9.43	0.02	0.06	—	0.06	0.06	—	0.06	—	1,694	1,694	0.07	0.01	—	1,700
Architectural Coatings	—	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.27	1.71	9.43	0.02	0.06	—	0.06	0.06	—	0.06	—	1,694	1,694	0.07	0.01	—	1,700
Architectural Coatings	—	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	0.12	0.11	0.69	3.80	0.01	0.03	—	0.03	0.02	—	0.02	—	683	683	0.03	0.01	—	685
Architectural Coatings	—	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	0.13	0.69	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	113	113	< 0.005	< 0.005	—	113
Architectural Coatings	—	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.60	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	133	133	0.01	< 0.005	0.41	135
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.51	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	126	126	< 0.005	< 0.005	0.01	127
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.22	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51.5	51.5	< 0.005	< 0.005	0.07	52.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.53	8.53	< 0.005	< 0.005	0.01	8.64
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.61. ID11 (2028) - 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	0.75	0.62	4.00	6.17	0.02	0.16	—	0.16	0.15	—	0.15	—	1,693	1,693	0.07	0.01	—	1,699
Architectural Coatings	—	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	0.10	0.08	0.52	0.81	< 0.005	0.02	—	0.02	0.02	—	0.02	—	222	222	0.01	< 0.005	—	223
Architectural Coatings	—	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	0.01	0.10	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.8	36.8	< 0.005	< 0.005	—	36.9
Architectural Coatings	—	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	0.04	0.03	0.04	0.48	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	124	124	< 0.005	< 0.005	0.01	125
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.5	16.5	< 0.005	< 0.005	0.02	16.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.73	2.73	< 0.005	< 0.005	< 0.005	2.76
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.62. ID11 (2028) - Mitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.27	1.71	9.43	0.02	0.06	—	0.06	0.06	—	0.06	—	1,693	1,693	0.07	0.01	—	1,699
Architectural Coatings	—	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	0.04	0.04	0.22	1.24	< 0.005	0.01	—	0.01	0.01	—	0.01	—	222	222	0.01	< 0.005	—	223
Architectural Coatings	—	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	0.01	0.01	0.04	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	36.8	36.8	< 0.005	< 0.005	—	36.9
Architectural Coatings	—	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	0.04	0.03	0.04	0.48	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	124	124	< 0.005	< 0.005	0.01	125

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.5	16.5	< 0.005	< 0.005	0.02	16.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.73	2.73	< 0.005	< 0.005	< 0.005	2.76
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.63. ID46 (2033) - 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	0.63	0.52	2.64	5.78	0.02	0.11	—	0.11	0.10	—	0.10	—	1,631	1,631	0.07	0.01	—	1,636
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	0.52	2.64	5.78	0.02	0.11	—	0.11	0.10	—	0.10	—	1,631	1,631	0.07	0.01	—	1,636
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	0.18	0.89	1.96	0.01	0.04	—	0.04	0.03	—	0.03	—	552	552	0.02	< 0.005	—	554
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	0.16	0.36	< 0.005	0.01	—	0.01	0.01	—	0.01	—	91.4	91.4	< 0.005	< 0.005	—	91.7
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	0.02	0.02	0.02	0.31	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	90.7	90.7	< 0.005	< 0.005	0.15	91.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.26	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	86.1	86.1	< 0.005	< 0.005	< 0.005	86.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.6	29.6	< 0.005	< 0.005	0.02	29.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.90	4.90	< 0.005	< 0.005	< 0.005	4.91

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.64. ID46 (2033) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.21	1.24	9.17	0.02	0.05	—	0.05	0.05	—	0.05	—	1,631	1,631	0.07	0.01	—	1,636
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.21	1.24	9.17	0.02	0.05	—	0.05	0.05	—	0.05	—	1,631	1,631	0.07	0.01	—	1,636
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	0.42	3.11	0.01	0.02	—	0.02	0.02	—	0.02	—	552	552	0.02	< 0.005	—	554
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	0.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	91.4	91.4	< 0.005	< 0.005	—	91.7
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	0.02	0.02	0.02	0.31	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	90.7	90.7	< 0.005	< 0.005	0.15	91.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.26	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	86.1	86.1	< 0.005	< 0.005	< 0.005	86.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	29.6	29.6	< 0.005	< 0.005	0.02	29.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.90	4.90	< 0.005	< 0.005	< 0.005	4.91
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.65. ID46 (2034) - 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	0.61	0.51	2.49	5.76	0.02	0.10	—	0.10	0.09	—	0.09	—	1,631	1,631	0.07	0.01	—	1,636
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	0.03	0.02	0.11	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	73.4	73.4	< 0.005	< 0.005	—	73.7
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	< 0.005	0.02	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.2	12.2	< 0.005	< 0.005	—	12.2
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	0.02	0.02	0.02	0.25	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	85.1	85.1	< 0.005	< 0.005	< 0.005	85.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
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	—	3.88	3.88	< 0.005	< 0.005	< 0.005	3.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.64
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.66. ID46 (2034) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.21	1.24	9.17	0.02	0.05	—	0.05	0.05	—	0.05	—	1,631	1,631	0.07	0.01	—	1,636
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.41	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	73.4	73.4	< 0.005	< 0.005	—	73.7
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	0.01	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.2	12.2	< 0.005	< 0.005	—	12.2
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	0.02	0.02	0.02	0.25	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	85.1	85.1	< 0.005	< 0.005	< 0.005	85.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
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	—	3.88	3.88	< 0.005	< 0.005	< 0.005	3.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.64	0.64	< 0.005	< 0.005	< 0.005	0.64
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

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

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
ID7	Demolition	12/15/2025	5/15/2026	5.00	110	Ph1 30MGD - Clear&Grub, Utility Reloc, Demo & Waste Haul Off
ID8	Site Preparation	3/3/2026	8/27/2026	5.00	128	Ph1 30MGD - Hazardous Soils Removal
ID43	Site Preparation	11/2/2032	1/24/2033	5.00	60.0	Ph2 35MGD - Hazardous Soils Removal
ID9	Grading	5/12/2026	12/11/2026	5.00	154	Ph1 30MGD - Mass Excavation & Haul Off
ID38	Grading	3/18/2031	7/20/2032	5.00	351	Ph1 85MGD - Storm Drain Culvert
ID10	Grading	10/29/2026	8/18/2027	5.00	210	Ph1 30MGD - Structural Excavation & Foundation Prep
ID45	Grading	2/8/2033	9/26/2033	5.00	165	Ph2 35MGD - Structural Excavation, Haul Off, and Foundation Prep
ID12-20	Building Construction	6/9/2027	12/31/2029	5.00	669	Ph1 30MGD - Above Grade Facilities, Equipment, and Site Improvements

ID21&30	Building Construction	12/31/2027	7/13/2029	5.00	401	Ph1 30MGD & 85MGD - Roofing & Exterior Cladding
ID26-29	Building Construction	3/22/2029	3/31/2031	5.00	528	Ph1 85MGD - Above Grade Facilities, Equipment, and Site Improvements
ID48-53	Building Construction	7/12/2033	2/7/2036	5.00	673	Ph2 35MGD - Process Equipment and A/G Process Piping Installation
ID54	Building Construction	3/1/2034	5/23/2034	5.00	60.0	Ph2 35MGD - Roofing & Exterior Cladding
ID32	Building Construction	4/22/2030	6/14/2030	5.00	40.0	Ph1 85MGD - Paving & Striping
ID56	Building Construction	9/13/2034	10/10/2034	5.00	20.0	Ph2 35MGD - Paving
ID23	Paving	10/2/2029	3/18/2030	5.00	120	Ph1 30MGD - Paving & Stripping
ID11	Trenching	6/9/2027	3/7/2028	5.00	195	Ph1 30MGD - Yard Pipe Dig/Lay/Bfill
ID46	Trenching	7/12/2033	1/23/2034	5.00	140	Ph2 35MGD - Yard Piping

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
ID7	Excavators	Diesel	Average	1.00	8.00	128	0.38
ID7	Rubber Tired Loaders	Diesel	Average	1.00	8.00	300	0.36
ID7	Skid Steer Loaders	Diesel	Average	1.00	8.00	75.0	0.37
ID7	Crawler Tractors	Diesel	Average	1.00	8.00	400	0.43
ID8	Rollers	Diesel	Average	1.00	8.00	80.0	0.38
ID8	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
ID8	Graders	Diesel	Average	1.00	8.00	155	0.41

ID8	Off-Highway Trucks	Diesel	Average	1.00	8.00	300	0.38
ID43	Rollers	Diesel	Average	1.00	8.00	80.0	0.38
ID43	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
ID43	Graders	Diesel	Average	1.00	8.00	155	0.41
ID43	Off-Highway Trucks	Diesel	Average	1.00	8.00	300	0.38
ID9	Excavators	Diesel	Average	3.00	8.00	128	0.38
ID9	Scrapers	Diesel	Average	2.00	8.00	490	0.48
ID9	Rubber Tired Loaders	Diesel	Average	2.00	8.00	300	0.36
ID9	Off-Highway Trucks	Diesel	Average	4.00	4.00	300	0.38
ID38	Skid Steer Loaders	Diesel	Average	1.00	8.00	75.0	0.37
ID10	Rollers	Diesel	Average	1.00	8.00	80.0	0.38
ID10	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
ID10	Graders	Diesel	Average	1.00	8.00	155	0.41
ID10	Off-Highway Trucks	Diesel	Average	1.00	4.00	300	0.38
ID45	Rollers	Diesel	Average	1.00	8.00	80.0	0.38
ID45	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
ID45	Graders	Diesel	Average	1.00	8.00	155	0.41
ID45	Off-Highway Trucks	Diesel	Average	1.00	4.00	300	0.38
ID12-20	Excavators	Diesel	Average	1.00	8.00	160	0.38
ID12-20	Rubber Tired Loaders	Diesel	Average	2.00	8.00	300	0.36
ID12-20	Dumpers/Tenders	Diesel	Average	4.00	8.00	16.0	0.38
ID12-20	Rollers	Diesel	Average	2.00	8.00	80.0	0.38
ID12-20	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
ID12-20	Forklifts	Diesel	Average	3.00	8.00	101	0.20
ID12-20	Cranes	Diesel	Average	1.00	8.00	225	0.29

ID12-20	Crawler Tractors	Diesel	Average	1.00	8.00	600	0.43
ID12-20	Off-Highway Trucks	Diesel	Average	1.00	4.00	300	0.38
ID21&30	Cranes	Diesel	Average	1.00	8.00	225	0.29
ID21&30	Forklifts	Diesel	Average	1.00	8.00	101	0.20
ID26-29	Excavators	Diesel	Average	1.00	8.00	160	0.38
ID26-29	Rubber Tired Loaders	Diesel	Average	2.00	8.00	300	0.36
ID26-29	Dumpers/Tenders	Diesel	Average	4.00	8.00	16.0	0.38
ID26-29	Rollers	Diesel	Average	2.00	8.00	80.0	0.38
ID26-29	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
ID26-29	Forklifts	Diesel	Average	3.00	8.00	101	0.20
ID26-29	Cranes	Diesel	Average	1.00	8.00	225	0.29
ID26-29	Crawler Tractors	Diesel	Average	1.00	8.00	600	0.43
ID26-29	Off-Highway Trucks	Diesel	Average	4.00	4.00	300	0.38
ID48-53	Excavators	Diesel	Average	1.00	8.00	160	0.38
ID48-53	Rubber Tired Loaders	Diesel	Average	1.00	8.00	300	0.36
ID48-53	Dumpers/Tenders	Diesel	Average	2.00	8.00	16.0	0.38
ID48-53	Rollers	Diesel	Average	1.00	8.00	80.0	0.38
ID48-53	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
ID48-53	Forklifts	Diesel	Average	1.00	8.00	101	0.20
ID48-53	Cranes	Diesel	Average	1.00	8.00	225	0.29
ID48-53	Off-Highway Trucks	Diesel	Average	1.00	4.00	300	0.38
ID54	Cranes	Diesel	Average	1.00	4.00	225	0.29
ID54	Forklifts	Diesel	Average	1.00	8.00	101	0.20
ID32	Graders	Diesel	Average	1.00	8.00	155	0.41
ID32	Pavers	Diesel	Average	1.00	8.00	225	0.42
ID32	Rollers	Diesel	Average	2.00	8.00	80.0	0.38

ID32	Dumpers/Tenders	Diesel	Average	1.00	8.00	16.0	0.38
ID32	Off-Highway Trucks	Diesel	Average	1.00	4.00	300	0.38
ID56	Graders	Diesel	Average	1.00	8.00	155	0.41
ID56	Pavers	Diesel	Average	1.00	8.00	225	0.42
ID56	Rollers	Diesel	Average	2.00	8.00	80.0	0.38
ID56	Dumpers/Tenders	Diesel	Average	1.00	8.00	16.0	0.38
ID56	Off-Highway Trucks	Diesel	Average	1.00	4.00	300	0.38
ID23	Pavers	Diesel	Average	1.00	8.00	225	0.42
ID23	Rollers	Diesel	Average	2.00	8.00	80.0	0.38
ID23	Graders	Diesel	Average	1.00	8.00	155	0.41
ID23	Dumpers/Tenders	Diesel	Average	1.00	8.00	16.0	0.38
ID23	Off-Highway Trucks	Diesel	Average	1.00	4.00	300	0.38
ID11	Excavators	Diesel	Average	1.00	8.00	160	0.38
ID11	Rubber Tired Loaders	Diesel	Average	1.00	8.00	300	0.36
ID11	Dumpers/Tenders	Diesel	Average	2.00	8.00	16.0	0.38
ID46	Excavators	Diesel	Average	1.00	8.00	160	0.38
ID46	Rubber Tired Loaders	Diesel	Average	1.00	8.00	300	0.36
ID46	Dumpers/Tenders	Diesel	Average	1.00	8.00	16.0	0.38

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
ID7	Excavators	Diesel	Tier 4 Final	1.00	8.00	128	0.38
ID7	Rubber Tired Loaders	Diesel	Tier 4 Final	1.00	8.00	300	0.36
ID7	Skid Steer Loaders	Diesel	Tier 4 Final	1.00	8.00	75.0	0.37
ID7	Crawler Tractors	Diesel	Tier 4 Final	1.00	8.00	400	0.43
ID8	Rollers	Diesel	Tier 4 Final	1.00	8.00	80.0	0.38

ID8	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
ID8	Graders	Diesel	Tier 4 Final	1.00	8.00	155	0.41
ID8	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	8.00	300	0.38
ID43	Rollers	Diesel	Tier 4 Final	1.00	8.00	80.0	0.38
ID43	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
ID43	Graders	Diesel	Tier 4 Final	1.00	8.00	155	0.41
ID43	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	8.00	300	0.38
ID9	Excavators	Diesel	Tier 4 Final	3.00	8.00	128	0.38
ID9	Scrapers	Diesel	Tier 4 Final	2.00	8.00	490	0.48
ID9	Rubber Tired Loaders	Diesel	Tier 4 Final	2.00	8.00	300	0.36
ID9	Off-Highway Trucks	Diesel	Tier 4 Final	4.00	4.00	300	0.38
ID38	Skid Steer Loaders	Diesel	Tier 4 Final	1.00	8.00	75.0	0.37
ID10	Rollers	Diesel	Tier 4 Final	1.00	8.00	80.0	0.38
ID10	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
ID10	Graders	Diesel	Tier 4 Final	1.00	8.00	155	0.41
ID10	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	300	0.38
ID45	Rollers	Diesel	Tier 4 Final	1.00	8.00	80.0	0.38
ID45	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
ID45	Graders	Diesel	Tier 4 Final	1.00	8.00	155	0.41
ID45	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	300	0.38
ID12-20	Excavators	Diesel	Tier 4 Final	1.00	8.00	160	0.38
ID12-20	Rubber Tired Loaders	Diesel	Tier 4 Final	2.00	8.00	300	0.36
ID12-20	Dumpers/Tenders	Diesel	Average	4.00	8.00	16.0	0.38
ID12-20	Rollers	Diesel	Tier 4 Final	2.00	8.00	80.0	0.38

ID12-20	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
ID12-20	Forklifts	Diesel	Tier 4 Final	3.00	8.00	101	0.20
ID12-20	Cranes	Diesel	Tier 4 Final	1.00	8.00	225	0.29
ID12-20	Crawler Tractors	Diesel	Tier 4 Final	1.00	8.00	600	0.43
ID12-20	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	300	0.38
ID21&30	Cranes	Diesel	Tier 4 Final	1.00	8.00	225	0.29
ID21&30	Forklifts	Diesel	Tier 4 Final	1.00	8.00	101	0.20
ID26-29	Excavators	Diesel	Tier 4 Final	1.00	8.00	160	0.38
ID26-29	Rubber Tired Loaders	Diesel	Tier 4 Final	2.00	8.00	300	0.36
ID26-29	Dumpers/Tenders	Diesel	Average	4.00	8.00	16.0	0.38
ID26-29	Rollers	Diesel	Tier 4 Final	2.00	8.00	80.0	0.38
ID26-29	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
ID26-29	Forklifts	Diesel	Tier 4 Final	3.00	8.00	101	0.20
ID26-29	Cranes	Diesel	Tier 4 Final	1.00	8.00	225	0.29
ID26-29	Crawler Tractors	Diesel	Tier 4 Final	1.00	8.00	600	0.43
ID26-29	Off-Highway Trucks	Diesel	Tier 4 Final	4.00	4.00	300	0.38
ID48-53	Excavators	Diesel	Tier 4 Final	1.00	8.00	160	0.38
ID48-53	Rubber Tired Loaders	Diesel	Tier 4 Final	1.00	8.00	300	0.36
ID48-53	Dumpers/Tenders	Diesel	Average	2.00	8.00	16.0	0.38
ID48-53	Rollers	Diesel	Tier 4 Final	1.00	8.00	80.0	0.38
ID48-53	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
ID48-53	Forklifts	Diesel	Tier 4 Final	1.00	8.00	101	0.20
ID48-53	Cranes	Diesel	Tier 4 Final	1.00	8.00	225	0.29
ID48-53	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	300	0.38
ID54	Cranes	Diesel	Tier 4 Final	1.00	4.00	225	0.29
ID54	Forklifts	Diesel	Tier 4 Final	1.00	8.00	101	0.20

ID32	Graders	Diesel	Tier 4 Final	1.00	8.00	155	0.41
ID32	Pavers	Diesel	Tier 4 Final	1.00	8.00	225	0.42
ID32	Rollers	Diesel	Tier 4 Final	2.00	8.00	80.0	0.38
ID32	Dumpers/Tenders	Diesel	Average	1.00	8.00	16.0	0.38
ID32	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	300	0.38
ID56	Graders	Diesel	Tier 4 Final	1.00	8.00	155	0.41
ID56	Pavers	Diesel	Tier 4 Final	1.00	8.00	225	0.42
ID56	Rollers	Diesel	Tier 4 Final	2.00	8.00	80.0	0.38
ID56	Dumpers/Tenders	Diesel	Average	1.00	8.00	16.0	0.38
ID56	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	300	0.38
ID23	Pavers	Diesel	Tier 4 Final	1.00	8.00	225	0.42
ID23	Rollers	Diesel	Tier 4 Final	2.00	8.00	80.0	0.38
ID23	Graders	Diesel	Tier 4 Final	1.00	8.00	155	0.41
ID23	Dumpers/Tenders	Diesel	Average	1.00	8.00	16.0	0.38
ID23	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	300	0.38
ID11	Excavators	Diesel	Tier 4 Final	1.00	8.00	160	0.38
ID11	Rubber Tired Loaders	Diesel	Tier 4 Final	1.00	8.00	300	0.36
ID11	Dumpers/Tenders	Diesel	Average	2.00	8.00	16.0	0.38
ID46	Excavators	Diesel	Tier 4 Final	1.00	8.00	160	0.38
ID46	Rubber Tired Loaders	Diesel	Tier 4 Final	1.00	8.00	300	0.36
ID46	Dumpers/Tenders	Diesel	Average	1.00	8.00	16.0	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
ID7	—	—	—	—

ID7	Worker	10.0	18.5	LDA,LDT1,LDT2
ID7	Vendor	—	10.2	HHDT,MHDT
ID7	Hauling	32.0	20.0	HHDT
ID7	Onsite truck	—	—	HHDT
ID8	—	—	—	—
ID8	Worker	10.0	18.5	LDA,LDT1,LDT2
ID8	Vendor	—	10.2	HHDT,MHDT
ID8	Hauling	94.0	20.0	HHDT
ID8	Onsite truck	—	—	HHDT
ID9	—	—	—	—
ID9	Worker	27.5	18.5	LDA,LDT1,LDT2
ID9	Vendor	—	10.2	HHDT,MHDT
ID9	Hauling	0.00	20.0	HHDT
ID9	Onsite truck	—	—	HHDT
ID38	—	—	—	—
ID38	Worker	2.50	18.5	LDA,LDT1,LDT2
ID38	Vendor	—	10.2	HHDT,MHDT
ID38	Hauling	0.00	20.0	HHDT
ID38	Onsite truck	—	—	HHDT
ID10	—	—	—	—
ID10	Worker	10.0	18.5	LDA,LDT1,LDT2
ID10	Vendor	—	10.2	HHDT,MHDT
ID10	Hauling	0.00	20.0	HHDT
ID10	Onsite truck	—	—	HHDT
ID11	—	—	—	—
ID11	Worker	10.0	18.5	LDA,LDT1,LDT2
ID11	Vendor	—	10.2	HHDT,MHDT

ID11	Hauling	0.00	20.0	HHDT
ID11	Onsite truck	—	—	HHDT
ID45	—	—	—	—
ID45	Worker	10.0	18.5	LDA,LDT1,LDT2
ID45	Vendor	—	10.2	HHDT,MHDT
ID45	Hauling	0.00	20.0	HHDT
ID45	Onsite truck	—	—	HHDT
ID12-20	—	—	—	—
ID12-20	Worker	0.00	18.5	LDA,LDT1,LDT2
ID12-20	Vendor	0.00	10.2	HHDT,MHDT
ID12-20	Hauling	0.00	20.0	HHDT
ID12-20	Onsite truck	—	—	HHDT
ID21&30	—	—	—	—
ID21&30	Worker	0.00	18.5	LDA,LDT1,LDT2
ID21&30	Vendor	0.00	10.2	HHDT,MHDT
ID21&30	Hauling	0.00	20.0	HHDT
ID21&30	Onsite truck	—	—	HHDT
ID26-29	—	—	—	—
ID26-29	Worker	0.00	18.5	LDA,LDT1,LDT2
ID26-29	Vendor	0.00	10.2	HHDT,MHDT
ID26-29	Hauling	0.00	20.0	HHDT
ID26-29	Onsite truck	—	—	HHDT
ID48-53	—	—	—	—
ID48-53	Worker	0.00	18.5	LDA,LDT1,LDT2
ID48-53	Vendor	0.00	10.2	HHDT,MHDT
ID48-53	Hauling	0.00	20.0	HHDT
ID48-53	Onsite truck	—	—	HHDT

ID54	—	—	—	—
ID54	Worker	0.00	18.5	LDA,LDT1,LDT2
ID54	Vendor	0.00	10.2	HHDT,MHDT
ID54	Hauling	0.00	20.0	HHDT
ID54	Onsite truck	—	—	HHDT
ID23	—	—	—	—
ID23	Worker	15.0	18.5	LDA,LDT1,LDT2
ID23	Vendor	40.0	10.2	HHDT,MHDT
ID23	Hauling	0.00	20.0	HHDT
ID23	Onsite truck	—	—	HHDT
ID46	—	—	—	—
ID46	Worker	7.50	18.5	LDA,LDT1,LDT2
ID46	Vendor	—	10.2	HHDT,MHDT
ID46	Hauling	0.00	20.0	HHDT
ID46	Onsite truck	—	—	HHDT
ID43	—	—	—	—
ID43	Worker	10.0	18.5	LDA,LDT1,LDT2
ID43	Vendor	—	10.2	HHDT,MHDT
ID43	Hauling	0.00	20.0	HHDT
ID43	Onsite truck	—	—	HHDT
ID32	—	—	—	—
ID32	Worker	0.00	18.5	LDA,LDT1,LDT2
ID32	Vendor	40.0	10.2	HHDT,MHDT
ID32	Hauling	0.00	20.0	HHDT
ID32	Onsite truck	—	—	HHDT
ID56	—	—	—	—
ID56	Worker	0.00	18.5	LDA,LDT1,LDT2

ID56	Vendor	0.00	10.2	HHDT,MHDT
ID56	Hauling	0.00	20.0	HHDT
ID56	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
ID7	—	—	—	—
ID7	Worker	10.0	18.5	LDA,LDT1,LDT2
ID7	Vendor	—	10.2	HHDT,MHDT
ID7	Hauling	32.0	20.0	HHDT
ID7	Onsite truck	—	—	HHDT
ID8	—	—	—	—
ID8	Worker	10.0	18.5	LDA,LDT1,LDT2
ID8	Vendor	—	10.2	HHDT,MHDT
ID8	Hauling	94.0	20.0	HHDT
ID8	Onsite truck	—	—	HHDT
ID9	—	—	—	—
ID9	Worker	27.5	18.5	LDA,LDT1,LDT2
ID9	Vendor	—	10.2	HHDT,MHDT
ID9	Hauling	0.00	20.0	HHDT
ID9	Onsite truck	—	—	HHDT
ID38	—	—	—	—
ID38	Worker	2.50	18.5	LDA,LDT1,LDT2
ID38	Vendor	—	10.2	HHDT,MHDT
ID38	Hauling	0.00	20.0	HHDT
ID38	Onsite truck	—	—	HHDT
ID10	—	—	—	—

ID10	Worker	10.0	18.5	LDA,LDT1,LDT2
ID10	Vendor	—	10.2	HHDT,MHDT
ID10	Hauling	0.00	20.0	HHDT
ID10	Onsite truck	—	—	HHDT
ID11	—	—	—	—
ID11	Worker	10.0	18.5	LDA,LDT1,LDT2
ID11	Vendor	—	10.2	HHDT,MHDT
ID11	Hauling	0.00	20.0	HHDT
ID11	Onsite truck	—	—	HHDT
ID45	—	—	—	—
ID45	Worker	10.0	18.5	LDA,LDT1,LDT2
ID45	Vendor	—	10.2	HHDT,MHDT
ID45	Hauling	0.00	20.0	HHDT
ID45	Onsite truck	—	—	HHDT
ID12-20	—	—	—	—
ID12-20	Worker	0.00	18.5	LDA,LDT1,LDT2
ID12-20	Vendor	0.00	10.2	HHDT,MHDT
ID12-20	Hauling	0.00	20.0	HHDT
ID12-20	Onsite truck	—	—	HHDT
ID21&30	—	—	—	—
ID21&30	Worker	0.00	18.5	LDA,LDT1,LDT2
ID21&30	Vendor	0.00	10.2	HHDT,MHDT
ID21&30	Hauling	0.00	20.0	HHDT
ID21&30	Onsite truck	—	—	HHDT
ID26-29	—	—	—	—
ID26-29	Worker	0.00	18.5	LDA,LDT1,LDT2
ID26-29	Vendor	0.00	10.2	HHDT,MHDT

ID26-29	Hauling	0.00	20.0	HHDT
ID26-29	Onsite truck	—	—	HHDT
ID48-53	—	—	—	—
ID48-53	Worker	0.00	18.5	LDA,LDT1,LDT2
ID48-53	Vendor	0.00	10.2	HHDT,MHDT
ID48-53	Hauling	0.00	20.0	HHDT
ID48-53	Onsite truck	—	—	HHDT
ID54	—	—	—	—
ID54	Worker	0.00	18.5	LDA,LDT1,LDT2
ID54	Vendor	0.00	10.2	HHDT,MHDT
ID54	Hauling	0.00	20.0	HHDT
ID54	Onsite truck	—	—	HHDT
ID23	—	—	—	—
ID23	Worker	15.0	18.5	LDA,LDT1,LDT2
ID23	Vendor	40.0	10.2	HHDT,MHDT
ID23	Hauling	0.00	20.0	HHDT
ID23	Onsite truck	—	—	HHDT
ID46	—	—	—	—
ID46	Worker	7.50	18.5	LDA,LDT1,LDT2
ID46	Vendor	—	10.2	HHDT,MHDT
ID46	Hauling	0.00	20.0	HHDT
ID46	Onsite truck	—	—	HHDT
ID43	—	—	—	—
ID43	Worker	10.0	18.5	LDA,LDT1,LDT2
ID43	Vendor	—	10.2	HHDT,MHDT
ID43	Hauling	0.00	20.0	HHDT
ID43	Onsite truck	—	—	HHDT

ID32	—	—	—	—
ID32	Worker	0.00	18.5	LDA,LDT1,LDT2
ID32	Vendor	40.0	10.2	HHDT,MHDT
ID32	Hauling	0.00	20.0	HHDT
ID32	Onsite truck	—	—	HHDT
ID56	—	—	—	—
ID56	Worker	0.00	18.5	LDA,LDT1,LDT2
ID56	Vendor	0.00	10.2	HHDT,MHDT
ID56	Hauling	0.00	20.0	HHDT
ID56	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

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)
ID11	0.00	0.00	0.00	0.00	—

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 (Ton of Debris)	Acres Paved (acres)
ID7	0.00	0.00	0.00	53,705	—
ID8	—	110,400	0.00	0.00	—
ID43	—	30,800	30.0	0.00	—
ID9	—	0.00	308	0.00	—
ID38	—	—	0.00	0.00	—
ID10	—	—	105	0.00	—
ID45	—	0.00	82.5	0.00	—
ID23	0.00	0.00	0.00	0.00	11.9

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Industrial	11.9	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005
2027	0.00	532	0.03	< 0.005

2028	0.00	532	0.03	< 0.005
2029	0.00	532	0.03	< 0.005
2030	0.00	532	0.03	< 0.005
2032	0.00	532	0.03	< 0.005
2033	0.00	532	0.03	< 0.005
2031	0.00	532	0.03	< 0.005
2034	0.00	532	0.03	< 0.005
2035	0.00	532	0.03	< 0.005
2036	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

5.18.2.2. Mitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	5.07	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	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	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	20.8
AQ-PM	75.2
AQ-DPM	81.6
Drinking Water	29.4
Lead Risk Housing	54.2
Pesticides	73.9
Toxic Releases	99.5
Traffic	80.9
Effect Indicators	—
CleanUp Sites	19.9
Groundwater	32.9
Haz Waste Facilities/Generators	96.1
Impaired Water Bodies	0.00
Solid Waste	0.00
Sensitive Population	—
Asthma	76.6
Cardio-vascular	82.7
Low Birth Weights	91.9
Socioeconomic Factor Indicators	—

Education	54.6
Housing	6.10
Linguistic	43.3
Poverty	28.4
Unemployment	33.6

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	86.12857693
Employed	59.16848454
Median HI	79.85371487
Education	—
Bachelor's or higher	52.02104453
High school enrollment	100
Preschool enrollment	10.18863082
Transportation	—
Auto Access	92.6344155
Active commuting	24.57333504
Social	—
2-parent households	37.5465161
Voting	15.28294623
Neighborhood	—
Alcohol availability	70.10137303
Park access	36.21198511
Retail density	45.14307712

Supermarket access	67.61195945
Tree canopy	44.51430771
Housing	—
Homeownership	93.53265751
Housing habitability	91.83882972
Low-inc homeowner severe housing cost burden	69.28012319
Low-inc renter severe housing cost burden	96.97164122
Uncrowded housing	24.38085461
Health Outcomes	—
Insured adults	45.46387784
Arthritis	55.6
Asthma ER Admissions	30.5
High Blood Pressure	37.6
Cancer (excluding skin)	45.0
Asthma	95.7
Coronary Heart Disease	51.0
Chronic Obstructive Pulmonary Disease	76.7
Diagnosed Diabetes	24.2
Life Expectancy at Birth	68.8
Cognitively Disabled	22.1
Physically Disabled	45.1
Heart Attack ER Admissions	25.8
Mental Health Not Good	74.9
Chronic Kidney Disease	45.1
Obesity	84.8
Pedestrian Injuries	44.9
Physical Health Not Good	56.1

Stroke	51.7
Health Risk Behaviors	—
Binge Drinking	92.1
Current Smoker	74.7
No Leisure Time for Physical Activity	43.7
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	81.0
Elderly	34.5
English Speaking	79.2
Foreign-born	83.5
Outdoor Workers	60.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	12.9
Traffic Density	77.5
Traffic Access	67.6
Other Indices	—
Hardship	61.4
Other Decision Support	—
2016 Voting	17.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	74.0
Healthy Places Index Score for Project Location (b)	61.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes

Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	Wilmington Long Beach Carson

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	Per PD: The majority of new surface facilities would be constructed on Sanitation Districts property, occupying approximately 56 acres of land within and east of the existing JWPCP site in the city of Carson.
Construction: Construction Phases	Data provided by Stantec: AWT Data Needs Matrix Populated 01082024.pdf
Construction: Off-Road Equipment	Data provided by Stantec
Construction: Paving	Ph1 30MGD - 420 ksf Ph1 85MGD - 40 ksf Ph2 35MGD - 58 ksf
Construction: Dust From Material Movement	Soil hauling based on info provided by Stantec
Construction: Trips and VMT	Truck trips based on data received from Stantec

Joint Treatment Site Construction Energy Use

Off-Road Construction Equipment Energy Use

Phase	Equipment	Fuel	HP	Load Factor	Equipment Count	Hours/Day	Work Days	Gallons /HP-Hr	Gallons /Hour	Gallons /Day	Total Gallons	Total kBtu
ID7	Excavators	Diesel	128	0.38	1	8	110	0.019753042	0.96079	7.686	845.5	117,524
	Rubber Tired Loaders	Diesel	300	0.36	1	8	110	0.018667584	2.01610	16.129	1,774.2	246,609
	Skid Steer Loaders	Diesel	75	0.37	1	8	110	0.019086509	0.52965	4.237	466.1	64,787
	Crawler Tractors	Diesel	400	0.43	1	8	110	0.022187691	3.81628	30.530	3,358.3	466,808
ID8	Rollers	Diesel	80	0.38	1	8	128	0.019411121	0.59010	4.721	604.3	83,992
	Tractors/Loaders/Backhoes	Diesel	84	0.37	1	8	128	0.019125703	0.59443	4.755	608.7	84,608
	Graders	Diesel	155	0.41	1	8	128	0.021256519	1.35085	10.807	1,383.3	192,275
	Off-Highway Trucks	Diesel	300	0.38	1	8	128	0.019688374	2.24447	17.956	2,298.3	319,470
ID43	Rollers	Diesel	80	0.38	1	8	60	0.019411121	0.59010	4.721	283.2	39,371
	Tractors/Loaders/Backhoes	Diesel	84	0.37	1	8	60	0.019125703	0.59443	4.755	285.3	39,660
	Graders	Diesel	155	0.41	1	8	60	0.021256519	1.35085	10.807	648.4	90,129
	Off-Highway Trucks	Diesel	300	0.38	1	8	60	0.019688374	2.24447	17.956	1,077.3	149,751
ID9	Excavators	Diesel	128	0.38	3	8	154	0.019753042	0.96079	23.059	3,551.1	493,599
	Scrapers	Diesel	490	0.48	2	8	154	0.024996978	5.87929	94.069	14,486.6	2,013,633
	Rubber Tired Loaders	Diesel	300	0.36	2	8	154	0.018667584	2.01610	32.258	4,967.7	690,506
	Off-Highway Trucks	Diesel	300	0.38	4	4	154	0.019688374	2.24447	35.912	5,530.4	768,724
ID38	Skid Steer Loaders	Diesel	75	0.37	1	8	351	0.019086509	0.52965	4.237	1,487.3	206,729
ID10	Rollers	Diesel	80	0.38	1	8	210	0.019411121	0.59010	4.721	991.4	137,800
	Tractors/Loaders/Backhoes	Diesel	84	0.37	1	8	210	0.019125703	0.59443	4.755	998.6	138,811
	Graders	Diesel	155	0.41	1	8	210	0.021256519	1.35085	10.807	2,269.4	315,451
	Off-Highway Trucks	Diesel	300	0.38	1	4	210	0.019688374	2.24447	8.978	1,885.4	262,065
ID45	Rollers	Diesel	80	0.38	1	8	165	0.019411121	0.59010	4.721	778.9	108,271
	Tractors/Loaders/Backhoes	Diesel	84	0.37	1	8	165	0.019125703	0.59443	4.755	784.6	109,065
	Graders	Diesel	155	0.41	1	8	165	0.021256519	1.35085	10.807	1,783.1	247,854
	Off-Highway Trucks	Diesel	300	0.38	1	4	165	0.019688374	2.24447	8.978	1,481.4	205,908
ID12-20	Excavators	Diesel	160	0.38	1	8	669	0.019753042	1.20098	9.608	6,427.7	893,446
	Rubber Tired Loaders	Diesel	300	0.36	2	8	669	0.018667584	2.01610	32.258	21,580.3	2,999,665
	Dumpers/Tenders	Diesel	16	0.38	4	8	669	0.022727412	0.13818	4.422	2,958.2	411,192
	Rollers	Diesel	80	0.38	2	8	669	0.019411121	0.59010	9.442	6,316.4	877,981
	Tractors/Loaders/Backhoes	Diesel	84	0.37	1	8	669	0.019125703	0.59443	4.755	3,181.4	442,211
	Forklifts	Diesel	101	0.2	3	8	669	0.010388111	0.20984	5.036	3,369.2	468,317
	Cranes	Diesel	225	0.29	1	8	669	0.014892312	0.97172	7.774	5,200.7	722,892
	Crawler Tractors	Diesel	600	0.43	1	8	669	0.022187691	5.72442	45.795	30,637.1	4,258,559
	Off-Highway Trucks	Diesel	300	0.38	1	4	669	0.019688374	2.24447	8.978	6,006.2	834,864
ID21&30	Cranes	Diesel	225	0.29	1	8	401	0.014892312	0.97172	7.774	3,117.3	433,303
	Forklifts	Diesel	101	0.2	1	8	401	0.010388111	0.20984	1.679	673.2	93,570
ID26-29	Excavators	Diesel	160	0.38	1	8	528	0.019753042	1.20098	9.608	5,073.0	705,142
	Rubber Tired Loaders	Diesel	300	0.36	2	8	528	0.018667584	2.01610	32.258	17,032.0	2,367,449
	Dumpers/Tenders	Diesel	16	0.38	4	8	528	0.022727412	0.13818	4.422	2,334.7	324,528
	Rollers	Diesel	80	0.38	2	8	528	0.019411121	0.59010	9.442	4,985.1	692,936
	Tractors/Loaders/Backhoes	Diesel	84	0.37	1	8	528	0.019125703	0.59443	4.755	2,510.9	349,009
	Forklifts	Diesel	101	0.2	3	8	528	0.010388111	0.20984	5.036	2,659.1	369,614
	Cranes	Diesel	225	0.29	1	8	528	0.014892312	0.97172	7.774	4,104.6	570,534
	Crawler Tractors	Diesel	600	0.43	1	8	528	0.022187691	5.72442	45.795	24,180.0	3,361,016
	Off-Highway Trucks	Diesel	300	0.38	4	4	528	0.019688374	2.24447	35.912	18,961.3	2,635,624
ID48-53	Excavators	Diesel	160	0.38	1	8	673	0.019753042	1.20098	9.608	6,466.1	898,788
	Rubber Tired Loaders	Diesel	300	0.36	1	8	673	0.018667584	2.01610	16.129	10,854.7	1,508,800
	Dumpers/Tenders	Diesel	16	0.38	2	8	673	0.022727412	0.13818	2.211	1,488.0	206,825
	Rollers	Diesel	80	0.38	1	8	673	0.019411121	0.59010	4.721	3,177.1	441,615
	Tractors/Loaders/Backhoes	Diesel	84	0.37	1	8	673	0.019125703	0.59443	4.755	3,200.4	444,855
	Forklifts	Diesel	101	0.2	1	8	673	0.010388111	0.20984	1.679	1,129.8	157,039
	Cranes	Diesel	225	0.29	1	8	673	0.014892312	0.97172	7.774	5,231.8	727,214
	Off-Highway Trucks	Diesel	300	0.38	1	4	673	0.019688374	2.24447	8.978	6,042.1	839,855
ID54	Cranes	Diesel	225	0.29	1	4	60	0.014892312	0.97172	3.887	233.2	32,417
	Forklifts	Diesel	101	0.2	1	8	60	0.010388111	0.20984	1.679	100.7	14,001
ID32	Graders	Diesel	155	0.41	1	8	40	0.021256519	1.35085	10.807	432.3	60,086
	Pavers	Diesel	225	0.42	1	8	40	0.021501586	2.03190	16.255	650.2	90,379
	Rollers	Diesel	80	0.38	2	8	40	0.019411121	0.59010	9.442	377.7	52,495
	Dumpers/Tenders	Diesel	16	0.38	1	8	40	0.022727412	0.13818	1.105	44.2	6,146
	Off-Highway Trucks	Diesel	300	0.38	1	4	40	0.019688374	2.24447	8.978	359.1	49,917
ID56	Graders	Diesel	155	0.41	1	8	20	0.0212565	1.35085	10.807	216.1	30,043
	Pavers	Diesel	225	0.42	1	8	20	0.0215016	2.03190	16.255	325.1	45,189
	Rollers	Diesel	80	0.38	2	8	20	0.0194111	0.59010	9.442	188.8	26,248
	Dumpers/Tenders	Diesel	16	0.38	1	8	20	0.0227274	0.13818	1.105	22.1	3,073
	Off-Highway Trucks	Diesel	300	0.38	1	4	20	0.0196884	2.24447	8.978	179.6	24,959
ID23	Pavers	Diesel	225	0.42	1	8	120	0.0215016	2.03190	16.255	1,950.6	271,137
	Rollers	Diesel	80	0.38	2	8	120	0.0194111	0.59010	9.442	1,133.0	157,485
	Graders	Diesel	155	0.41	1	8	120	0.0212565	1.35085	10.807	1,296.8	180,258
	Dumpers/Tenders	Diesel	16	0.38	1	8	120	0.0227274	0.13818	1.105	132.7	18,439
	Off-Highway Trucks	Diesel	300	0.38	1	4	120	0.0196884	2.24447	8.978	1,077.3	149,751
ID11	Excavators	Diesel	160	0.38	1	8	195	0.0197530	1.20098	9.608	1,873.5	260,422
	Rubber Tired Loaders	Diesel	300	0.36	1	8	195	0.0186676	2.01610	16.129	3,145.1	437,171
	Dumpers/Tenders	Diesel	16	0.38	2	8	195	0.0227274	0.13818	2.211	431.1	59,927
ID46	Excavators	Diesel	160	0.38	1	8	140	0.0197530	1.20098	9.608	1,345.1	186,969
	Rubber Tired Loaders	Diesel	300	0.36	1	8	140	0.0186676	2.01610	16.129	2,258.0	313,866
	Dumpers/Tenders	Diesel	16	0.38	1	8	140	0.0227274	0.13818	1.105	154.8	21,512
										Project Construction Off-Road Total	**281,454.2**	**39,122,133**

On-Road Construction Energy Use

Phase	Trip Type (Fleet Mix)	Trips	Distance (miles)	Work Days	Total VMT	Diesel (gal/mi)	Gas (gal/mi)	Elec (kWh/mi)	NG (gal/mi)	Total diesel gallons	Total gasoline gallons	Total kWh Electricity	Total NG Gallons	Total kBtu
ID7	Worker (LD_Mix)	10	18.5	110	20350.0	5.56372E-05	0.033459947	0.022841453	0	1.13	680.91	464.8235643	0	86,176
	Hauling/Vendor (HD_Mix)	32	20	110	70400.0	0.077218614	0.027022145	0.014728267	0.00344084	5436.19	1,902.36	1036.869991	242.2348	1,028,659
ID8	Worker (LD_Mix)	10	18.5	128	23680.0	5.56372E-05	0.033459947	0.022841453	0	1.32	792.33	540.885602	0	100,278
	Hauling/Vendor (HD_Mix)	94	20	128	240640.0	0.077218614	0.027022145	0.014728267	0.00344084	18581.89	6,502.61	3544.210152	828.0026	3,516,143
ID43	Worker (LD_Mix)	10	18.5	60	11100.0	5.56372E-05	0.033459947	0.022841453	0	0.62	371.41	253.540126	0	47,005
	Hauling/Vendor (HD_Mix)	0	20	60	0.0	0.077218614	0.027022145	0.014728267	0.00344084	0.00	-	0	0	-
ID9	Worker (LD_Mix)	27.5	18.5	154	78347.5	5.56372E-05	0.033459947	0.022841453	0	4.36	2,621.50	1789.570722	0	331,779
	Hauling/Vendor (HD_Mix)	0	20	154	0.0	0.077218614	0.027022145	0.014728267	0.00344084	0.00	-	0	0	-
ID38	Worker (LD_Mix)	2.5	18.5	351	16233.8	5.56372E-05	0.033459947	0.022841453	0	0.90	543.18	370.8024342	0	68,745
	Hauling/Vendor (HD_Mix)	0	20	351	0.0	0.077218614	0.027022145	0.014728267	0.00344084	0.00	-	0	0	-
ID10	Worker (LD_Mix)	10	18.5	210	38850.0	5.56372E-05	0.033459947	0.022841453	0	2.16	1,299.92	887.3904408	0	164,518
	Hauling/Vendor (HD_Mix)	0	20	210	0.0	0.077218614	0.027022145	0.014728267	0.00344084	0.00	-	0	0	-
ID45	Worker (LD_Mix)	10	18.5	165	30525.0	5.56372E-05	0.033459947	0.022841453	0	1.70	1,021.36	697.2353464	0	129,264
	Hauling/Vendor (HD_Mix)	0	20	165	0.0	0.077218614	0.027022145	0.014728267	0.00344084	0.00	-	0	0	-
ID12-20	Worker (LD_Mix)	0	18.5	669	0.0	5.56372E-05	0.033459947	0.022841453	0	0.00	-	0	0	-
	Hauling/Vendor (HD_Mix)	0	20	669	0.0	0.077218614	0.027022145	0.014728267	0.00344084	0.00	-	0	0	-
ID21&30	Worker (LD_Mix)	0	18.5	401	0.0	5.56372E-05	0.033459947	0.022841453	0	0.00	-	0	0	-
	Hauling/Vendor (HD_Mix)	0	20	401	0.0	0.077218614	0.027022145	0.014728267	0.00344084	0.00	-	0	0	-
ID26-39	Worker (LD_Mix)	0	18.5	528	0.0	5.56372E-05	0.033459947	0.022841453	0	0.00	-	0	0	-
	Hauling/Vendor (HD_Mix)	0	20	528	0.0	0.077218614	0.027022145	0.014728267	0.00344084	0.00	-	0	0	-
ID48-53	Worker (LD_Mix)	0	18.5	673	0.0	5.56372E-05	0.033459947	0.022841453	0	0.00	-	0	0	-
	Hauling/Vendor (HD_Mix)	0	20	673	0.0	0.077218614	0.027022145	0.014728267	0.00344084	0.00	-	0	0	-
ID54	Worker (LD_Mix)	0	18.5	60	0.0	5.56372E-05	0.033459947	0.022841453	0	0.00	-	0	0	-
	Hauling/Vendor (HD_Mix)	0	20	60	0.0	0.077218614	0.027022145	0.014728267	0.00344084	0.00	-	0	0	-
ID32	Worker (LD_Mix)	0	18.5	40	0.0	5.56372E-05	0.033459947	0.022841453	0	0.00	-	0	0	-
	Hauling/Vendor (HD_Mix)	40	10.2	40	16320.0	0.077218614	0.027022145	0.014728267	0.00344084	1260.21	441.00	240.3653162	56.15443	238,462
ID56	Worker (LD_Mix)	0	18.5	20	0.0	5.56372E-05	0.033459947	0.022841453	0	0.00	-	0	0	-
	Hauling/Vendor (HD_Mix)	0	20	20	0.0	0.077218614	0.027022145	0.014728267	0.00344084	0.00	-	0	0	-
ID23	Worker (LD_Mix)	15	18.5	120	33300.0	5.56372E-05	0.033459947	0.022841453	0	1.85	1,114.22	760.6203779	0	141,016
	Hauling/Vendor (HD_Mix)	40	10.2	120	48960.0	0.077218614	0.027022145	0.014728267	0.00344084	3780.62	1,323.00	721.0959485	168.4633	715,386
ID11	Worker (LD_Mix)	10	18.5	195	36075.0	5.56372E-05	0.033459947	0.022841453	0	2.01	1,207.07	824.0054094	0	152,767
	Hauling/Vendor (HD_Mix)	0	20	195	0.0	0.077218614	0.027022145	0.014728267	0.00344084	0.00	-	0	0	-
ID46	Worker (LD_Mix)	7.5	18.5	140	19425.0	5.56372E-05	0.033459947	0.022841453	0	1.08	649.96	443.6952204	0	82,259
	Hauling/Vendor (HD_Mix)	0	20	140	0.0	0.077218614	0.027022145	0.014728267	0.00344084	0.00	-	0	0	-
		Project Construction On-Road Total			**684206.3**					**29076.0**	**20470.8**	**12575.1**	**1294.9**	**6802456.9**

Notes:
1. Off-road equipment types and horsepower from CalEEMod defaults.
2. Off-road equipment count and hours from CalEEMod for the AQ/GHG report.
3. Off-road fuel consumption factors from CARB OFFROAD2021, for the South Coast Air Basin, aggregate model years. https://arb.ca.gov/emfac/emissions-inventory/.
4. On-road fleet mix and trip distances from CalEEMod for the AQ/GHG report.
5. On-road fuel consumption factors weighted average for fleet mix from CARB EMFAC2021, for the South Coast Air Basin, aggregate model years, aggregate speeds. https://arb.ca.gov/emfac/emissions-inventory/

Construction Energy Summary

Source	Gallons Diesel	Gallons Gas	kWh Electricity	Gallons NG	kBtu
Off-Road Construction Equipment	281,454	0	0	0	39,122,133
On-Road Construction Traffic	29,076	20,471	12,575	1,295	6,802,457
Project Construction Total	**310,530**	**20,471**	**12,575**	**1,295**	**45,924,590**

Whittier Narrows Pump Station Detailed Report

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1.1. Basic Project Information

Data Field	Value
Project Name	Whittier Narrows Pump Station
Construction Start Date	11/1/2029
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	18.2
Location	34.03291157638232, -118.03749259022956
County	Los Angeles-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4196
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

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
User Defined Industrial	1.00	User Defined Unit	4.20	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

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

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.03	1.58	16.2	19.6	0.05	0.56	3.90	4.45	0.52	1.64	2.15	—	6,270	6,270	0.27	0.53	6.12	6,441
Mit.	0.56	0.39	5.67	20.0	0.05	0.10	3.90	4.00	0.10	1.64	1.74	—	6,270	6,270	0.27	0.53	6.12	6,441
% Reduced	72%	75%	65%	-2%	—	82%	—	10%	81%	—	19%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.68	3.05	27.6	29.5	0.06	1.11	8.29	9.39	1.02	4.10	5.12	—	8,005	8,005	0.37	0.72	0.23	8,230
Mit.	0.71	0.58	9.85	29.7	0.06	0.12	8.29	8.41	0.12	4.10	4.22	—	8,005	8,005	0.37	0.72	0.23	8,230
% Reduced	81%	81%	64%	-1%	—	89%	—	11%	88%	—	18%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.02	0.82	7.92	10.8	0.02	0.26	0.93	1.18	0.24	0.39	0.63	—	2,637	2,637	0.11	0.14	0.63	2,681
Mit.	0.30	0.25	2.74	11.8	0.02	0.06	0.93	0.99	0.06	0.39	0.45	—	2,637	2,637	0.11	0.14	0.63	2,681
% Reduced	71%	70%	65%	-9%	—	77%	—	17%	76%	—	29%	—	—	—	—	—	—	—

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.19	0.15	1.45	1.97	< 0.005	0.05	0.17	0.22	0.04	0.07	0.11	—	437	437	0.02	0.02	0.10	444
Mit.	0.05	0.05	0.50	2.16	< 0.005	0.01	0.17	0.18	0.01	0.07	0.08	—	437	437	0.02	0.02	0.10	444
% Reduced	71%	70%	65%	-9%	—	77%	—	17%	76%	—	29%	—	—	—	—	—	—	—
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	2.03	1.58	16.2	19.6	0.05	0.56	3.90	4.45	0.52	1.64	2.15	—	6,270	6,270	0.27	0.53	6.12	6,441
2031	1.10	0.92	8.12	12.8	0.02	0.24	0.00	0.24	0.22	0.00	0.22	—	2,397	2,397	0.10	0.02	0.00	2,405
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2029	3.68	3.05	27.6	29.5	0.06	1.11	8.29	9.39	1.02	4.10	5.12	—	8,005	8,005	0.37	0.72	0.23	8,230
2030	2.02	1.57	16.4	19.5	0.05	0.56	3.90	4.45	0.52	1.64	2.15	—	6,261	6,261	0.27	0.53	0.16	6,427
2031	1.10	0.92	8.12	12.8	0.02	0.24	0.26	0.44	0.22	0.06	0.22	—	2,397	2,397	0.10	0.02	0.01	2,405
2032	0.74	0.77	5.45	9.50	0.01	0.17	0.26	0.43	0.15	0.06	0.22	—	1,582	1,582	0.06	0.01	0.01	1,587
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2029	0.39	0.31	3.05	3.00	0.01	0.11	0.80	0.91	0.10	0.30	0.41	—	874	874	0.04	0.06	0.30	892
2030	1.02	0.82	7.92	10.8	0.02	0.26	0.93	1.18	0.24	0.39	0.63	—	2,637	2,637	0.11	0.14	0.63	2,681
2031	0.77	0.65	5.70	9.05	0.02	0.17	0.01	0.18	0.16	< 0.005	0.16	—	1,680	1,680	0.07	0.01	0.01	1,686
2032	0.07	0.07	0.50	0.86	< 0.005	0.01	0.02	0.04	0.01	< 0.005	0.02	—	139	139	0.01	< 0.005	0.02	140
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2029	0.07	0.06	0.56	0.55	< 0.005	0.02	0.15	0.17	0.02	0.06	0.07	—	145	145	0.01	0.01	0.05	148
2030	0.19	0.15	1.45	1.97	< 0.005	0.05	0.17	0.22	0.04	0.07	0.11	—	437	437	0.02	0.02	0.10	444
2031	0.14	0.12	1.04	1.65	< 0.005	0.03	< 0.005	0.03	0.03	< 0.005	0.03	—	278	278	0.01	< 0.005	< 0.005	279
2032	0.01	0.01	0.09	0.16	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	23.1	23.1	< 0.005	< 0.005	< 0.005	23.2

2.3. Construction Emissions by Year, Mitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	0.56	0.39	5.67	20.0	0.05	0.10	3.90	4.00	0.10	1.64	1.74	—	6,270	6,270	0.27	0.53	6.12	6,441
2031	0.35	0.33	2.81	14.8	0.02	0.07	0.00	0.07	0.07	0.00	0.07	—	2,397	2,397	0.10	0.02	0.00	2,405
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2029	0.71	0.58	9.85	29.7	0.06	0.12	8.29	8.41	0.12	4.10	4.22	—	8,005	8,005	0.37	0.72	0.23	8,230
2030	0.55	0.38	5.83	19.9	0.05	0.10	3.90	4.00	0.10	1.64	1.74	—	6,261	6,261	0.27	0.53	0.16	6,427

2031	0.35	0.42	2.81	14.8	0.02	0.07	0.26	0.31	0.07	0.06	0.11	—	2,397	2,397	0.10	0.02	0.01	2,405
2032	0.29	0.42	2.19	10.1	0.01	0.05	0.26	0.31	0.05	0.06	0.11	—	1,582	1,582	0.06	0.01	0.01	1,587
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2029	0.08	0.06	0.83	3.00	0.01	0.01	0.80	0.81	0.01	0.30	0.32	—	874	874	0.04	0.06	0.30	892
2030	0.30	0.25	2.74	11.8	0.02	0.06	0.93	0.99	0.06	0.39	0.45	—	2,637	2,637	0.11	0.14	0.63	2,681
2031	0.25	0.24	1.98	10.4	0.02	0.05	0.01	0.06	0.05	< 0.005	0.05	—	1,680	1,680	0.07	0.01	0.01	1,686
2032	0.03	0.04	0.22	0.90	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	0.01	—	139	139	0.01	< 0.005	0.02	140
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2029	0.01	0.01	0.15	0.55	< 0.005	< 0.005	0.15	0.15	< 0.005	0.06	0.06	—	145	145	0.01	0.01	0.05	148
2030	0.05	0.05	0.50	2.16	< 0.005	0.01	0.17	0.18	0.01	0.07	0.08	—	437	437	0.02	0.02	0.10	444
2031	0.04	0.04	0.36	1.90	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	—	278	278	0.01	< 0.005	< 0.005	279
2032	< 0.005	0.01	0.04	0.16	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	23.1	23.1	< 0.005	< 0.005	< 0.005	23.2

3. Construction Emissions Details

3.1. Demolition (2029) - 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	2.55	2.14	18.6	18.5	0.03	0.74	—	0.74	0.68	—	0.68	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	3.74	3.74	—	0.57	0.57	—	—	—	—	—	—	—

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	0.15	0.12	1.07	1.06	< 0.005	0.04	—	0.04	0.04	—	0.04	—	197	197	0.01	< 0.005	—	198
Demolition	—	—	—	—	—	—	0.22	0.22	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.20	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	32.6	32.6	< 0.005	< 0.005	—	32.8
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.67	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	182	182	< 0.005	0.01	0.01	185
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.30	0.07	5.30	2.07	0.03	0.06	1.28	1.34	0.06	0.35	0.41	—	4,395	4,395	0.23	0.69	0.22	4,606
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	—	10.7	10.7	< 0.005	< 0.005	0.01	10.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	< 0.005	0.31	0.12	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	253	253	0.01	0.04	0.21	265

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.76	1.76	< 0.005	< 0.005	< 0.005	1.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.9	41.9	< 0.005	0.01	0.03	43.9

3.2. Demolition (2029) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.36	4.51	18.2	0.03	0.06	—	0.06	0.06	—	0.06	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	3.74	3.74	—	0.57	0.57	—	—	—	—	—	—	—
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	0.26	1.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	197	197	0.01	< 0.005	—	198
Demolition	—	—	—	—	—	—	0.22	0.22	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.05	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.6	32.6	< 0.005	< 0.005	—	32.8

Demolitio	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.67	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	182	182	< 0.005	0.01	0.01	185
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.30	0.07	5.30	2.07	0.03	0.06	1.28	1.34	0.06	0.35	0.41	—	4,395	4,395	0.23	0.69	0.22	4,606
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	—	10.7	10.7	< 0.005	< 0.005	0.01	10.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	< 0.005	0.31	0.12	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	253	253	0.01	0.04	0.21	265
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.76	1.76	< 0.005	< 0.005	< 0.005	1.79
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.9	41.9	< 0.005	0.01	0.03	43.9

3.3. Site Preparation (2029) - 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	3.53	2.97	25.9	28.1	0.05	1.09	—	1.09	1.00	—	1.00	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
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	0.18	1.56	1.69	< 0.005	0.07	—	0.07	0.06	—	0.06	—	319	319	0.01	< 0.005	—	320
Dust From Material Movement	—	—	—	—	—	—	0.46	0.46	—	0.24	0.24	—	—	—	—	—	—	—
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	0.29	0.31	< 0.005	0.01	—	0.01	0.01	—	0.01	—	52.8	52.8	< 0.005	< 0.005	—	53.0
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.78	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	213	213	< 0.005	0.01	0.02	215
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.09	0.02	1.61	0.63	0.01	0.02	0.39	0.41	0.02	0.11	0.13	—	1,340	1,340	0.07	0.21	0.07	1,404
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	—	13.0	13.0	< 0.005	< 0.005	0.02	13.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	80.7	80.7	< 0.005	0.01	0.07	84.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.16	2.16	< 0.005	< 0.005	< 0.005	2.18
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.4	13.4	< 0.005	< 0.005	0.01	14.0

3.4. Site Preparation (2029) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.50	2.59	28.3	0.05	0.10	—	0.10	0.10	—	0.10	—	5,296	5,296	0.21	0.04	—	5,314

Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
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	0.03	0.03	0.16	1.71	< 0.005	0.01	—	0.01	0.01	—	0.01	—	319	319	0.01	< 0.005	—	320
Dust From Material Movement	—	—	—	—	—	—	0.46	0.46	—	0.24	0.24	—	—	—	—	—	—	—
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	0.03	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	52.8	52.8	< 0.005	< 0.005	—	53.0
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.78	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	213	213	< 0.005	0.01	0.02	215
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.09	0.02	1.61	0.63	0.01	0.02	0.39	0.41	0.02	0.11	0.13	—	1,340	1,340	0.07	0.21	0.07	1,404

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	—	13.0	13.0	< 0.005	< 0.005	0.02	13.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.10	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	80.7	80.7	< 0.005	0.01	0.07	84.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.16	2.16	< 0.005	< 0.005	< 0.005	2.18
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.4	13.4	< 0.005	< 0.005	0.01	14.0

3.5. Grading (2030) - 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	1.76	1.48	12.6	17.3	0.03	0.51	—	0.51	0.47	—	0.47	—	2,959	2,959	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	—	2.77	2.77	—	1.34	1.34	—	—	—	—	—	—	—
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	1.76	1.48	12.6	17.3	0.03	0.51	—	0.51	0.47	—	0.47	—	2,959	2,959	0.12	0.02	—	2,969

Dust From Material Movement	—	—	—	—	—	—	2.77	2.77	—	1.34	1.34	—	—	—	—	—	—	—
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	0.42	0.35	3.01	4.13	0.01	0.12	—	0.12	0.11	—	0.11	—	705	705	0.03	0.01	—	708
Dust From Material Movement	—	—	—	—	—	—	0.66	0.66	—	0.32	0.32	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.55	0.75	< 0.005	0.02	—	0.02	0.02	—	0.02	—	117	117	< 0.005	< 0.005	—	117
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.06	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.74	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	189	189	< 0.005	0.01	0.44	192
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.22	0.05	3.59	1.47	0.02	0.04	0.93	0.98	0.04	0.26	0.30	—	3,121	3,121	0.14	0.50	5.68	3,280
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.05	0.05	0.04	0.63	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	180	180	< 0.005	0.01	0.01	182
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.22	0.05	3.74	1.49	0.02	0.04	0.93	0.98	0.04	0.26	0.30	—	3,123	3,123	0.14	0.50	0.15	3,276
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	43.4	43.4	< 0.005	< 0.005	0.05	44.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.01	0.90	0.35	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	744	744	0.03	0.12	0.58	781
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.19	7.19	< 0.005	< 0.005	0.01	7.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.16	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	123	123	0.01	0.02	0.10	129

3.6. Grading (2030) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.29	2.04	17.8	0.03	0.06	—	0.06	0.06	—	0.06	—	2,959	2,959	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	—	2.77	2.77	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.29	0.29	2.04	17.8	0.03	0.06	—	0.06	0.06	—	0.06	—	2,959	2,959	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	—	2.77	2.77	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.07	0.49	4.23	0.01	0.01	—	0.01	0.01	—	0.01	—	705	705	0.03	0.01	—	708
Dust From Material Movement	—	—	—	—	—	—	0.66	0.66	—	0.32	0.32	—	—	—	—	—	—	—
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	0.09	0.77	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	117	117	< 0.005	< 0.005	—	117
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.06	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.74	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	189	189	< 0.005	0.01	0.44	192
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.22	0.05	3.59	1.47	0.02	0.04	0.93	0.98	0.04	0.26	0.30	—	3,121	3,121	0.14	0.50	5.68	3,280

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.63	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	180	180	< 0.005	0.01	0.01	182
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.22	0.05	3.74	1.49	0.02	0.04	0.93	0.98	0.04	0.26	0.30	—	3,123	3,123	0.14	0.50	0.15	3,276
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	43.4	43.4	< 0.005	< 0.005	0.05	44.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.01	0.90	0.35	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	744	744	0.03	0.12	0.58	781
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.19	7.19	< 0.005	< 0.005	0.01	7.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.16	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	123	123	0.01	0.02	0.10	129

3.7. Building Construction (2030) - 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	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
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	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
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	0.54	0.45	4.01	6.15	0.01	0.12	—	0.12	0.11	—	0.11	—	1,144	1,144	0.05	0.01	—	1,148
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	0.10	0.08	0.73	1.12	< 0.005	0.02	—	0.02	0.02	—	0.02	—	189	189	0.01	< 0.005	—	190
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2030) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.33	2.81	14.8	0.02	0.07	—	0.07	0.07	—	0.07	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.33	2.81	14.8	0.02	0.07	—	0.07	0.07	—	0.07	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.16	1.34	7.08	0.01	0.04	—	0.04	0.03	—	0.03	—	1,144	1,144	0.05	0.01	—	1,148
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.03	0.24	1.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	189	189	0.01	< 0.005	—	190
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2031) - 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	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
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	0.74	0.62	5.48	8.67	0.02	0.16	—	0.16	0.15	—	0.15	—	1,618	1,618	0.07	0.01	—	1,624
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	0.14	0.11	1.00	1.58	< 0.005	0.03	—	0.03	0.03	—	0.03	—	268	268	0.01	< 0.005	—	269
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2031) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.33	2.81	14.8	0.02	0.07	—	0.07	0.07	—	0.07	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.35	0.33	2.81	14.8	0.02	0.07	—	0.07	0.07	—	0.07	—	2,397	2,397	0.10	0.02	—	2,405
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	0.23	0.22	1.90	10.0	0.02	0.05	—	0.05	0.05	—	0.05	—	1,618	1,618	0.07	0.01	—	1,624
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	0.04	0.35	1.83	< 0.005	0.01	—	0.01	0.01	—	0.01	—	268	268	0.01	< 0.005	—	269
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2031) - 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	0.70	0.58	5.49	8.78	0.01	0.18	—	0.18	0.16	—	0.16	—	1,350	1,350	0.05	0.01	—	1,354
Paving	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.03	0.02	0.21	0.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	52.8	52.8	< 0.005	< 0.005	—	53.0
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	< 0.005	< 0.005	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.75	8.75	< 0.005	< 0.005	—	8.78

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	0.06	0.05	0.06	0.79	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	236	236	< 0.005	0.01	0.01	239
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.36	9.36	< 0.005	< 0.005	0.01	9.49
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.55	1.55	< 0.005	< 0.005	< 0.005	1.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Paving (2031) - Mitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.21	2.14	9.35	0.01	0.05	—	0.05	0.05	—	0.05	—	1,350	1,350	0.05	0.01	—	1,354
Paving	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.37	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	52.8	52.8	< 0.005	< 0.005	—	53.0
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	< 0.005	< 0.005	0.02	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.75	8.75	< 0.005	< 0.005	—	8.78
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	0.06	0.05	0.06	0.79	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	236	236	< 0.005	0.01	0.01	239
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.36	9.36	< 0.005	< 0.005	0.01	9.49
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.55	1.55	< 0.005	< 0.005	< 0.005	1.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Paving (2032) - 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	0.68	0.57	5.40	8.77	0.01	0.17	—	0.17	0.15	—	0.15	—	1,350	1,350	0.05	0.01	—	1,354
Paving	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.72	< 0.005	0.01	—	0.01	0.01	—	0.01	—	111	111	< 0.005	< 0.005	—	111
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	0.08	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.4	18.4	< 0.005	< 0.005	—	18.4
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	0.06	0.05	0.05	0.74	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	233	233	< 0.005	< 0.005	0.01	233
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.4	19.4	< 0.005	< 0.005	0.02	19.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.21	3.21	< 0.005	< 0.005	< 0.005	3.25
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Paving (2032) - Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.21	2.14	9.35	0.01	0.05	—	0.05	0.05	—	0.05	—	1,350	1,350	0.05	0.01	—	1,354
Paving	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.18	0.77	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	111	111	< 0.005	< 0.005	—	111
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	< 0.005	< 0.005	0.03	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.4	18.4	< 0.005	< 0.005	—	18.4
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	0.06	0.05	0.05	0.74	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	233	233	< 0.005	< 0.005	0.01	233
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.4	19.4	< 0.005	< 0.005	0.02	19.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.21	3.21	< 0.005	< 0.005	< 0.005	3.25
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2032) - 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	0.11	0.09	0.77	1.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	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	0.01	0.01	0.05	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.14	9.14	< 0.005	< 0.005	—	9.18
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.51	1.51	< 0.005	< 0.005	—	1.52
Architectural Coatings	—	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Architectural Coating (2032) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.65	0.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.04	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.14	9.14	< 0.005	< 0.005	—	9.18
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.51	1.51	< 0.005	< 0.005	—	1.52

Architect Coatings	—	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. 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)

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

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

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

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

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	11/1/2029	11/29/2029	5.00	21.0	—
Site Preparation	Site Preparation	11/30/2029	12/31/2029	5.00	22.0	—
Grading	Grading	1/1/2030	5/1/2030	5.00	87.0	—
Building Construction	Building Construction	5/2/2030	12/11/2031	5.00	421	—
Paving	Paving	12/12/2031	2/11/2032	5.00	44.0	—
Architectural Coating	Architectural Coating	2/12/2032	3/17/2032	5.00	25.0	—

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

Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	6.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

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

Demolition	Concrete/Industrial Saws	Diesel	Tier 4 Final	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Tier 4 Final	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Final	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Final	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Tier 4 Final	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Final	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Tier 4 Final	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Final	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Final	2.00	6.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	69.0	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	21.0	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	50.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	0.00	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—

Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	69.0	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	21.0	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	50.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	0.00	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT

Paving	—	—	—	—
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

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)
Architectural Coating	0.00	0.00	0.00	0.00	—

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 (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	5,800	—
Site Preparation	—	3,700	31.5	0.00	—
Grading	12,000	23,000	87.0	0.00	—
Paving	0.00	0.00	0.00	0.00	2.60

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Industrial	2.60	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2029	0.00	532	0.03	< 0.005
2030	0.00	532	0.03	< 0.005
2031	0.00	532	0.03	< 0.005
2032	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

5.18.2.2. Mitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	17.1	annual days of extreme heat
Extreme Precipitation	5.60	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	3.21	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	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	72.8

AQ-PM	80.1
AQ-DPM	88.0
Drinking Water	95.3
Lead Risk Housing	46.5
Pesticides	59.5
Toxic Releases	83.5
Traffic	98.2
Effect Indicators	—
CleanUp Sites	68.9
Groundwater	4.52
Haz Waste Facilities/Generators	65.2
Impaired Water Bodies	51.2
Solid Waste	52.9
Sensitive Population	—
Asthma	41.8
Cardio-vascular	64.3
Low Birth Weights	33.0
Socioeconomic Factor Indicators	—
Education	76.0
Housing	32.3
Linguistic	61.5
Poverty	44.1
Unemployment	19.6

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	71.16643141
Employed	88.14320544
Median HI	68.22789683
Education	—
Bachelor's or higher	38.73989478
High school enrollment	19.24804312
Preschool enrollment	82.06082382
Transportation	—
Auto Access	92.6344155
Active commuting	47.45284229
Social	—
2-parent households	29.71897857
Voting	49.6856153
Neighborhood	—
Alcohol availability	61.45258565
Park access	41.88374182
Retail density	22.52021045
Supermarket access	54.16399333
Tree canopy	59.5534454
Housing	—
Homeownership	86.71885025
Housing habitability	84.0626203
Low-inc homeowner severe housing cost burden	39.21467984
Low-inc renter severe housing cost burden	93.86629026
Uncrowded housing	29.84729886
Health Outcomes	—

Insured adults	35.27524702
Arthritis	0.0
Asthma ER Admissions	52.1
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	81.8
Cognitively Disabled	66.4
Physically Disabled	49.3
Heart Attack ER Admissions	46.3
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	76.9
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	0.0
SLR Inundation Area	0.0
Children	48.8

Elderly	30.4
English Speaking	26.7
Foreign-born	71.4
Outdoor Workers	38.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	52.1
Traffic Density	97.6
Traffic Access	23.0
Other Indices	—
Hardship	43.3
Other Decision Support	—
2016 Voting	33.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	75.0
Healthy Places Index Score for Project Location (b)	65.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
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	4.2 acre site
Construction: Construction Phases	Schedule provided by Black & Veatch
Construction: Paving	Conveyance System Data Needs_Pump Stations_Ph1 20221114_TRIP-DATA.xlsx
Construction: Dust From Material Movement	Volumes provided by B&V

Whittier Narrows Pump Station Construction Energy Use

Off-Road Construction Equipment Energy Use

Phase	Equipment	Fuel	HP	Load Factor	Equipment Count	Hours/Day	Work Days	Gallons /HP-Hr	Gallons /Hour	Gallons /Day	Total Gallons	Total kBtu
Demolition	Concrete/Industrial Saws	Diesel	33	0.73	1	8.0	21	0.0418250	1.00756	8.061	169.3	23,529
	Excavators	Diesel	36	0.38	3	8.0	21	0.0219661	0.30050	7.212	151.5	21,052
	Rubber Tired Dozers	Diesel	367	0.4	2	8.0	21	0.0206268	3.02801	48.448	1,017.4	141,420
Site Preparation	Rubber Tired Dozers	Diesel	367	0.4	3	8.0	22	0.0206268	3.02801	72.672	1,598.8	222,232
	Tractors/Loaders/Backhoes	Diesel	84	0.37	4	8.0	22	0.0191257	0.59443	19.022	418.5	58,168
Grading	Excavators	Diesel	36	0.38	1	8.0	87	0.0219661	0.30050	2.404	209.1	29,071
	Graders	Diesel	148	0.41	1	8.0	87	0.0212565	1.28985	10.319	897.7	124,785
	Rubber Tired Dozers	Diesel	367	0.4	1	8.0	87	0.0206268	3.02801	24.224	2,107.5	292,942
	Tractors/Loaders/Backhoes	Diesel	84	0.37	3	8	87	0.0191257	0.59443	14.266	1,241.2	172,522
Building Construction	Cranes	Diesel	367	0.29	1	7	421	0.0148894	1.58468	11.093	4,670.1	649,137
	Forklifts	Diesel	82	0.2	3	8	421	0.0103808	0.17025	4.086	1,720.2	239,102
	Generator Sets	Diesel	14	0.74	1	8	421	0.0423044	0.43827	3.506	1,476.1	205,178
	Tractors/Loaders/Backhoes	Diesel	84	0.37	3	7	421	0.0191257	0.59443	12.483	5,255.3	730,491
	Welders	Diesel	46	0.45	1	8	421	0.0258087	0.53424	4.274	1,799.3	250,105
Paving	Cement and Mortar Mixers	Diesel	10	0.56	2	6.0	44	0.0354635	0.19860	2.383	104.9	14,575
	Pavers	Diesel	81	0.42	1	8.0	44	0.0215097	0.73176	5.854	257.6	35,803
	Paving Equipment	Diesel	89	0.36	2	6.0	44	0.0183606	0.58827	7.059	310.6	43,175
	Rollers	Diesel	36	0.38	2	6.0	44	0.0215765	0.29517	3.542	155.8	21,663
	Tractors/Loaders/Backhoes	Diesel	84	0.37	1	8.0	44	0.0191257	0.59443	4.755	209.2	29,084
Architectural Coating	Air Compressors	Diesel	37	0.48	1	6.0	25	0.0275656	0.48956	2.937	73.4	10,207
										Project Construction Off-Road Total	**23,843.5**	**3,314,242**

On-Road Construction Energy Use

Phase	Trip Type (Fleet Mix)	Trips	Distance (miles)	Work Days	Total VMT	Diesel (gal/mi)	Gas (gal/mi)	Elec (kWh/mi)	NG (gal/mi)	Total diesel gallons	Total gasoline gallons	Total kWh Electricity	Total NG Gallons	Total kBtu
Demolition	Worker (LDA, LDT1, LDT2)	15	18.5	21	5827.5	5.56372E-05	0.033459947	0.022841453	0	0.32	194.99	133.1085661	0	24,678
	Hauling (HHDT)	69.0476	20	21	29000.0	0.077218614	0.027022145	0.014728267	0.00344084	2239.34	783.64	427.1197407	99.78422	423,737
Site Preparation	Worker (LDA, LDT1, LDT2)	17.5	18.5	22	7122.5	5.56372E-05	0.033459947	0.022841453	0	0.40	238.32	162.6882475	0	30,162
	Hauling (HHDT)	21.0455	20	22	9260.0	0.077218614	0.027022145	0.014728267	0.00344084	715.04	250.23	136.3837517	31.86213	135,304
Grading	Worker (LDA, LDT1, LDT2)	15	18.5	87	24142.5	5.56372E-05	0.033459947	0.022841453	0	1.34	807.81	551.449774	0	102,236
	Hauling (HHDT)	50.2874	20	87	87500.0	0.077218614	0.027022145	0.014728267	0.00344084	6756.63	2,364.44	1288.723356	301.0731	1,278,518
Building Construction	Worker (LDA, LDT1, LDT2)	0	18.5	421	0.0	5.56372E-05	0.033459947	0.022841453	0	0.00	-	0	0	-
	Vendor (HHDT, MHDT)	0	10.2	421	0.0	0.077218614	0.027022145	0.014728267	0.00344084	0.00	-	0	0	-
Paving	Worker (LDA, LDT1, LDT2)	20	18.5	44	16280.0	5.56372E-05	0.033459947	0.022841453	0	0.91	544.73	371.8588514	0	68,941
	Hauling (HHDT)	0	20	44	0.0	0.077218614	0.027022145	0.014728267	0.00344084	0.00	-	0	0	-
Architectural Coating	Worker (LDA, LDT1, LDT2)	0	18.5	25	0.0	5.56372E-05	0.033459947	0.022841453	0	0.00	-	0	0	-
			Project Construction On-Road Total		**179132.5**					**9714.0**	**5184.1**	**3071.3**	**432.7**	**2063575.7**

Notes:
1. Off-road equipment types and horsepower from CalEEMod defaults.
2. Off-road equipment count and hours from CalEEMod for the AQ/GHG report.
3. Off-road fuel consumption factors from CARB OFFROAD2021, for the South Coast Air Basin, aggregate model years. https://arb.ca.gov/emfac/emissions-inventory/.
4. On-road fleet mix and trip distances from CalEEMod for the AQ/GHG report.
5. On-road fuel consumption factors weighted average for fleet mix from CARB EMFAC2021, for the South Coast Air Basin, aggregate model years, aggregate speeds. https://arb.ca.gov/emfac/emissions-inventory/

Construction Energy Summary

Source	Gallons Diesel	Gallons Gas	kWh Electricity	Gallons NG	kBtu
Off-Road Construction Equipment	23,843	0	0	0	3,314,242
On-Road Construction Traffic	9,714	5,184	3,071	433	2,063,576
Project Construction Total	**33,557**	**5,184**	**3,071**	**433**	**5,377,818**

Santa Fe Spreading Grounds Pump Station Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Santa Fe Spreading Grounds Pump Station
Construction Start Date	11/26/2029
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	22.4
Location	34.12949154427281, -117.95930895399303
County	Los Angeles-South Coast
City	Irwindale
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4900
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

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
User Defined Industrial	1.00	User Defined Unit	4.20	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

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

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.03	1.58	16.2	19.6	0.05	0.56	3.90	4.45	0.52	1.64	2.15	—	6,270	6,270	0.27	0.53	6.12	6,441
Mit.	0.56	0.39	5.67	20.0	0.05	0.10	3.90	4.00	0.10	1.64	1.74	—	6,270	6,270	0.27	0.53	6.12	6,441
% Reduced	72%	75%	65%	-2%	—	82%	—	10%	81%	—	19%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.68	3.05	27.6	29.8	0.06	1.11	8.29	9.39	1.02	4.10	5.12	—	7,622	7,622	0.35	0.66	0.21	7,829
Mit.	0.69	0.58	9.39	29.7	0.06	0.12	8.29	8.41	0.12	4.10	4.22	—	7,622	7,622	0.35	0.66	0.21	7,829
% Reduced	81%	81%	66%	< 0.5%	—	89%	—	11%	88%	—	18%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.14	0.92	8.79	11.6	0.02	0.30	1.33	1.63	0.27	0.59	0.86	—	2,844	2,844	0.12	0.15	0.69	2,892
Mit.	0.31	0.26	2.79	12.5	0.02	0.06	1.33	1.39	0.06	0.59	0.65	—	2,844	2,844	0.12	0.15	0.69	2,892
% Reduced	73%	72%	68%	-8%	—	79%	—	14%	78%	—	25%	—	—	—	—	—	—	—

Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.21	0.17	1.60	2.11	< 0.005	0.05	0.24	0.30	0.05	0.11	0.16	—	471	471	0.02	0.02	0.11	479
Mit.	0.06	0.05	0.51	2.28	< 0.005	0.01	0.24	0.25	0.01	0.11	0.12	—	471	471	0.02	0.02	0.11	479
% Reduced	73%	72%	68%	-8%	—	79%	—	14%	78%	—	25%	—	—	—	—	—	—	—
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—
Mit.	—	No	No	No	No	—	—	No	—	—	No	—	—	—	—	—	—	—

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	2.03	1.58	16.2	19.6	0.05	0.56	3.90	4.45	0.52	1.64	2.15	—	6,270	6,270	0.27	0.53	6.12	6,441
2031	1.10	0.92	8.12	12.8	0.02	0.24	0.00	0.24	0.22	0.00	0.22	—	2,397	2,397	0.10	0.02	0.00	2,405
2032	0.11	0.09	0.77	1.10	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	—	134	134	0.01	< 0.005	0.00	134

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2029	3.68	3.05	27.6	29.5	0.06	1.11	8.29	9.39	1.02	4.10	5.12	—	7,622	7,622	0.35	0.66	0.21	7,829
2030	3.62	2.99	26.8	29.8	0.06	1.08	8.29	9.37	1.00	4.10	5.10	—	6,812	6,812	0.28	0.53	0.16	6,897
2031	1.10	0.92	8.12	12.8	0.02	0.24	0.00	0.24	0.22	0.00	0.22	—	2,397	2,397	0.10	0.02	0.00	2,405
2032	1.07	0.90	7.87	12.8	0.02	0.22	0.26	0.43	0.21	0.06	0.22	—	2,397	2,397	0.10	0.02	0.01	2,405
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2029	0.22	0.17	1.75	1.62	< 0.005	0.06	0.38	0.44	0.06	0.10	0.15	—	547	547	0.02	0.04	0.24	562
2030	1.14	0.92	8.79	11.6	0.02	0.30	1.33	1.63	0.27	0.59	0.86	—	2,844	2,844	0.12	0.15	0.69	2,892
2031	0.78	0.66	5.80	9.18	0.02	0.17	0.00	0.17	0.16	0.00	0.16	—	1,712	1,712	0.07	0.01	0.00	1,718
2032	0.10	0.10	0.73	1.26	< 0.005	0.02	0.03	0.05	0.02	0.01	0.03	—	206	206	0.01	< 0.005	0.02	207
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2029	0.04	0.03	0.32	0.30	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	—	90.6	90.6	< 0.005	0.01	0.04	93.0
2030	0.21	0.17	1.60	2.11	< 0.005	0.05	0.24	0.30	0.05	0.11	0.16	—	471	471	0.02	0.02	0.11	479
2031	0.14	0.12	1.06	1.67	< 0.005	0.03	0.00	0.03	0.03	0.00	0.03	—	283	283	0.01	< 0.005	0.00	284
2032	0.02	0.02	0.13	0.23	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	34.1	34.1	< 0.005	< 0.005	< 0.005	34.2

2.3. Construction Emissions by Year, Mitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2030	0.56	0.39	5.67	20.0	0.05	0.10	3.90	4.00	0.10	1.64	1.74	—	6,270	6,270	0.27	0.53	6.12	6,441
2031	0.35	0.33	2.81	14.8	0.02	0.07	0.00	0.07	0.07	0.00	0.07	—	2,397	2,397	0.10	0.02	0.00	2,405
2032	0.02	0.02	0.65	0.96	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	—	134	134	0.01	< 0.005	0.00	134

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2029	0.69	0.58	9.39	29.7	0.06	0.12	8.29	8.41	0.12	4.10	4.22	—	7,622	7,622	0.35	0.66	0.21	7,829
2030	0.64	0.57	5.83	29.7	0.06	0.12	8.29	8.41	0.12	4.10	4.22	—	6,812	6,812	0.28	0.53	0.16	6,897
2031	0.35	0.33	2.81	14.8	0.02	0.07	0.00	0.07	0.07	0.00	0.07	—	2,397	2,397	0.10	0.02	0.00	2,405
2032	0.35	0.42	2.81	14.8	0.02	0.07	0.26	0.31	0.07	0.06	0.11	—	2,397	2,397	0.10	0.02	0.01	2,405
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2029	0.05	0.04	0.64	1.60	< 0.005	0.01	0.38	0.39	0.01	0.10	0.10	—	547	547	0.02	0.04	0.24	562
2030	0.31	0.26	2.79	12.5	0.02	0.06	1.33	1.39	0.06	0.59	0.65	—	2,844	2,844	0.12	0.15	0.69	2,892
2031	0.25	0.23	2.01	10.6	0.02	0.05	0.00	0.05	0.05	0.00	0.05	—	1,712	1,712	0.07	0.01	0.00	1,718
2032	0.04	0.05	0.32	1.32	< 0.005	0.01	0.03	0.04	0.01	0.01	0.01	—	206	206	0.01	< 0.005	0.02	207
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2029	0.01	0.01	0.12	0.29	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	90.6	90.6	< 0.005	0.01	0.04	93.0
2030	0.06	0.05	0.51	2.28	< 0.005	0.01	0.24	0.25	0.01	0.11	0.12	—	471	471	0.02	0.02	0.11	479
2031	0.05	0.04	0.37	1.93	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	—	283	283	0.01	< 0.005	0.00	284
2032	0.01	0.01	0.06	0.24	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	34.1	34.1	< 0.005	< 0.005	< 0.005	34.2

3. Construction Emissions Details

3.1. Demolition (2029) - 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	2.55	2.14	18.6	18.5	0.03	0.74	—	0.74	0.68	—	0.68	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	3.41	3.41	—	0.52	0.52	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.17	1.16	< 0.005	0.05	—	0.05	0.04	—	0.04	—	216	216	0.01	< 0.005	—	217
Demolition	—	—	—	—	—	—	0.22	0.22	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01	—	35.8	35.8	< 0.005	< 0.005	—	35.9
Demolition	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.67	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	182	182	< 0.005	0.01	0.01	185
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.27	0.06	4.84	1.89	0.03	0.06	1.17	1.22	0.06	0.32	0.38	—	4,013	4,013	0.21	0.63	0.20	4,206
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	—	11.7	11.7	< 0.005	< 0.005	0.01	11.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	< 0.005	0.31	0.12	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	253	253	0.01	0.04	0.21	265
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.93	1.93	< 0.005	< 0.005	< 0.005	1.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.9	41.9	< 0.005	0.01	0.03	43.9

3.2. Demolition (2029) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.36	4.51	18.2	0.03	0.06	—	0.06	0.06	—	0.06	—	3,427	3,427	0.14	0.03	—	3,439
Demolition	—	—	—	—	—	—	3.41	3.41	—	0.52	0.52	—	—	—	—	—	—	—
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	0.28	1.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	216	216	0.01	< 0.005	—	217

Demolitio	—	—	—	—	—	—	0.22	0.22	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.05	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	35.8	35.8	< 0.005	< 0.005	—	35.9
Demolitio n	—	—	—	—	—	—	0.04	0.04	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.67	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	182	182	< 0.005	0.01	0.01	185
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.27	0.06	4.84	1.89	0.03	0.06	1.17	1.22	0.06	0.32	0.38	—	4,013	4,013	0.21	0.63	0.20	4,206
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	—	11.7	11.7	< 0.005	< 0.005	0.01	11.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	< 0.005	0.31	0.12	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	253	253	0.01	0.04	0.21	265
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.93	1.93	< 0.005	< 0.005	< 0.005	1.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.9	41.9	< 0.005	0.01	0.03	43.9

3.3. Site Preparation (2029) - 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	3.53	2.97	25.9	28.1	0.05	1.09	—	1.09	1.00	—	1.00	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
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	0.03	0.03	0.25	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	51.8	51.8	< 0.005	< 0.005	—	52.0
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.58	8.58	< 0.005	< 0.005	—	8.61

Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.78	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	213	213	< 0.005	0.01	0.02	215
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.09	0.02	1.61	0.63	0.01	0.02	0.39	0.41	0.02	0.11	0.13	—	1,340	1,340	0.07	0.21	0.07	1,404
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	—	2.11	2.11	< 0.005	< 0.005	< 0.005	2.14
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.1	13.1	< 0.005	< 0.005	0.01	13.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.35
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.17	2.17	< 0.005	< 0.005	< 0.005	2.28

3.4. Site Preparation (2029) - Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.50	2.59	28.3	0.05	0.10	—	0.10	0.10	—	0.10	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.28	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	51.8	51.8	< 0.005	< 0.005	—	52.0
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.58	8.58	< 0.005	< 0.005	—	8.61
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.78	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	213	213	< 0.005	0.01	0.02	215
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.09	0.02	1.61	0.63	0.01	0.02	0.39	0.41	0.02	0.11	0.13	—	1,340	1,340	0.07	0.21	0.07	1,404
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	—	2.11	2.11	< 0.005	< 0.005	< 0.005	2.14
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.1	13.1	< 0.005	< 0.005	0.01	13.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.35	0.35	< 0.005	< 0.005	< 0.005	0.35
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.17	2.17	< 0.005	< 0.005	< 0.005	2.28

3.5. Site Preparation (2030) - 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	3.47	2.92	25.2	28.4	0.05	1.07	—	1.07	0.98	—	0.98	—	5,296	5,296	0.21	0.04	—	5,314

Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.23	1.39	< 0.005	0.05	—	0.05	0.05	—	0.05	—	259	259	0.01	< 0.005	—	260
Dust From Material Movement	—	—	—	—	—	—	0.38	0.38	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.23	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	42.9	42.9	< 0.005	< 0.005	—	43.0
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.73	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	209	209	< 0.005	0.01	0.01	212
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.09	0.02	1.56	0.62	0.01	0.02	0.39	0.41	0.02	0.11	0.13	—	1,307	1,307	0.06	0.21	0.06	1,371

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	—	10.4	10.4	< 0.005	< 0.005	0.01	10.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	63.9	63.9	< 0.005	0.01	0.05	67.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.72	1.72	< 0.005	< 0.005	< 0.005	1.74
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.01	11.1

3.6. Site Preparation (2030) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.50	2.59	28.3	0.05	0.10	—	0.10	0.10	—	0.10	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
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	0.13	1.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	259	259	0.01	< 0.005	—	260

Dust From Material Movement	—	—	—	—	—	—	0.38	0.38	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.25	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	42.9	42.9	< 0.005	< 0.005	—	43.0
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.73	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	209	209	< 0.005	0.01	0.01	212
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.09	0.02	1.56	0.62	0.01	0.02	0.39	0.41	0.02	0.11	0.13	—	1,307	1,307	0.06	0.21	0.06	1,371
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	—	10.4	10.4	< 0.005	< 0.005	0.01	10.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	63.9	63.9	< 0.005	0.01	0.05	67.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.72	1.72	< 0.005	< 0.005	< 0.005	1.74
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.01	11.1

3.7. Grading (2030) - 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	1.76	1.48	12.6	17.3	0.03	0.51	—	0.51	0.47	—	0.47	—	2,959	2,959	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	—	2.77	2.77	—	1.34	1.34	—	—	—	—	—	—	—
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	1.76	1.48	12.6	17.3	0.03	0.51	—	0.51	0.47	—	0.47	—	2,959	2,959	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	—	2.77	2.77	—	1.34	1.34	—	—	—	—	—	—	—
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	0.42	0.35	3.01	4.13	0.01	0.12	—	0.12	0.11	—	0.11	—	705	705	0.03	0.01	—	708

Dust From Material Movement	—	—	—	—	—	—	0.66	0.66	—	0.32	0.32	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.55	0.75	< 0.005	0.02	—	0.02	0.02	—	0.02	—	117	117	< 0.005	< 0.005	—	117
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.06	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.74	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	189	189	< 0.005	0.01	0.44	192
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.22	0.05	3.59	1.47	0.02	0.04	0.93	0.98	0.04	0.26	0.30	—	3,121	3,121	0.14	0.50	5.68	3,280
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.63	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	180	180	< 0.005	0.01	0.01	182
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.22	0.05	3.74	1.49	0.02	0.04	0.93	0.98	0.04	0.26	0.30	—	3,123	3,123	0.14	0.50	0.15	3,276
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	43.4	43.4	< 0.005	< 0.005	0.05	44.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.01	0.90	0.35	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	744	744	0.03	0.12	0.58	781

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.19	7.19	< 0.005	< 0.005	0.01	7.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.16	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	123	123	0.01	0.02	0.10	129

3.8. Grading (2030) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.29	2.04	17.8	0.03	0.06	—	0.06	0.06	—	0.06	—	2,959	2,959	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	—	2.77	2.77	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.29	2.04	17.8	0.03	0.06	—	0.06	0.06	—	0.06	—	2,959	2,959	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	—	2.77	2.77	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.07	0.07	0.49	4.23	0.01	0.01	—	0.01	0.01	—	0.01	—	705	705	0.03	0.01	—	708
Dust From Material Movement	—	—	—	—	—	—	0.66	0.66	—	0.32	0.32	—	—	—	—	—	—	—
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	0.09	0.77	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	117	117	< 0.005	< 0.005	—	117
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.06	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.74	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	189	189	< 0.005	0.01	0.44	192
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.22	0.05	3.59	1.47	0.02	0.04	0.93	0.98	0.04	0.26	0.30	—	3,121	3,121	0.14	0.50	5.68	3,280
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.63	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	180	180	< 0.005	0.01	0.01	182
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.22	0.05	3.74	1.49	0.02	0.04	0.93	0.98	0.04	0.26	0.30	—	3,123	3,123	0.14	0.50	0.15	3,276
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	43.4	43.4	< 0.005	< 0.005	0.05	44.0

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.05	0.01	0.90	0.35	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	744	744	0.03	0.12	0.58	781
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.19	7.19	< 0.005	< 0.005	0.01	7.28
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.16	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	123	123	0.01	0.02	0.10	129

3.9. Building Construction (2030) - 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	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
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	1.12	0.94	8.39	12.9	0.02	0.26	—	0.26	0.24	—	0.24	—	2,397	2,397	0.10	0.02	—	2,405
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	0.48	0.40	3.56	5.47	0.01	0.11	—	0.11	0.10	—	0.10	—	1,018	1,018	0.04	0.01	—	1,021
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	0.09	0.07	0.65	1.00	< 0.005	0.02	—	0.02	0.02	—	0.02	—	169	169	0.01	< 0.005	—	169
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2030) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.33	2.81	14.8	0.02	0.07	—	0.07	0.07	—	0.07	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.33	2.81	14.8	0.02	0.07	—	0.07	0.07	—	0.07	—	2,397	2,397	0.10	0.02	—	2,405
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	0.15	0.14	1.19	6.29	0.01	0.03	—	0.03	0.03	—	0.03	—	1,018	1,018	0.04	0.01	—	1,021
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.22	1.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	169	169	0.01	< 0.005	—	169
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2031) - 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	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.10	0.92	8.12	12.8	0.02	0.24	—	0.24	0.22	—	0.22	—	2,397	2,397	0.10	0.02	—	2,405
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	0.78	0.66	5.80	9.18	0.02	0.17	—	0.17	0.16	—	0.16	—	1,712	1,712	0.07	0.01	—	1,718
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	0.14	0.12	1.06	1.67	< 0.005	0.03	—	0.03	0.03	—	0.03	—	283	283	0.01	< 0.005	—	284
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2031) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.33	2.81	14.8	0.02	0.07	—	0.07	0.07	—	0.07	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.33	2.81	14.8	0.02	0.07	—	0.07	0.07	—	0.07	—	2,397	2,397	0.10	0.02	—	2,405
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	0.25	0.23	2.01	10.6	0.02	0.05	—	0.05	0.05	—	0.05	—	1,712	1,712	0.07	0.01	—	1,718

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.37	1.93	< 0.005	0.01	—	0.01	0.01	—	0.01	—	283	283	0.01	< 0.005	—	284
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2032) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	0.90	7.87	12.8	0.02	0.22	—	0.22	0.21	—	0.21	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.69	4.69	< 0.005	< 0.005	—	4.71
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	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Building Construction (2032) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	0.33	2.81	14.8	0.02	0.07	—	0.07	0.07	—	0.07	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	< 0.005	0.01	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.69	4.69	< 0.005	< 0.005	—	4.71
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	< 0.005	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.78	0.78	< 0.005	< 0.005	—	0.78
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Paving (2032) - 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	0.68	0.57	5.40	8.77	0.01	0.17	—	0.17	0.15	—	0.15	—	1,350	1,350	0.05	0.01	—	1,354
Paving	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.65	1.06	< 0.005	0.02	—	0.02	0.02	—	0.02	—	163	163	0.01	< 0.005	—	163
Paving	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.12	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.9	26.9	< 0.005	< 0.005	—	27.0
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	0.06	0.05	0.05	0.74	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	233	233	< 0.005	< 0.005	0.01	233
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.4	28.4	< 0.005	< 0.005	0.02	28.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.71	4.71	< 0.005	< 0.005	< 0.005	4.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Paving (2032) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.21	2.14	9.35	0.01	0.05	—	0.05	0.05	—	0.05	—	1,350	1,350	0.05	0.01	—	1,354
Paving	—	0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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	0.03	0.03	0.26	1.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	163	163	0.01	< 0.005	—	163
Paving	—	0.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	0.05	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.9	26.9	< 0.005	< 0.005	—	27.0
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	0.06	0.05	0.05	0.74	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	233	233	< 0.005	< 0.005	0.01	233
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.4	28.4	< 0.005	< 0.005	0.02	28.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.71	4.71	< 0.005	< 0.005	< 0.005	4.77

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2032) - 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	0.11	0.09	0.77	1.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.77	1.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	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	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.88	9.88	< 0.005	< 0.005	—	9.91

Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.64	1.64	< 0.005	< 0.005	—	1.64
Architectural Coatings	—	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Architectural Coating (2032) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.65	0.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.65	0.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.88	9.88	< 0.005	< 0.005	—	9.91

Architect Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.64	1.64	< 0.005	< 0.005	—	1.64
Architectural Coatings	—	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

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

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	11/26/2029	12/26/2029	5.00	23.0	—
Site Preparation	Site Preparation	12/27/2029	1/25/2030	5.00	22.0	—

Grading	Grading	1/26/2030	5/28/2030	5.00	87.0	—
Building Construction	Building Construction	5/29/2030	1/1/2032	5.00	417	—
Paving	Paving	1/2/2032	3/3/2032	5.00	44.0	—
Architectural Coating	Architectural Coating	3/4/2032	4/9/2032	5.00	27.0	—

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
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56

Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	6.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Tier 4 Final	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Tier 4 Final	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Final	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Final	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Tier 4 Final	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Final	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56

Paving	Pavers	Diesel	Tier 4 Final	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Final	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Final	2.00	6.00	36.0	0.38
Paving	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	63.0	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	21.0	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	50.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	0.00	18.5	LDA,LDT1,LDT2

Building Construction	Vendor	0.00	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	63.0	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	21.0	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—

Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	50.3	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	0.00	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	0.00	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

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)
Architectural Coating	0.00	0.00	0.00	0.00	—

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 (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	5,800	—
Site Preparation	—	3,700	31.5	0.00	—
Grading	12,000	23,000	87.0	0.00	—
Paving	0.00	0.00	0.00	0.00	2.60

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Industrial	2.60	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2029	0.00	532	0.03	< 0.005
2030	0.00	532	0.03	< 0.005
2031	0.00	532	0.03	< 0.005
2032	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

5.18.2.2. Mitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	25.9	annual days of extreme heat
Extreme Precipitation	8.95	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	28.5	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A

Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	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	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	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	82.6
AQ-PM	66.5
AQ-DPM	68.2
Drinking Water	84.6
Lead Risk Housing	67.8
Pesticides	53.5
Toxic Releases	75.3
Traffic	88.3
Effect Indicators	—
CleanUp Sites	83.1
Groundwater	92.7
Haz Waste Facilities/Generators	91.7
Impaired Water Bodies	43.8
Solid Waste	99.3
Sensitive Population	—
Asthma	54.4
Cardio-vascular	36.6
Low Birth Weights	36.1
Socioeconomic Factor Indicators	—
Education	69.8
Housing	35.3

Linguistic	36.5
Poverty	48.7
Unemployment	73.4

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	—
Employed	—
Median HI	—
Education	—
Bachelor's or higher	—
High school enrollment	—
Preschool enrollment	—
Transportation	—
Auto Access	—
Active commuting	—
Social	—
2-parent households	—
Voting	—
Neighborhood	—
Alcohol availability	—
Park access	—
Retail density	—
Supermarket access	—
Tree canopy	—

Housing	—
Homeownership	—
Housing habitability	—
Low-inc homeowner severe housing cost burden	—
Low-inc renter severe housing cost burden	—
Uncrowded housing	—
Health Outcomes	—
Insured adults	—
Arthritis	0.0
Asthma ER Admissions	58.6
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	0.0
Cognitively Disabled	87.2
Physically Disabled	24.6
Heart Attack ER Admissions	66.5
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	0.0
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	1.3
SLR Inundation Area	0.0
Children	19.0
Elderly	62.6
English Speaking	0.0
Foreign-born	0.0
Outdoor Workers	37.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	29.6
Traffic Density	0.0
Traffic Access	23.0
Other Indices	—
Hardship	0.0
Other Decision Support	—
2016 Voting	0.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	83.0
Healthy Places Index Score for Project Location (b)	—
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	4.2 acre site
Construction: Construction Phases	Schedule provided by Black & Veatch
Construction: Paving	Conveyance System Data Needs_Pump Stations_Ph1 20221114_TRIP-DATA.xlsx
Construction: Dust From Material Movement	Volumes provided by B&V

Santa Fe Springs Pump Station Construction Energy Use

Off-Road Construction Equipment Energy Use

Phase	Equipment	Fuel	HP	Load Factor	Equipment Count	Hours/Day	Work Days	Gallons /HP-Hr	Gallons /Hour	Gallons /Day	Total Gallons	Total kBtu
Demolition	Concrete/Industrial Saws	Diesel	33	0.73	1	8.0	23	0.0418250	1.00756	8.061	185.4	25,769
	Excavators	Diesel	36	0.38	3	8.0	23	0.0219661	0.30050	7.212	165.9	23,057
	Rubber Tired Dozers	Diesel	367	0.4	2	8.0	23	0.0206268	3.02801	48.448	1,114.3	154,889
Site Preparation	Rubber Tired Dozers	Diesel	367	0.4	3	8.0	22	0.0206268	3.02801	72.672	1,598.8	222,232
	Tractors/Loaders/Backhoes	Diesel	84	0.37	4	8.0	22	0.0191257	0.59443	19.022	418.5	58,168
Grading	Excavators	Diesel	36	0.38	1	8.0	87	0.0219661	0.30050	2.404	209.1	29,071
	Graders	Diesel	148	0.41	1	8.0	87	0.0212565	1.28985	10.319	897.7	124,785
	Rubber Tired Dozers	Diesel	367	0.4	1	8.0	87	0.0206268	3.02801	24.224	2,107.5	292,942
	Tractors/Loaders/Backhoes	Diesel	84	0.37	3	8	87	0.0191257	0.59443	14.266	1,241.2	172,522
Building Construction	Cranes	Diesel	367	0.29	1	7	417	0.0148894	1.58468	11.093	4,625.7	642,970
	Forklifts	Diesel	82	0.2	3	8	417	0.0103808	0.17025	4.086	1,703.8	236,830
	Generator Sets	Diesel	14	0.74	1	8	417	0.0423044	0.43827	3.506	1,462.1	203,229
	Tractors/Loaders/Backhoes	Diesel	84	0.37	3	7	417	0.0191257	0.59443	12.483	5,205.4	723,550
	Welders	Diesel	46	0.45	1	8	417	0.0258087	0.53424	4.274	1,782.2	247,729
Paving	Cement and Mortar Mixers	Diesel	10	0.56	2	6.0	44	0.0354635	0.19860	2.383	104.9	14,575
	Pavers	Diesel	81	0.42	1	8.0	44	0.0215097	0.73176	5.854	257.6	35,803
	Paving Equipment	Diesel	89	0.36	2	6.0	44	0.0183606	0.58827	7.059	310.6	43,175
	Rollers	Diesel	36	0.38	2	6.0	44	0.0215765	0.29517	3.542	155.8	21,663
	Tractors/Loaders/Backhoes	Diesel	84	0.37	1	8.0	44	0.0191257	0.59443	4.755	209.2	29,084
Architectural Coating	Air Compressors	Diesel	37	0.48	1	6.0	27	0.0275656	0.48956	2.937	79.3	11,024
										Project Construction Off-Road Total	**23,835.0**	**3,313,067**

On-Road Construction Energy Use

Phase	Trip Type (Fleet Mix)	Trips	Distance (miles)	Work Days	Total VMT	Diesel (gal/mi)	Gas (gal/mi)	Elec (kWh/mi)	NG (gal/mi)	Total diesel gallons	Total gasoline gallons	Total kWh Electricity	Total NG Gallons	Total kBtu
Demolition	Worker (LDA, LDT1, LDT2)	15	18.5	21	5827.5	5.56372E-05	0.033459947	0.022841453	0	0.32	194.99	133.1085661	0	24,678
	Hauling (HHDT)	63.0435	20	21	26478.3	0.077218614	0.027022145	0.014728267	0.00344084	2044.61	715.50	389.9788937	91.10733	386,891
Site Preparation	Worker (LDA, LDT1, LDT2)	17.5	18.5	22	7122.5	5.56372E-05	0.033459947	0.022841453	0	0.40	238.32	162.6882475	0	30,162
	Hauling (HHDT)	21.0455	20	22	9260.0	0.077218614	0.027022145	0.014728267	0.00344084	715.04	250.23	136.3837517	31.86213	135,304
Grading	Worker (LDA, LDT1, LDT2)	15	18.5	87	24142.5	5.56372E-05	0.033459947	0.022841453	0	1.34	807.81	551.449774	0	102,236
	Hauling (HHDT)	50.2874	20	87	87500.0	0.077218614	0.027022145	0.014728267	0.00344084	6756.63	2,364.44	1288.723356	301.0731	1,278,518
Building Construction	Worker (LDA, LDT1, LDT2)	0	18.5	421	0.0	5.56372E-05	0.033459947	0.022841453	0	0.00	-	0	0	-
	Vendor (HHDT, MHDT)	0	10.2	421	0.0	0.077218614	0.027022145	0.014728267	0.00344084	0.00	-	0	0	-
Paving	Worker (LDA, LDT1, LDT2)	20	18.5	44	16280.0	5.56372E-05	0.033459947	0.022841453	0	0.91	544.73	371.8588514	0	68,941
	Hauling (HHDT)	0	20	44	0.0	0.077218614	0.027022145	0.014728267	0.00344084	0.00	-	0	0	-
Architectural Coating	Worker (LDA, LDT1, LDT2)	0	18.5	25	0.0	5.56372E-05	0.033459947	0.022841453	0	0.00	-	0	0	-
		Project Construction On-Road Total			**176610.8**					**9519.3**	**5116.0**	**3034.2**	**424.0**	**2026728.9**

Notes:
1. Off-road equipment types and horsepower from CalEEMod defaults.
2. Off-road equipment count and hours from CalEEMod for the AQ/GHG report.
3. Off-road fuel consumption factors from CARB OFFROAD2021, for the South Coast Air Basin, aggregate model years. https://arb.ca.gov/emfac/emissions-inventory/.
4. On-road fleet mix and trip distances from CalEEMod for the AQ/GHG report.
5. On-road fuel consumption factors weighted average for fleet mix from CARB EMFAC2021, for the South Coast Air Basin, aggregate model years, aggregate speeds. https://arb.ca.gov/emfac/emissions-inventory/

Construction Energy Summary

Source	Gallons Diesel	Gallons Gas	kWh Electricity	Gallons NG	kBtu
Off-Road Construction Equipment	23,835	0	0	0	3,313,067
On-Road Construction Traffic	9,519	5,116	3,034	424	2,026,729
Project Construction Total	**33,354**	**5,116**	**3,034**	**424**	**5,339,796**

Daily Operational Emissions Summary

Early Start - 2031 Daily Emissions	ROG	NOX	CO	SOX	PM10	PM2.5
AWT Stationary	6.22	3.45	17.94	0.03	0.15	0.15
Conveyance Stationary	-	-	-	-	-	-
Mobile	0.13	0.67	2.13	0.02	0.11	0.04
Subtotal	***6.35***	***4.12***	***20.07***	***0.05***	***0.26***	***0.19***
Ongoing Construction	*55.89*	*318.37*	*413.54*	*1.41*	*15.75*	*12.63*
TOTAL	**62.24**	**322.49**	**433.61**	**1.46**	**16.01**	**12.82**
SCAQMD Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Exceed Threshold?	***Yes***	***Yes***	***No***	***No***	***No***	***No***

Phase 1 - 2032 Daily Emissions	ROG	NOX	CO	SOX	PM10	PM2.5
AWT Stationary	6.22	3.45	17.94	0.03	0.15	0.15
Conveyance Stationary	0.06	0.13	1.17	0.00	0.01	0.01
Mobile	0.34	1.77	5.38	0.05	0.32	0.12
Subtotal	***6.62***	***5.36***	***24.49***	***0.08***	***0.48***	***0.27***
Ongoing Construction	**15.52**	**91.00**	**138.24**	**0.41**	**5.23**	**3.96**
TOTAL	**22.14**	**96.36**	**162.73**	**0.50**	**5.71**	**4.23**
SCAQMD Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Exceed Threshold?	***No***	***Yes***	***No***	***No***	***No***	***No***

Full Buildout - 2036 Daily Emissions	ROG	NOX	CO	SOX	PM10	PM2.5
AWT Stationary	6.22	3.45	17.94	0.03	0.15	0.15
Conveyance Stationary	0.06	0.13	1.17	0.00	0.01	0.01
Mobile	0.41	2.26	6.77	0.06	0.50	0.18
TOTAL	**6.69**	**5.84**	**25.88**	**0.10**	**0.66**	**0.33**
SCAQMD Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Exceed Threshold?	***No***	***No***	***No***	***No***	***No***	***No***

Daily Operational Emissions Summary - With Mitigation

Early Start - 2031 Daily Emissions	ROG	NOX	CO	SOX	PM10	PM2.5
AWT Stationary	6.22	3.45	17.94	0.03	0.15	0.15
Conveyance Stationary	-	-	-	-	-	-
Mobile	0.13	0.67	2.13	0.02	0.11	0.04
Subtotal	***6.35***	***4.12***	***20.07***	***0.05***	***0.26***	***0.19***
Ongoing Construction - w/ Mit	*26.30*	*50.45*	*435.83*	*1.41*	*4.67*	*2.46*
TOTAL	**32.65**	**54.58**	**455.90**	**1.46**	**4.93**	**2.65**
SCAQMD Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Exceed Threshold?	***No***	***No***	***No***	***No***	***No***	***No***

Phase 1 - 2032 Daily Emissions	ROG	NOX	CO	SOX	PM10	PM2.5
AWT Stationary	6.22	3.45	17.94	0.03	0.15	0.15
Conveyance Stationary	0.06	0.13	1.17	0.00	0.01	0.01
Mobile	0.34	1.77	5.38	0.05	0.32	0.12
Subtotal	***6.62***	***5.36***	***24.49***	***0.08***	***0.48***	***0.27***
Ongoing Construction - w/ Mit	**8.58**	**12.99**	**144.38**	**0.41**	**1.70**	**0.73**
TOTAL	**15.20**	**18.35**	**168.87**	**0.50**	**2.18**	**1.00**
SCAQMD Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Exceed Threshold?	***No***	***No***	***No***	***No***	***No***	***No***

Annual Operational Emissions Summary

Full Buildout - 2036 Annual Emissions	ROG	NOX	CO	SOX	PM10	PM2.5
AWT Stationary	1.08	0.41	2.15	0.00	0.02	0.02
Conveyance Stationary	0.00	0.01	0.05	0.00	0.00	0.00
Mobile	0.05	0.37	0.85	0.01	0.08	0.03
TOTAL	**1.13**	**0.79**	**3.06**	**0.01**	**0.10**	**0.05**
de minimis Levels	*10*	*10*	-	-	-	*70*
Exceed Threshold?	***No***	***No***	***No***	***No***	***No***	***No***

Full Buildout - 2036 Annual GHG Emissions	$MTCO_2e$
AWT Electricity Consumption	43,656
Conveyance Electricity Consumption	29,122
Nitrification/DeNitrification[1]	41,668
Mobile	1,012
AWT Stationary	393
Micro-C[2]	15,717
Conveyance Stationary	10
TOTAL	**115,861**

[1] LACSD. 2025. PWSC BNR Net N2O Emissions Estimate Considering Ocean Nitrogen Discharge. March 3.

[2] Not included in total. Jacobs Engineering. 2024. Carbon Dioxide Emissions from External Carbon Addition. August 20.

Annual Operational Energy Use

Project On-Road Operational Energy Use										
Category	Annual VMT	Diesel Gallons/VMT	Diesel Gallons	Gasoline Gallons/VMT	Gasoline Gallons	Natural Gas Gallons/VMT	Natural Gas Gallons	Electricity kWh/VMT	Electricity kWh	kBtu
Employee/Visitor Commute	1,026,480	0.000041	42.1	0.0284171	29,169.6	-	-	0.03	35,698.1	3,744,696
Liquid Chemical Delivery	847,040	0.060191	50,983.8	0.0218349	18,495.1	0.0015	1,231.5	0.31	259,643.3	10,436,885
Hydrated Lime or CO2 Delivery	64,400	0.118845	7,653.6	0.0000334	2.2	0.0069	445.8	0.19	12,259.4	1,167,782
	Annual Total		**58,679.6**		**47,666.8**		**1,677.3**		**307,600.9**	**15,349,363**

Project Off-Road Energy Use				
Source	Annual Hours	Diesel Gallons/hr	Diesel Gallons	kBtu
4,000 kW Generators (AWP Facility)	240	154.9	37,176	5,167,464
175 kW Generators (Pump Stations)	90	9.7	873	121,347
	Total	**10**	**38,049**	5,288,811

Project Electricity			
Type	Source	kWhr	kBtu
Electricity	AWP Facility Full Buildout	366,223,000	1,249,604,880
Electricity	Conveyance	244,300,000	833,586,291
	Total	**610,523,000**	**2,083,191,170**

Project Total		
Energy Type	Quantity	kBtu
Gasoline (Gallons)	47,667	5,910,687
Diesel (Gallons)	96,729	13,445,269
Natural Gas (Gallons)	1,677	232,640
Electricity (kWhr)	610,830,601	2,084,240,748
	Total	**2,103,829,344**

Notes:
1. Fuel consumption factors weighted average for fleet mix from CARB EMFAC2021, for Los Angeles County, aggregate model years for 2036, aggregate speeds.
2. 1 Gallon of diesel = 139 kBtu; 1 gallon of gasoline = 124 KBtu; 1 kWhr = 3.412142 kBtu; 1 gallon of natural gas = 138.7 kBtu.

Operational Emissions - Generators

Equipment	Equipment Specs[1]						
	Quantity	Fuel	HP	LF	hrs/day	days/yr	hp-hr/day
AWT 4,000 kW Generators	8	Diesel	4,288	73%	1	30	3,130
175 kW Generator	3	Diesel	279	73%	1	30	204

[1] *07152022 AWT Data Needs Matrix Populated Phase 1.doc* x and *Conveyance System Data Needs_Pump Stations_Ph1 20221114_TRIP-DATA.xlsx*

Equipment	Emission Factors[2] (g/hp-hr)								
	ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O
AWT 4,000 kW Generators	0.14	0.50	2.60	0.00	0.02	0.02	521.63	0.07	-
175 kW Generator	0.14	0.30	2.60	0.00	0.02	0.01	521.63	0.07	-

[2] Criteria Pollutants based on Tier 4f standards found at https://dieselnet.com/standards/us/nonroad.php#tier4; GHGs based on USEPA AP-42

Equipment	Emission Rates (lb/d)								
	ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O
AWT 4,000 kW Generators	0.97	3.45	17.94	0.03	0.15	0.15	3,599.78	0.50	-
175 kW Generator	0.06	0.13	1.17	0.00	0.01	0.01	234.22	0.03	-

Equipment	Emission Rates (tpy)									
	ROG	NOX	CO	SOX	PM10	PM2.5	CO2	CH4	N2O	CO2e
AWT 4,000 kW Generators	0.12	0.41	2.15	0.00	0.02	0.02	391.88	0.05	-	393.25
175 kW Generator	0.00	0.01	0.05	0.00	0.00	0.00	9.56	0.00	-	9.60

Operational Emissions - Mobile Sources

Mobile source emissions are calculated using the equations described below:

For running emissions

$Emissions_{pollutant} = VMT * EF_{pollutant}$

Where:

$Emissions_{pollutant}$ = emissions for each pollutant

VMT = vehicle miles traveled

$EF_{pollutant}$ = emission factor for each pollutant

Other emission types are calculated from trip rates as follows

$Emissions_{pollutant} = Trip * EF_{pollutant}$

Where:

$Emissions_{pollutant}$ = emissions for each pollutant

Trip = number of vehicle trips

$EF_{pollutant}$ = emission factor for each pollutant

Early Start Trip Characteristics						
Trip Purpose	Veh Class	Trips/Year	Trips/Day	ATL	Annual VMT	Daily VMT
Employee Commute	LDA_Mix	15600	65	18.2	283920	1183
Liquid Chemical Delivery	MHDT	5598	4	80	447840	320
Hydrated Lime or CO_2 Delivery	HHDT	537	1	80	42960	80

Pounds per Trip Emission Factors	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CH_4	N_2O	CO_2
LDA_Mix	1.58E-03	4.79E-03	4.30E-04	1.34E-06	3.32E-06	3.05E-06	1.07E-04	5.96E-05	1.36E-01
MHDT	3.11E-04	3.30E-03	3.54E-03	2.72E-06	1.19E-06	1.13E-06	6.49E-05	5.66E-05	2.98E-01
HHDT	6.86E-04	1.09E-02	1.30E-02	1.36E-05	3.75E-06	3.57E-06	3.10E-04	2.50E-04	1.55E+00

Pounds per Mile Emission Factors	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CH_4	N_2O	CO_2
LDA_Mix	1.54E-05	1.37E-03	7.15E-05	5.53E-06	3.96E-05	1.34E-05	4.25E-06	8.55E-06	5.59E-01
MHDT	2.25E-05	3.35E-04	9.26E-04	2.10E-05	1.26E-04	4.74E-05	1.92E-05	2.60E-04	2.21E+00
HHDT	2.50E-05	8.78E-04	2.96E-03	2.67E-05	3.13E-04	1.30E-04	1.10E-04	4.70E-04	2.95E+00

Total Trip Emissions (lbs/day)	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CH_4	N_2O	CO_2
LDA_Mix	0.10	0.31	0.03	0.00	0.00	0.00	0.01	0.00	8.83
MHDT	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	1.19
HHDT	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	1.55

Total VMT Emissions (lbs/day)	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CH_4	N_2O	CO_2
LDA_Mix	0.02	1.62	0.08	0.01	0.05	0.02	0.01	0.01	661.58
MHDT	0.01	0.11	0.30	0.01	0.04	0.02	0.01	0.08	708.11
HHDT	0.00	0.07	0.24	0.00	0.03	0.01	0.01	0.04	235.67

Total Emissions	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CH_4	N_2O	CO_2
Pounds per Day	0.13	2.13	0.67	0.02	0.11	0.04	0.03	0.14	1,616.93
Tons per Year	0.02	0.27	0.13	0.00	0.02	0.01	0.00	0.02	254.44

Operational Emissions - Mobile Sources

Phase 1 Trip Characteristics						
Trip Purpose	Veh Class	Trips/Year	Trips/Day	ATL	Annual VMT	Daily VMT
Employee and Visitor Commute	LDA_Mix	40320	168	18.2	733824	3057.6
Liquid Chemical Delivery	MHDT	5598	18	80	447840	1440
Hydrated Lime or CO_2 Delivery	HHDT	537	1	80	42960	80

Pounds per Trip Emission Factors	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CH_4	N_2O	CO_2
LDA_Mix	1.54E-03	4.60E-03	4.18E-04	1.32E-06	3.13E-06	2.88E-06	1.02E-04	5.87E-05	1.33E-01
MHDT	2.91E-04	3.12E-03	3.37E-03	2.62E-06	1.04E-06	9.87E-07	6.29E-05	5.44E-05	2.88E-01
HHDT	6.79E-04	1.08E-02	1.28E-02	1.33E-05	3.63E-06	3.46E-06	3.03E-04	2.45E-04	1.52E+00
Pounds per Mile Emission Factors	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CH_4	N_2O	CO_2
LDA_Mix	1.44E-05	1.32E-03	6.72E-05	5.44E-06	3.94E-05	1.33E-05	4.01E-06	8.27E-06	5.51E-01
MHDT	1.97E-05	2.97E-04	8.30E-04	2.00E-05	1.24E-04	4.60E-05	1.86E-05	2.50E-04	2.11E+00
HHDT	2.41E-05	8.34E-04	2.85E-03	2.60E-05	3.11E-04	1.29E-04	1.03E-04	4.58E-04	2.87E+00
Total Trip Emissions (lbs/day)	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CH_4	N_2O	CO_2
LDA_Mix	0.26	0.77	0.07	0.00	0.00	0.00	0.02	0.01	22.42
MHDT	0.01	0.06	0.06	0.00	0.00	0.00	0.00	0.00	5.19
HHDT	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	1.52
Total VMT Emissions (lbs/day)	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CH_4	N_2O	CO_2
LDA_Mix	0.04	4.05	0.21	0.02	0.12	0.04	0.01	0.03	1,683.99
MHDT	0.03	0.43	1.20	0.03	0.18	0.07	0.03	0.36	3,039.55
HHDT	0.00	0.07	0.23	0.00	0.02	0.01	0.01	0.04	229.49
Total Emissions	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CH_4	N_2O	CO_2
Pounds per Day	0.34	5.38	1.77	0.05	0.32	0.12	0.07	0.43	4,982.16
Tons per Year	0.04	0.67	0.29	0.01	0.05	0.02	0.01	0.07	740.25

Phase 2 Trip Characteristics						
Trip Purpose	Veh Class	Trips/Year	Trips/Day	ATL	Annual VMT	Daily VMT
Employee and Visitor Commute	LDA_Mix	56400	235	18.2	1026480	4277
Liquid Chemical Delivery	MHDT	10588	28	80	847040	2240
Hydrated Lime or CO_2 Delivery	HHDT	805	3	80	64400	240

Pounds per Trip Emission Factors	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CH_4	N_2O	CO_2
LDA_Mix	1.36E-03	4.01E-03	3.82E-04	1.24E-06	2.46E-06	2.26E-06	8.63E-05	5.58E-05	1.26E-01
MHDT	2.29E-04	2.46E-03	2.71E-03	2.20E-06	6.53E-07	6.16E-07	5.40E-05	4.57E-05	2.43E-01
HHDT	6.57E-04	1.05E-02	1.19E-02	1.23E-05	3.29E-06	3.14E-06	2.72E-04	2.26E-04	1.40E+00
Pounds per Mile Emission Factors	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CH_4	N_2O	CO_2
LDA_Mix	1.11E-05	1.20E-03	5.46E-05	5.19E-06	3.89E-05	1.28E-05	3.29E-06	7.46E-06	5.25E-01
MHDT	1.25E-05	1.95E-04	5.46E-04	1.62E-05	1.15E-04	4.12E-05	1.61E-05	2.09E-04	1.71E+00
HHDT	2.15E-05	6.72E-04	2.50E-03	2.37E-05	3.07E-04	1.26E-04	8.08E-05	4.16E-04	2.61E+00
Total Trip Emissions (lbs/day)	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CH_4	N_2O	CO_2
LDA_Mix	0.32	0.94	0.09	0.00	0.00	0.00	0.02	0.01	29.57
MHDT	0.01	0.07	0.08	0.00	0.00	0.00	0.00	0.00	6.81
HHDT	0.00	0.03	0.04	0.00	0.00	0.00	0.00	0.00	4.21
Total VMT Emissions (lbs/day)	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CH_4	N_2O	CO_2
LDA_Mix	0.05	5.13	0.23	0.02	0.17	0.05	0.01	0.03	2,244.22
MHDT	0.03	0.44	1.22	0.04	0.26	0.09	0.04	0.47	3,832.09
HHDT	0.01	0.16	0.60	0.01	0.07	0.03	0.02	0.10	626.38
Total Emissions	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CH_4	N_2O	CO_2
Pounds per Day	0.41	6.77	2.26	0.06	0.50	0.18	0.09	0.61	6,743.29
Tons per Year	0.05	0.85	0.37	0.01	0.08	0.03	0.01	0.10	982.74

Operational Emissions - Electricity Consumption

Greenhouse Gas Emissions from Electricity Consumption

Phase	Electricity Usage (MWh/yr)[1]	GHG Intensity ($MTCO_2e/MWh$)[2]	$MTCO_2e/yr$
AWT Phase 1	245,195	0.12	29,229
AWT Phase 2	121,028	0.12	14,427
AWT Full Buildout	366,223	0.12	43,656
Conveyance System	244,300	0.12	29,122

[1] AWT electricity usage from *Appendix E - Equipment Load List* . Conveyance system electricity usage from *CEQA Information, Pump Stations, Backbone Alignment 20231005.xlsx.*
Note: energy associated with Product Water has been reassigned from AWT to Conveyance.

[2] GHG Intensity factors from CalEEMod Appendix G

Appendix B

Health Risk Assessment

MEMORANDUM

To: Los Angeles County Sanitation Districts (LACSD)

From: Ramboll Americas Engineering Solutions, Inc. Irvine, California

Subject: **HEALTH RISK ASSESSMENT (HRA) FOR A.K. WARREN WATER RESOURCE FACILITY (WWRF) AND ADVANCED WATER PURIFICATION (AWP) FACILITY**

September 24, 2024

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INTRODUCTION

The Los Angeles County Sanitation Districts (LACSD) and the Metropolitan Water District of Southern California (MWD) are developing a water recycling project, Pure Water Southern California (PWSC), that will reuse the cleaned wastewater from the LACSD's A.K. Warren Water Resource Facility (WWRF). The proposed facilities to implement Pure Water include modifications to the existing WWRF and construction of a new full-scale Advanced Water Purification (AWP) Facility. A site location map is provided in **Figure 1**. This memorandum describes the methodology and results of a health risk assessment that evaluates potential health risk impacts associated with the WWRF and the AWP Facility.

The following scenarios were analyzed:

- Baseline: this scenario represents activities associated with the current wastewater treatment operation at WWRF. These activities are listed as existing sources in the Toxic Air Contaminant Emissions Section.
- Proposed Scenario #1: this scenario represents buildout associated with the operation of the WWRF and the addition of AWP Facility where tertiary membrane bioreactors (TMBR) are used for nitrogen management. The emission sources for this scenario are listed under existing sources and new sources in the Toxic Air Contaminant Emissions Section.
- Proposed Scenario #2: this scenario represents buildout associated with the operation of the WWRF and the addition of AWP Facility where secondary membrane bioreactors (SMBR) are used for nitrogen management. The emission sources for this scenario are listed under existing sources and new sources in the Toxic Air Contaminant Emissions Section.
- Proposed Scenario #3 (Pure Water Only): this scenario represents only the AWP Facility where TMBR are used for nitrogen management. The emission sources for this scenario are listed under new sources in the Toxic Air Contaminant Emissions Section.

The following control measures for the operation of the WWRF are part of the proposed Scenarios 1 and 2. These control measures are not applicable to Scenario #3.

- Control measure 1: 50% control of the chloroform level from the upstream sources (based on the 2022 calendar year).

- Control measure 2: Installation of the diesel particulate filter (DPF) for the selected diesel engines with an 85% particulate matter control efficiency (excluding the Switchboard 1B/1C emergency generator).

TOXIC AIR CONTAMINANT EMISSIONS

Toxic air contaminant (TAC) emissions associated with the Baseline and proposed Scenarios 1-3 were evaluated for emission sources at the WWRF. These sources include the following activities and operations:

Existing Sources (Baseline Scenario):

- Total Energy Facility (TEF): three (3) digester gas turbine generators and one (1) steam turbine generator.
- Primary Effluent Pump Station (PEPS): five (5) digester gas fired engines.
- Secondary Influent Pump Station (SIPS): five (5) natural gas fired engines.
- Odor scrubbers.
- Vacuum loaders.
- pH adjustment vents.
- Stage 3 high purity oxygen activated sludge (HPOAS) vents.
- Secondary clarifiers.
- Mixed Liquor Conveyance Channels (MLCC).
- Boilers.
- Flares.
- Gasoline storage and dispensing.
- Emergency diesel engine use.
- Portable equipment.
- Plasma Arc Cutter.
- Pure Water Southern California demonstration plant.

New sources (Proposed Scenarios #1-3):

- PWSC bioreactors.[1]
- PWSC emergency generators.
- Centrate treatment.
- Mobile trucking sources.

The TAC emissions inventory associated with the Baseline and Scenarios 1-3 were prepared by LACSD and can be found in Appendix A.

[1] Foul air from the bioreactors are captured and conveyed to a centralized odor control facility.

AIR DISPERSION MODELING METHODOLOGY

Hotspots Analysis and Reporting Program (HARP) Air Dispersion Modeling Risk Tool (ADMRT Version 22118) with built-in AERMOD developed by California Air Resource Board (CARB) was used to estimate ambient air concentrations and evaluate the health risks associated with the operational TAC emissions at off-site receptors. For each receptor location, the model generates air concentrations (or air dispersion factors if unit emissions [i.e., 1 g/s] were modeled) that result from emissions from multiple sources.

AERMOD

Air dispersion models such as AERMOD require a variety of inputs such as source parameters, meteorological data, topography information, and receptor parameters. When site-specific information was unknown, default parameter sets that are designed to produce conservative (i.e., overestimates of) air concentrations were used. AERMOD has been approved for use by United States Environmental Protection Agency (USEPA), CARB, and South Coast Air Quality Management District (SCAQMD), and incorporates multiple variables in its algorithms including:

- Meteorological data representative of surface and upper air conditions;
- Local terrain data to account for elevation changes; and
- Physical specification of emission sources including information such as:
  - Location;
  - Release height; and
  - Source dimensions.

Dispersion model averaging times are specified based on the averaging times of ambient air quality standards and the air quality significance thresholds established by the appropriate regulatory agencies. A five-year averaging time for TACs is modeled for calculating long-term health risks. Dispersion modelling was performed using the annual average TAC emissions and a five-year meteorological data set to evaluate long-term impacts, thereby ensuring that all likely meteorological conditions are considered.

The following other options in AERMOD were selected for use in this analysis. The regulatory default option was selected based on the SCAQMD modelling recommendations,[2] which established the settings for variables such as urban modelling dispersion option, receptor heights, and off-site receptor grid spacing. The air dispersion model was run using a unit emission factor approach. The AERMOD (v23132) output based on a unit emission factor approach was incorporated into a post-processing step with the calculated emission rates to estimate the air concentrations at each receptor (i.e., ground-level concentration (GLC) calculation in HARP ADMRT).

[2] SCAQMD. South Coast AQMD Modeling Guidance for AERMOD. Available at: Available at: http://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance. Accessed: July 2023.

Source Characterization

Two different types of emission sources are used in the air dispersion model: area sources and point sources. A complete list of WWRF and PWSC emission sources modeled in AERMOD for the Baseline and Scenarios 1-3 were provided by LACSD. Detailed descriptions of these emission sources are included in Appendix A. The modeled AERMOD sources are provided in **Figure 2** and **Figure 3.**

Sources that can be reasonably represented as emitting at a uniform rate over a two-dimensional surface were modeled as area sources. Area sources modeled include portable equipment, clarifiers, mixed liquor conveyance channel, gasoline dispensing facility, and PWSC centrate treatment operating on WWRF site. Sources that emit from stacks, such as boilers, flares, diesel engines, pH vent, etc. are modeled as point sources.

Appendix B includes AERMOD modeling files, which provides details on the modeled source parameters.

Meteorology

SCAQMD provides AERMOD model-ready meteorological data sets for use in air quality and risk impact analyses in the South Coast Air Basin (SCAB). SCAQMD's Long Beach Airport (KLGB) meteorological data set was selected based on that station's close geographic proximity to the AWP site. The SCAQMD meteorological data set includes the data from January 1, 2012 to December 31, 2016.[3]

Land Use

The land uses surrounding the AWP site are primarily a mix of developed residential and commercial areas. AERMOD offers the option of using either rural or urban dispersion characteristics. Selection of rural or urban dispersion characteristics depends on the predominant land use within a three-kilometer radius of the site. SCAQMD recommends that the urban land use option be chosen for all sources in its jurisdiction. The population of Los Angeles County where the AWP Facility is located was used to model urban effects.[4]

Terrain

Data specifying terrain elevations of sources and receptors were imported into the model. Elevations were based on Digital Elevation Models (DEM) files and consist of an array of regularly spaced points on a horizontal plane for which an elevation is specified. DEMs used in this analysis were obtained from CARB and are spaced at 10 meters by 10 meters.[5]

Receptors

To ensure the maximum impacts are captured, the following receptor grids were included in the AERMOD modeling per SCAQMD guidance:[6]

- 6-km by 6-km Cartesian grid with a receptor spacing of 50-m over the project site.
- Polar receptor network placed along 36 direction radials over the nearest residential area south of the WWRF.

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[3] SCAQMD Meteorological Data for AERMOD. Available at: http://www.aqmd.gov/home/air-quality/meteorological-data/data-for-aermod. Accessed: July 2023.

[4] SCAQMD. South Coast AQMD Modeling Guidance for AERMOD. Available at: https://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance. Accessed: July 2023.

[5] USGS National Elevation Dataset. Available at: https://www.mrlc.gov/tools. Accessed: July 2023.

[6] SCAQMD. South Coast AQMD Modeling Guidance for AERMOD. Available at: https://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance. Accessed: July 2023.

- Fenceline receptors along the property boundary at a 20-meter interval spacing.

Receptor heights were assumed to be ground-level.[7]

HEALTH RISK ASSESSMENT METHODOLOGY

The latest version of the HARP (version 22118) was used to calculate cancer risks and non-cancer hazard indices (HI). HARP combines dispersion modeling results with exposure and toxicity data following the 2015 Office of Environmental Health Hazard Assessment (OEHHA) guidelines to calculate health risks. The receptor grid is sufficiently dense to identify where the maximum health impacts occur, including the Point of Maximum Impact (PMI), the Maximally Exposed Individual Resident (MEIR) and the Maximally Exposed Individual Worker (MEIW). The PMI is the highest predicted risk within the domain, including fenceline receptors, which was only evaluated for acute hazard index because long-term exposure is not expected at the fenceline. The MEIR is the highest predicted risk at a residence within the domain. The MEIW is the highest predicted risk at an external worksite within the domain. Both chronic and acute health effects were evaluated at these maximum impact locations. Cancer risks and non-carcinogenic hazards associated with the TAC emissions at the facility are presented and discussed. **Table 1** below summarizes the inputs for HARP modeling following the SCAQMD supplemental guidance.[8]

Table 1. Default Exposure Assumptions Required by SCAQMD

Exposure Inputs	Assumptions
Exposure Duration	The recommended OEHHA 30-year and 25-year cancer exposure were assessed for residents and workers, respectively.
Exposure Adjustments	For the modeling purpose, it is assumed the WWRF operates 24 hours per day and 7 days per week. Therefore, no exposure adjustments were made for workers.
Exposure Pathways	Inhalation, soil ingestion, dermal absorption, homegrown produce (resident only) and mother's milk consumption (resident only) were assessed. For dermal absorption, warm climate is assumed. Other site dependent exposure pathways such as drinking water inhalation, home-raised animal product ingestion are not applicable to the AWP Facility due to lack of such pathways within the modeling domain.
Deposition Rate	0.02 m/s (default for emissions from controlled sources)
Intake Rate Percentile	Risk Management Policy (RMP) using derived method for residential cancer risk. OEHHA derived method for worker cancer risk and non-cancer risk.

[7] SCAQMD. South Coast AQMD Modeling Guidance for AERMOD. Available at: ttps://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance. Accessed: April 2022.

[8] SCAQMD. 2020. Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act. Available at: http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab-2588-supplemental-guidelines.pdf?sfvrsn=19. Accessed: July 2023.

The risk results of this HRA were compared against SCAQMD significance thresholds of 10 in a million for the cancer risk and 1.0 for chronic and acute HI.[9]

HRA Results

HRA results for each scenario analyzed are presented in **Table 2, Table 3, Table 4, and Table 5**. The maximum cancer risk and HI for all modeled receptors are below their respective SCAQMD thresholds. As shown in **Table 3 and Table 4**, the proposed Scenarios #1 and #2 would result in lower MEIR risks when compared to the Baseline with the implementation of control measures 1 and 2. The MEIW risks and HI results for the proposed Scenarios #1 and #2 are similar to the Baseline results with relatively small differences. Contour maps showing the one-in-a-million cancer risk for the AWP Facility are provided in **Figure 4**.

Table 2. HRA Results - Baseline

Receptor	Baseline Risk Results				SCAQMD CEQA Significance Thresholds	
	Cancer (per million)	Chronic HI	8-hr Chronic HI	Acute HI	Cancer (per million)	HI
PMI				0.22	10	1
MEIR	7.3	0.02	0.01	0.04		
MEIW	0.8	0.02	0.01	0.06		

Table 3. HRA Results –Scenario #1

Receptor	Scenario #1 Risk Results				SCAQMD CEQA Significance Thresholds	
	Cancer (per million)	Chronic HI	8-hr Chronic HI	Acute HI	Cancer (per million)	HI
PMI				0.19	10	1
MEIR	5.2	0.02	0.01	0.03		
MEIW	0.7	0.02	0.01	0.05		

[9] SCAQMD. 2023. SCAQMD Air Quality Significance Threshold for TACs. Available at: https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25. Accessed: September 2023.

Table 4. HRA Results –Scenario #2						
	Scenario #2 Risk Results				SCAQMD CEQA Significance Thresholds	
Receptor	Cancer (per million)	Chronic HI	8-hr Chronic HI	Acute HI	Cancer (per million)	HI
PMI				0.19	10	1
MEIR	6.3	0.02	0.01	0.04		
MEIW	1.2	0.02	0.02	0.06		

Table 5. HRA Results – Scenario #3						
	Scenario #3 Risk Results				SCAQMD CEQA Significance Thresholds	
Receptor	Cancer (per million)	Chronic HI	8-hr Chronic HI	Acute HI	Cancer (per million)	HI
PMI				0.03	10	1
MEIR	0.96	0.0002	0.0001	0.002		
MEIW	1.0	0.04	0.04	0.027		

Per SCAQMD methodology, the evaluation of population cancer burden is required for areas where a project's Maximum Individual Cancer Risk (MICR) exceeded one in a million. Potential population exposure was analyzed within the modeled zone of impact (ZOI), which was defined by the residential cancer risk isopleth of 1 in a million. All census block receptors within in the ZOI were obtained from the 2020 census block data and modeled in AERMOD. Cancer burden was calculated as the sum of the 70-year residential cancer risk multiplied by the population at each census block receptor within the ZOI. **Table 6** presents the calculated cancer burden. The cancer burden results are less than SCAQMD threshold of 0.5 for all scenarios.

Table 6. Cancer Burden Results			
Scenario	ZOI Population	Cancer Burden	SCAQMD CEQA Significance Thresholds
Baseline	44,571	0.08	0.5
Scenario #1	31,540	0.06	0.5
Scenario #2	58,771	0.12	0.5

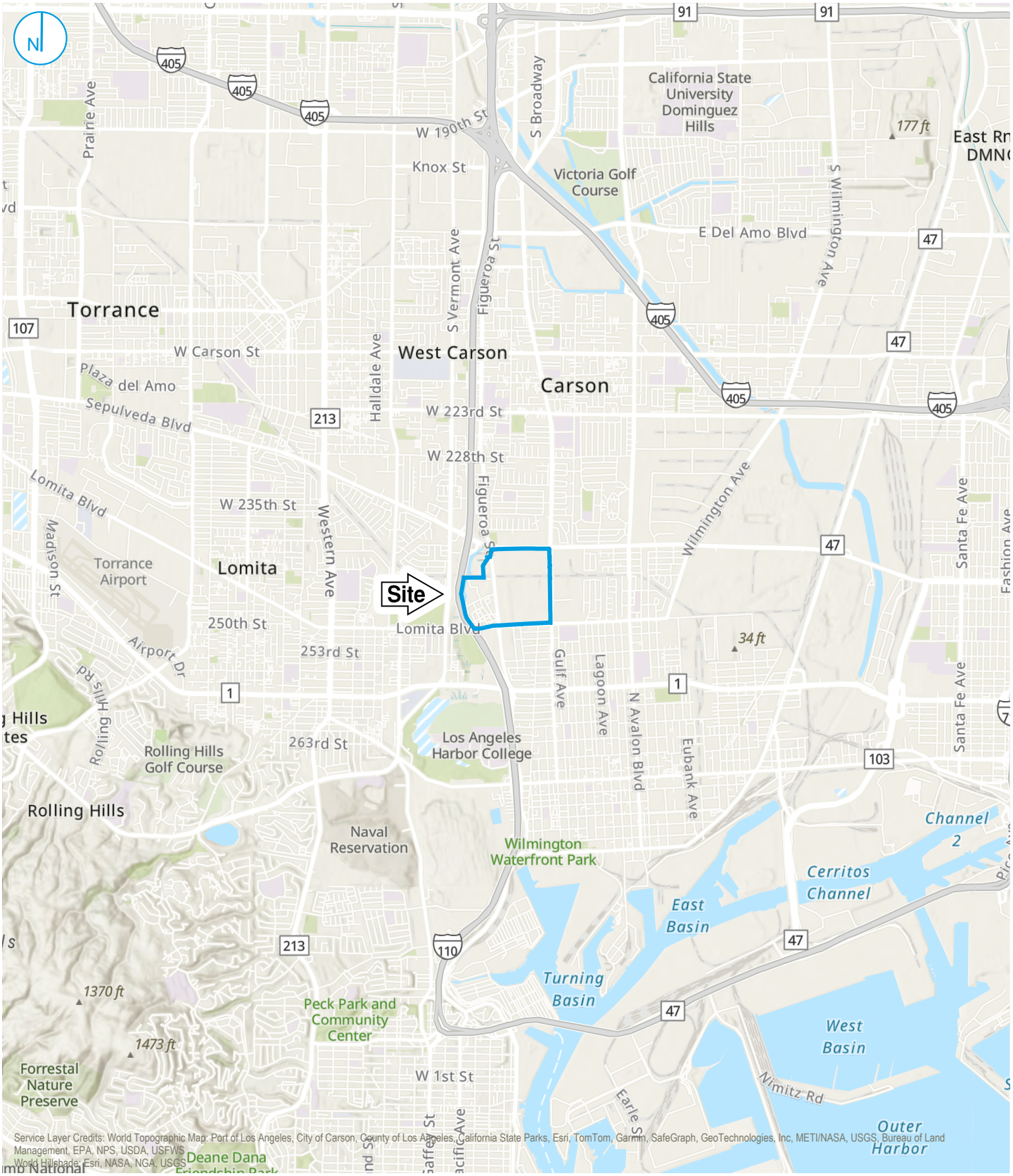
Table 6. Cancer Burden Results			
Scenario	**ZOI Population**	**Cancer Burden**	**SCAQMD CEQA Significance Thresholds**
Scenario #3			0.5

LIST OF ACRONYMS

ACRONYMS AND ABBREVIATION

Acronym	Definition
ADMRT	Air Dispersion Modeling and Risk Tool
AERMOD	AMS/EPA Regulatory Model
AWP	Advanced Water Purification
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
DEM	Digital Elevation Models
DPF	Diesel Particulate Filter
g/s	gram per second
GLC	ground-level concentration
HARP2	Hotspots Analysis and Reporting Program
HI	hazard index
HPOAS	high purity oxygen activated sludge
HRA	Health risk assessment
KLGB	Long Beach Airport
LACSD	Los Angeles County Sanitation Districts
MEIR	Maximally Exposed Individual Resident
MEIW	Maximally Exposed Individual Worker
MLCC	Mixed Liquor Conveyance Channels
OEHHA	Office of Environmental Health Hazard Assessment
PEPS	Primary Effluent Pump Station
PMI	Point of Maximum Impact
PWSC	Pure Water Southern California
Ramboll	Ramboll Americas Engineering Solutions, Inc.
RMP	Risk Management Policy
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SIPS	Secondary Influent Pump Station
SMBR	Secondary Membrane Bioreactors
TAC	Toxic Air Contaminant
TEF	Total Energy Facility
USEPA	United States Environmental Protection Agency
WWRF	A.K. Warren Water Resource Facility
ZOI	zone of impact

FIGURES



Map Scale: 1:72,000 | Map Center: 118°16'55"W 33°48'10"N

KEY MAP (not to scale)

Site Boundary

0 3,000 6,000 Feet

SITE LOCATION

Pure Water Southern California
Carson, California

FIGURE 01

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

PROJECT: 1690025887 | DATED: 4/25/2024 | DESIGNER: CWILLIAMSFREIER

C:\Users\CWILLIAMSFREIER\Ramboll\SWBU GIS Graphics Portal - General\Projects\LACSD\03_GIS\20240422_PollutionControl\20240422_PollutionControl.aprx\Figure 01 - Site Location

Site Boundary

Point Source Type

1. Boiler
2. Digester Cleaning Operation
3. Effluent Conveyance Channel Vent
4. Engine
5. Flare
6. Pure Water Bioreactor
7. Odor Control Unit
8. Plasma Arc Cutter
9. Portable Generator
10. Reactor Vent
11. SIPS
12. Scrubber
13. Standby Generator
14. Turbine
15. VEC Loader
16. pH Adjustment Vent

0 200 400 Feet

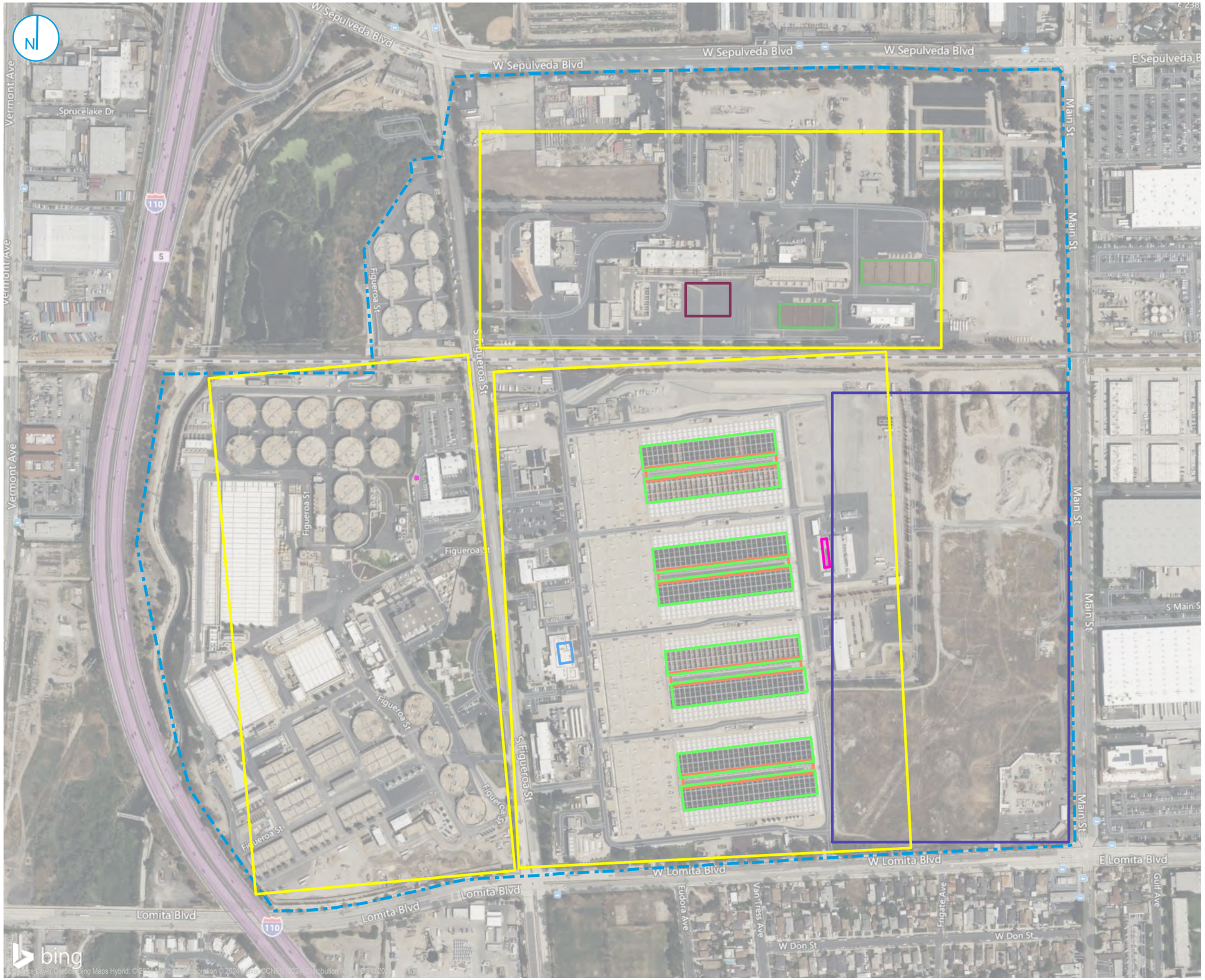
MODELED EMISSION SOURCES
POINT SOURCES

Pure Water Southern California
Carson, California

FIGURE 02

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL



Site Boundary

Area Source Type

- Biofilter
- Gasoline Storage and Dispensing
- Laboratory Fume Hood
- MLCC
- Pure Water Centrate Treatment
- Pure Water Demonstration Plant
- Mobile Travel and Idle Emissions
- Portable Equipment
- Reactor Clarifiers and Weir

0 200 400 Feet

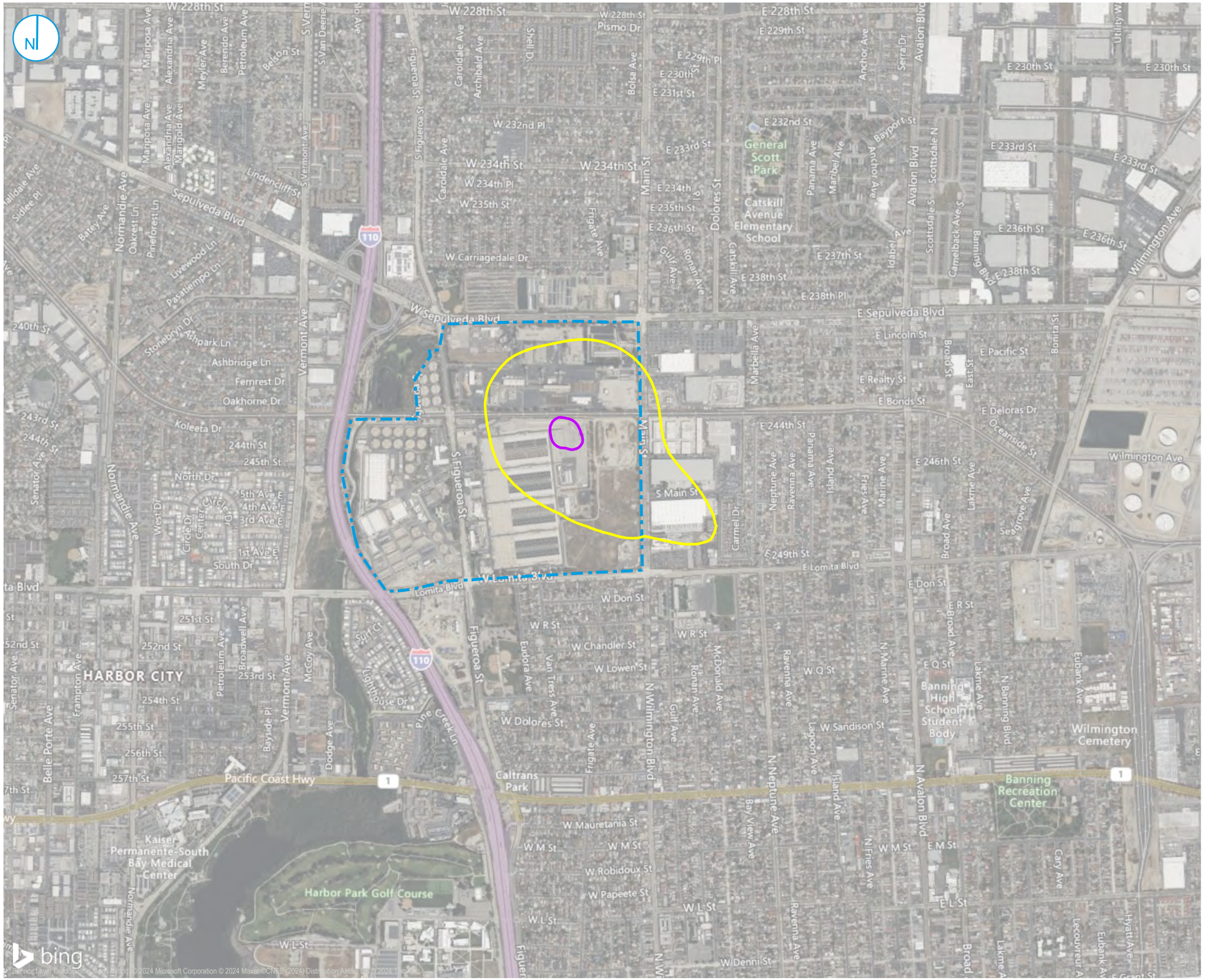
MODELED EMISSION SOURCES
AREA SOURCES

Pure Water Southern California
Carson, California

FIGURE 03

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL



Site Boundary
Worker Cancer Risk of One in a Million
Residential Cancer Risk of One in a Million

0 625 1,250 Feet

CANCER RISK ONE IN A MILLION ISOPLETHS
AWP SCENARIO 3

Pure Water Southern California
Carson, California

FIGURE 04

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

APPENDIX A
TOXIC AIR CONTAMINANT EMISSIONS INVENTORY

Table A-1. TAC Emissions Summary - Baseline
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
E-1 Skimmings Scrubber #1	56235	Carbon tetrachloride	1.79E-06	1.25E-02
	67663	Chloroform	1.39E-06	9.71E-03
	71432	Benzene	4.53E-06	3.18E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.55E-06	1.09E-02
	75014	Vinyl chloride	3.19E-06	2.24E-02
	75058	Acetonitrile	1.03E-04	7.22E-01
	75092	Methylene chloride {Dichloromethane}	1.07E-04	7.46E-01
	75343	1,1-Dichloroethane	1.15E-06	8.05E-03
	79016	Trichloroethylene	1.53E-06	1.07E-02
	95476	o-Xylene	1.28E-05	8.98E-02
	100414	Ethyl benzene	6.90E-06	4.84E-02
	100425	Styrene	2.42E-05	1.69E-01
	106467	p-Dichlorobenzene	2.83E-05	1.99E-01
	106990	1,3-Butadiene	3.01E-06	2.11E-02
	108883	Toluene	2.14E-05	1.50E-01
	127184	Perchloroethylene {Tetrachloroethene}	1.93E-06	1.35E-02
	540590	1,2-Dichloroethylene	1.13E-06	7.89E-03
	1330207	Xylenes (mixed)	2.47E-05	1.73E-01
	1634044	Methyl tert-butyl ether	4.71E-06	3.30E-02
	7783064	Hydrogen sulfide	3.96E-03	2.77E+01
E-1 Skimmings Scrubber #2	56235	Carbon tetrachloride	1.79E-06	1.25E-02
	67663	Chloroform	1.39E-06	9.71E-03
	71432	Benzene	4.53E-06	3.18E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.55E-06	1.09E-02
	75014	Vinyl chloride	3.19E-06	2.24E-02
	75058	Acetonitrile	1.03E-04	7.22E-01
	75092	Methylene chloride {Dichloromethane}	1.07E-04	7.46E-01
	75343	1,1-Dichloroethane	1.15E-06	8.05E-03
	79016	Trichloroethylene	1.53E-06	1.07E-02
	95476	o-Xylene	1.28E-05	8.98E-02
	100414	Ethyl benzene	6.90E-06	4.84E-02
	100425	Styrene	2.42E-05	1.69E-01
	106467	p-Dichlorobenzene	2.83E-05	1.99E-01
	106990	1,3-Butadiene	3.01E-06	2.11E-02
	108883	Toluene	2.14E-05	1.50E-01
	127184	Perchloroethylene {Tetrachloroethene}	1.93E-06	1.35E-02
	540590	1,2-Dichloroethylene	1.13E-06	7.89E-03
	1330207	Xylenes (mixed)	2.47E-05	1.73E-01
	1634044	Methyl tert-butyl ether	4.71E-06	3.30E-02
	7783064	Hydrogen sulfide	3.96E-03	2.77E+01
E-2 Skimmings Scrubber #1	56235	Carbon tetrachloride	1.82E-06	1.28E-02
	67663	Chloroform	5.03E-04	3.53E+00
	71432	Benzene	6.43E-07	4.51E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.14E-06	8.01E-03
	75014	Vinyl chloride	1.77E-06	1.24E-02
	75058	Acetonitrile	2.16E-06	1.52E-02
	75092	Methylene chloride {Dichloromethane}	5.60E-05	3.92E-01
	75343	1,1-Dichloroethane	1.56E-06	1.10E-02
	79016	Trichloroethylene	2.16E-07	1.52E-03
	95476	o-Xylene	1.82E-06	1.27E-02
	100414	Ethyl benzene	9.79E-07	6.86E-03
	100425	Styrene	3.43E-06	2.40E-02
	106467	p-Dichlorobenzene	4.02E-06	2.82E-02
	106990	1,3-Butadiene	1.21E-05	8.49E-02
	108883	Toluene	3.04E-06	2.13E-02
	127184	Perchloroethylene {Tetrachloroethene}	2.73E-07	1.91E-03
	540590	1,2-Dichloroethylene	8.94E-07	6.27E-03
	1330207	Xylenes (mixed)	3.50E-06	2.45E-02
	1634044	Methyl tert-butyl ether	1.68E-05	1.18E-01
	7783064	Hydrogen sulfide	5.62E-04	3.94E+00
E-2 Skimmings Scrubber #2	56235	Carbon tetrachloride	1.82E-06	1.28E-02
	67663	Chloroform	5.03E-04	3.53E+00
	71432	Benzene	6.43E-07	4.51E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.14E-06	8.01E-03
	75014	Vinyl chloride	1.77E-06	1.24E-02
	75058	Acetonitrile	2.16E-06	1.52E-02
	75092	Methylene chloride {Dichloromethane}	5.60E-05	3.92E-01
	75343	1,1-Dichloroethane	1.56E-06	1.10E-02
	79016	Trichloroethylene	2.16E-07	1.52E-03
	95476	o-Xylene	1.82E-06	1.27E-02
	100414	Ethyl benzene	9.79E-07	6.86E-03
	100425	Styrene	3.43E-06	2.40E-02
	106467	p-Dichlorobenzene	4.02E-06	2.82E-02
	106990	1,3-Butadiene	1.21E-05	8.49E-02
	108883	Toluene	3.04E-06	2.13E-02
	127184	Perchloroethylene {Tetrachloroethene}	2.73E-07	1.91E-03
	540590	1,2-Dichloroethylene	8.94E-07	6.27E-03
	1330207	Xylenes (mixed)	3.50E-06	2.45E-02
	1634044	Methyl tert-butyl ether	1.68E-05	1.18E-01
	7783064	Hydrogen sulfide	5.62E-04	3.94E+00

Table A-1. TAC Emissions Summary - Baseline
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
E-2 Skimmings Scrubber #3	56235	Carbon tetrachloride	1.82E-06	1.28E-02
	67663	Chloroform	5.03E-04	3.53E+00
	71432	Benzene	6.43E-07	4.51E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.14E-06	8.01E-03
	75014	Vinyl chloride	1.77E-06	1.24E-02
	75058	Acetonitrile	2.16E-06	1.52E-02
	75092	Methylene chloride {Dichloromethane}	5.60E-05	3.92E-01
	75343	1,1-Dichloroethane	1.56E-06	1.10E-02
	79016	Trichloroethylene	2.16E-07	1.52E-03
	95476	o-Xylene	1.82E-06	1.27E-02
	100414	Ethyl benzene	9.79E-07	6.86E-03
	100425	Styrene	3.43E-06	2.40E-02
	106467	p-Dichlorobenzene	4.02E-06	2.82E-02
	106990	1,3-Butadiene	1.21E-05	8.49E-02
	108883	Toluene	3.04E-06	2.13E-02
	127184	Perchloroethylene {Tetrachloroethene}	2.73E-07	1.91E-03
	540590	1,2-Dichloroethylene	8.94E-07	6.27E-03
	1330207	Xylenes (mixed)	3.50E-06	2.45E-02
	1634044	Methyl tert-butyl ether	1.68E-05	1.18E-01
	7783064	Hydrogen sulfide	5.62E-04	3.94E+00
E-3 Skimmings Scrubber #1	56235	Carbon tetrachloride	2.13E-05	1.49E-01
	67663	Chloroform	8.04E-03	5.63E+01
	71432	Benzene	1.17E-04	8.23E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	2.58E-05	1.81E-01
	75014	Vinyl chloride	1.38E-05	9.70E-02
	75058	Acetonitrile	1.51E-04	1.06E+00
	75092	Methylene chloride {Dichloromethane}	1.41E-03	9.88E+00
	75343	1,1-Dichloroethane	2.83E-05	1.98E-01
	79016	Trichloroethylene	3.51E-05	2.46E-01
	95476	o-Xylene	2.55E-05	1.78E-01
	100414	Ethyl benzene	1.37E-05	9.61E-02
	100425	Styrene	4.80E-05	3.37E-01
	106467	p-Dichlorobenzene	5.63E-05	3.94E-01
	106990	1,3-Butadiene	5.49E-04	3.85E+00
	108883	Toluene	4.25E-05	2.98E-01
	127184	Perchloroethylene {Tetrachloroethene}	3.82E-06	2.68E-02
	540590	1,2-Dichloroethylene	4.65E-05	3.26E-01
	1330207	Xylenes (mixed)	4.90E-05	3.43E-01
	1634044	Methyl tert-butyl ether	5.28E-04	3.70E+00
	7783064	Hydrogen sulfide	7.86E-03	5.51E+01
E-3 Skimmings Scrubber #2	56235	Carbon tetrachloride	2.13E-05	1.49E-01
	67663	Chloroform	8.04E-03	5.63E+01
	71432	Benzene	1.17E-04	8.23E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	2.58E-05	1.81E-01
	75014	Vinyl chloride	1.38E-05	9.70E-02
	75058	Acetonitrile	1.51E-04	1.06E+00
	75092	Methylene chloride {Dichloromethane}	1.41E-03	9.88E+00
	75343	1,1-Dichloroethane	2.83E-05	1.98E-01
	79016	Trichloroethylene	3.51E-05	2.46E-01
	95476	o-Xylene	2.55E-05	1.78E-01
	100414	Ethyl benzene	1.37E-05	9.61E-02
	100425	Styrene	4.80E-05	3.37E-01
	106467	p-Dichlorobenzene	5.63E-05	3.94E-01
	106990	1,3-Butadiene	5.49E-04	3.85E+00
	108883	Toluene	4.25E-05	2.98E-01
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	540590	1,2-Dichloroethylene	4.65E-05	3.26E-01
	1330207	Xylenes (mixed)	4.90E-05	3.43E-01
	1634044	Methyl tert-butyl ether	5.28E-04	3.70E+00
	7783064	Hydrogen sulfide	7.86E-03	5.51E+01
E-3 Skimmings Scrubber #3	56235	Carbon tetrachloride	2.13E-05	1.49E-01
	67663	Chloroform	8.04E-03	5.63E+01
	71432	Benzene	1.17E-04	8.23E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	2.58E-05	1.81E-01
	75014	Vinyl chloride	1.38E-05	9.70E-02
	75058	Acetonitrile	1.51E-04	1.06E+00
	75092	Methylene chloride {Dichloromethane}	1.41E-03	9.88E+00
	75343	1,1-Dichloroethane	2.83E-05	1.98E-01
	79016	Trichloroethylene	3.51E-05	2.46E-01
	95476	o-Xylene	2.55E-05	1.78E-01
	100414	Ethyl benzene	1.37E-05	9.61E-02
	100425	Styrene	4.80E-05	3.37E-01
	106467	p-Dichlorobenzene	5.63E-05	3.94E-01
	106990	1,3-Butadiene	5.49E-04	3.85E+00
	108883	Toluene	4.25E-05	2.98E-01
	127184	Perchloroethylene {Tetrachloroethene}	3.82E-06	2.68E-02
	540590	1,2-Dichloroethylene	4.65E-05	3.26E-01
	1330207	Xylenes (mixed)	4.90E-05	3.43E-01
	1634044	Methyl tert-butyl ether	5.28E-04	3.70E+00
	7783064	Hydrogen sulfide	7.86E-03	5.51E+01

Table A-1. TAC Emissions Summary - Baseline
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Scrubber S1; Inlet Channel to Reactors A/B	56235	Carbon tetrachloride	3.99E-05	2.77E-01
	67663	Chloroform	1.83E-03	1.27E+01
	71432	Benzene	2.41E-05	1.67E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	3.46E-05	2.40E-01
	75014	Vinyl chloride	1.62E-05	1.13E-01
	75092	Methylene chloride {Dichloromethane}	3.29E-04	2.28E+00
	75343	1,1-Dichloroethane	2.56E-05	1.78E-01
	79016	Trichloroethylene	3.40E-05	2.37E-01
	100414	Ethyl benzene	2.75E-05	1.91E-01
	100425	Styrene	2.70E-05	1.88E-01
	106467	p-Dichlorobenzene	3.81E-05	2.65E-01
	108883	Toluene	6.04E-05	4.20E-01
	127184	Perchloroethylene {Tetrachloroethene}	4.30E-05	2.99E-01
	1330207	Xylenes (mixed)	8.21E-05	5.71E-01
	1634044	Methyl tert-butyl ether	2.18E-04	1.52E+00
	7783064	Hydrogen sulfide	3.71E-03	2.58E+01
Scrubber S2; Inlet Channel to Reactors C/D	56235	Carbon tetrachloride	3.99E-05	2.79E-01
	67663	Chloroform	1.83E-03	1.28E+01
	71432	Benzene	2.41E-05	1.68E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	3.46E-05	2.42E-01
	75014	Vinyl chloride	1.62E-05	1.13E-01
	75092	Methylene chloride {Dichloromethane}	3.29E-04	2.30E+00
	75343	1,1-Dichloroethane	2.56E-05	1.79E-01
	79016	Trichloroethylene	3.40E-05	2.38E-01
	100414	Ethyl benzene	2.75E-05	1.92E-01
	100425	Styrene	2.70E-05	1.89E-01
	106467	p-Dichlorobenzene	3.81E-05	2.66E-01
	108883	Toluene	6.04E-05	4.22E-01
	127184	Perchloroethylene {Tetrachloroethene}	4.30E-05	3.00E-01
	1330207	Xylenes (mixed)	8.21E-05	5.74E-01
	1634044	Methyl tert-butyl ether	2.18E-04	1.53E+00
	7783064	Hydrogen sulfide	3.71E-03	2.59E+01
Scrubber S5; Inlet Channel to Reactors E/F	56235	Carbon tetrachloride	7.25E-05	5.04E-01
	67663	Chloroform	3.33E-03	2.32E+01
	71432	Benzene	4.37E-05	3.04E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	6.28E-05	4.37E-01
	75014	Vinyl chloride	2.94E-05	2.05E-01
	75092	Methylene chloride {Dichloromethane}	5.98E-04	4.15E+00
	75343	1,1-Dichloroethane	4.66E-05	3.24E-01
	79016	Trichloroethylene	6.19E-05	4.30E-01
	100414	Ethyl benzene	5.00E-05	3.48E-01
	100425	Styrene	4.91E-05	3.41E-01
	106467	p-Dichlorobenzene	6.92E-05	4.81E-01
	108883	Toluene	1.10E-04	7.64E-01
	127184	Perchloroethylene {Tetrachloroethene}	7.81E-05	5.43E-01
	1330207	Xylenes (mixed)	1.49E-04	1.04E+00
	1634044	Methyl tert-butyl ether	3.97E-04	2.76E+00
	7783064	Hydrogen sulfide	6.74E-03	4.68E+01
Scrubber S6; Inlet Channel to Reactors G/H	56235	Carbon tetrachloride	7.25E-05	5.05E-01
	67663	Chloroform	3.33E-03	2.32E+01
	71432	Benzene	4.37E-05	3.05E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	6.28E-05	4.38E-01
	75014	Vinyl chloride	2.94E-05	2.05E-01
	75092	Methylene chloride {Dichloromethane}	5.98E-04	4.16E+00
	75343	1,1-Dichloroethane	4.66E-05	3.25E-01
	79016	Trichloroethylene	6.19E-05	4.31E-01
	100414	Ethyl benzene	5.00E-05	3.49E-01
	100425	Styrene	4.91E-05	3.42E-01
	106467	p-Dichlorobenzene	6.92E-05	4.83E-01
	108883	Toluene	1.10E-04	7.66E-01
	127184	Perchloroethylene {Tetrachloroethene}	7.81E-05	5.44E-01
	1330207	Xylenes (mixed)	1.49E-04	1.04E+00
	1634044	Methyl tert-butyl ether	3.97E-04	2.77E+00
	7783064	Hydrogen sulfide	6.74E-03	4.70E+01
PEPS Outside Standby Generator	9901	Diesel particulate matter (DPM)	3.08E-04	2.16E+00
SIPS Standby Generator #1	9901	Diesel particulate matter (DPM)	3.45E-04	2.42E+00
TEF Black Start Standby Generator	9901	Diesel particulate matter (DPM)	1.92E-03	1.35E+01
Laboratory Annex Standby Generator	9901	Diesel particulate matter (DPM)	1.11E-04	7.76E-01
Boiler #7	1151	PAHs, total	1.71E-06	1.20E-02
	50000	Formaldehyde	2.11E-04	1.48E+00
	71432	Benzene	6.28E-06	4.40E-02
	75070	Acetaldehyde	5.31E-05	3.72E-01
	91203	Naphthalene	5.14E-06	3.60E-02
	100414	Ethyl benzene	1.18E-04	8.29E-01
	107028	Acrolein	4.63E-05	3.24E-01
	108883	Toluene	3.04E-05	2.13E-01
	110543	Hexane	7.89E-05	5.53E-01
	1330207	Xylenes (mixed)	2.56E-05	1.79E-01
	7664417	Ammonia	5.49E-02	3.84E+02

Table A-1. TAC Emissions Summary - Baseline
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Boiler #8	1151	PAHs, total	1.28E-06	8.99E-03
	50000	Formaldehyde	1.58E-04	1.11E+00
	71432	Benzene	4.70E-06	3.29E-02
	75070	Acetaldehyde	3.98E-05	2.79E-01
	91203	Naphthalene	3.85E-06	2.70E-02
	100414	Ethyl benzene	8.85E-05	6.20E-01
	107028	Acrolein	3.46E-05	2.43E-01
	108883	Toluene	2.27E-05	1.59E-01
	110543	Hexane	5.90E-05	4.13E-01
	1330207	Xylenes (mixed)	1.91E-05	1.34E-01
	7664417	Ammonia	4.10E-02	2.88E+02
Boiler #9	1151	PAHs, total	1.41E-06	9.91E-03
	50000	Formaldehyde	1.74E-04	1.22E+00
	71432	Benzene	5.18E-06	3.63E-02
	75070	Acetaldehyde	4.38E-05	3.07E-01
	91203	Naphthalene	4.24E-06	2.97E-02
	100414	Ethyl benzene	9.76E-05	6.84E-01
	107028	Acrolein	3.82E-05	2.68E-01
	108883	Toluene	2.50E-05	1.75E-01
	110543	Hexane	6.51E-05	4.56E-01
	1330207	Xylenes (mixed)	2.11E-05	1.48E-01
	7664417	Ammonia	4.53E-02	3.17E+02
Boiler #10	1151	PAHs, total	4.41E-07	3.09E-03
	50000	Formaldehyde	5.43E-05	3.80E-01
	71432	Benzene	1.62E-06	1.13E-02
	75070	Acetaldehyde	1.37E-05	9.59E-02
	91203	Naphthalene	1.32E-06	9.28E-03
	100414	Ethyl benzene	3.05E-05	2.13E-01
	107028	Acrolein	1.19E-05	8.35E-02
	108883	Toluene	7.82E-06	5.48E-02
	110543	Hexane	2.03E-05	1.42E-01
	1330207	Xylenes (mixed)	6.58E-06	4.61E-02
	7664417	Ammonia	1.41E-02	9.90E+01
Scrubber S4 at DAF	56235	Carbon tetrachloride	5.78E-05	4.04E-01
	67663	Chloroform	2.47E-03	1.73E+01
	71432	Benzene	6.29E-05	4.40E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	5.01E-05	3.50E-01
	75014	Vinyl chloride	2.35E-05	1.64E-01
	75092	Methylene chloride {Dichloromethane}	3.27E-04	2.29E+00
	75343	1,1-Dichloroethane	3.72E-05	2.60E-01
	79016	Trichloroethylene	4.93E-05	3.45E-01
	100414	Ethyl benzene	3.99E-05	2.79E-01
	100425	Styrene	3.91E-05	2.73E-01
	106467	p-Dichlorobenzene	5.52E-05	3.86E-01
	108883	Toluene	1.99E-04	1.39E+00
	127184	Perchloroethylene {Tetrachloroethene}	6.23E-05	4.35E-01
	1330207	Xylenes (mixed)	1.20E-04	8.36E-01
	1634044	Methyl tert-butyl ether	2.46E-04	1.72E+00
	7783064	Hydrogen sulfide	5.05E-03	3.53E+01
Central Odor South Carbon Unit	56235	Carbon tetrachloride	1.40E-04	9.78E-01
	67663	Chloroform	4.53E-02	3.18E+02
	71432	Benzene	1.32E-02	9.25E+01
	75092	Methylene chloride {Dichloromethane}	5.99E-03	4.20E+01
	95476	o-Xylene	3.39E-04	2.37E+00
	100414	Ethyl benzene	1.96E-04	1.37E+00
	100425	Styrene	7.35E-04	5.15E+00
	106467	p-Dichlorobenzene	8.15E-04	5.71E+00
	108883	Toluene	6.50E-04	4.56E+00
	127184	Perchloroethylene {Tetrachloroethene}	9.75E-05	6.83E-01
	1330207	Xylenes (mixed)	7.49E-04	5.25E+00
	1634044	Methyl tert-butyl ether	4.74E-04	3.32E+00
	7783064	Hydrogen sulfide	5.73E-02	4.01E+02
Central Odor Middle Carbon Unit	56235	Carbon tetrachloride	1.40E-04	9.78E-01
	67663	Chloroform	4.53E-02	3.18E+02
	71432	Benzene	1.32E-02	9.25E+01
	75092	Methylene chloride {Dichloromethane}	5.99E-03	4.20E+01
	95476	o-Xylene	3.39E-04	2.37E+00
	100414	Ethyl benzene	1.96E-04	1.37E+00
	100425	Styrene	7.35E-04	5.15E+00
	106467	p-Dichlorobenzene	8.15E-04	5.71E+00
	108883	Toluene	6.50E-04	4.56E+00
	127184	Perchloroethylene {Tetrachloroethene}	9.75E-05	6.83E-01
	1330207	Xylenes (mixed)	7.49E-04	5.25E+00
	1634044	Methyl tert-butyl ether	4.74E-04	3.32E+00
	7783064	Hydrogen sulfide	5.73E-02	4.01E+02
Central Odor North Carbon Unit	56235	Carbon tetrachloride	1.40E-04	9.78E-01
	67663	Chloroform	4.53E-02	3.18E+02
	71432	Benzene	1.32E-02	9.25E+01
	75092	Methylene chloride {Dichloromethane}	5.99E-03	4.20E+01
	95476	o-Xylene	3.39E-04	2.37E+00
	100414	Ethyl benzene	1.96E-04	1.37E+00
	100425	Styrene	7.35E-04	5.15E+00
	106467	p-Dichlorobenzene	8.15E-04	5.71E+00
	108883	Toluene	6.50E-04	4.56E+00
	127184	Perchloroethylene {Tetrachloroethene}	9.75E-05	6.83E-01
	1330207	Xylenes (mixed)	7.49E-04	5.25E+00
	1634044	Methyl tert-butyl ether	4.74E-04	3.32E+00
	7783064	Hydrogen sulfide	5.73E-02	4.01E+02

Table A-1. TAC Emissions Summary - Baseline
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Scrubber P16A	56235	Carbon tetrachloride	3.04E-06	2.13E-02
	67663	Chloroform	1.79E-05	1.26E-01
	100414	Ethyl benzene	6.71E-06	4.71E-02
	108883	Toluene	9.11E-06	6.38E-02
	1330207	Xylenes (mixed)	8.39E-06	5.88E-02
Scrubber P16B	56235	Carbon tetrachloride	3.04E-06	3.68E-03
	67663	Chloroform	2.36E-06	2.85E-03
	100414	Ethyl benzene	2.10E-06	2.54E-03
	108883	Toluene	9.11E-06	1.10E-02
	1330207	Xylenes (mixed)	8.39E-06	1.02E-02
Turbine #1 Stack West	1151	PAHs, total	8.11E-06	5.68E-02
	50000	Formaldehyde	7.94E-03	5.56E+01
	56235	Carbon tetrachloride	1.08E-04	7.54E-01
	67663	Chloroform	1.30E-03	9.12E+00
	71432	Benzene	5.31E-04	3.72E+00
	71556	Methyl chloroform {1,1,1-Trichloroethane}	9.33E-05	6.54E-01
	75014	Vinyl chloride	4.37E-05	3.06E-01
	75070	Acetaldehyde	1.53E-03	1.07E+01
	75092	Methylene chloride {Dichloromethane}	1.54E-02	1.08E+02
	79016	Trichloroethylene	9.19E-05	6.44E-01
	91203	Naphthalene	8.36E-06	5.86E-02
	106467	p-Dichlorobenzene	5.58E-04	3.91E+00
	106990	1,3-Butadiene	9.37E-04	6.56E+00
	107062	Ethylene dichloride {EDC}	6.92E-05	4.85E-01
	127184	Perchloroethylene {Tetrachloroethene}	1.16E-04	8.13E-01
	7439921	Lead	1.35E-05	9.49E-02
	7440020	Nickel	3.63E-05	2.54E-01
	7440382	Arsenic	1.35E-05	9.49E-02
	7440439	Cadmium	4.38E-06	3.07E-02
	7664417	Ammonia	4.08E-01	2.86E+03
	7782492	Selenium	4.52E-05	3.17E-01
Turbine #2 Stack West	1151	PAHs, total	7.85E-06	5.50E-02
	50000	Formaldehyde	7.69E-03	5.39E+01
	56235	Carbon tetrachloride	1.04E-04	7.30E-01
	67663	Chloroform	1.26E-03	8.84E+00
	71432	Benzene	5.14E-04	3.60E+00
	71556	Methyl chloroform {1,1,1-Trichloroethane}	9.04E-05	6.34E-01
	75014	Vinyl chloride	4.23E-05	2.97E-01
	75070	Acetaldehyde	1.49E-03	1.04E+01
	75092	Methylene chloride {Dichloromethane}	1.50E-02	1.05E+02
	79016	Trichloroethylene	8.90E-05	6.24E-01
	91203	Naphthalene	8.10E-06	5.68E-02
	106467	p-Dichlorobenzene	5.41E-04	3.79E+00
	106990	1,3-Butadiene	9.08E-04	6.36E+00
	107062	Ethylene dichloride {EDC}	6.71E-05	4.70E-01
	127184	Perchloroethylene {Tetrachloroethene}	1.12E-04	7.88E-01
	7439921	Lead	1.31E-05	9.20E-02
	7440020	Nickel	3.51E-05	2.46E-01
	7440382	Arsenic	1.31E-05	9.20E-02
	7440439	Cadmium	4.25E-06	2.98E-02
	7664417	Ammonia	3.96E-01	2.77E+03
	7782492	Selenium	4.38E-05	3.07E-01
Turbine #3 Stack West	1151	PAHs, total	6.90E-06	4.84E-02
	50000	Formaldehyde	6.76E-03	4.74E+01
	56235	Carbon tetrachloride	9.16E-05	6.42E-01
	67663	Chloroform	1.11E-03	7.77E+00
	71432	Benzene	4.52E-04	3.17E+00
	71556	Methyl chloroform {1,1,1-Trichloroethane}	7.94E-05	5.57E-01
	75014	Vinyl chloride	3.72E-05	2.61E-01
	75070	Acetaldehyde	1.31E-03	9.15E+00
	75092	Methylene chloride {Dichloromethane}	1.31E-02	9.21E+01
	79016	Trichloroethylene	7.82E-05	5.48E-01
	91203	Naphthalene	7.12E-06	4.99E-02
	106467	p-Dichlorobenzene	4.75E-04	3.33E+00
	106990	1,3-Butadiene	7.98E-04	5.59E+00
	107062	Ethylene dichloride {EDC}	5.89E-05	4.13E-01
	127184	Perchloroethylene {Tetrachloroethene}	9.87E-05	6.92E-01
	7439921	Lead	1.15E-05	8.08E-02
	7440020	Nickel	3.09E-05	2.16E-01
	7440382	Arsenic	1.15E-05	8.08E-02
	7440439	Cadmium	3.73E-06	2.61E-02
	7664417	Ammonia	3.48E-01	2.44E+03
	7782492	Selenium	3.85E-05	2.70E-01
Boiler #11	1151	PAHs, total	1.10E-09	7.70E-06
	50000	Formaldehyde	1.35E-07	9.47E-04
	71432	Benzene	6.37E-08	4.47E-04
	75070	Acetaldehyde	3.41E-08	2.39E-04
	91203	Naphthalene	3.30E-09	2.31E-05
	100414	Ethyl benzene	7.58E-08	5.31E-04
	107028	Acrolein	2.97E-08	2.08E-04
	108883	Toluene	2.91E-07	2.04E-03
	110543	Hexane	5.05E-08	3.54E-04
	1330207	Xylenes (mixed)	2.16E-07	1.52E-03
	7664417	Ammonia	3.52E-05	2.46E-01

Table A-1. TAC Emissions Summary - Baseline
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
North Flare Station - Flare #1	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
North Flare Station - Flare #2	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
North Flare Station - Flare #3	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
North Flare Station - Flare #4	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
North Flare Station - Flare #5	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02

Table A-1. TAC Emissions Summary - Baseline
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
North Flare Station - Flare #6	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
North Flare Station - Flare #7	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
SIPS #5	50000	Formaldehyde	1.51E-04	1.06E+00
	50000	Formaldehyde	2.24E-04	1.57E+00
	56235	Carbon tetrachloride	6.19E-06	4.34E-02
	56235	Carbon tetrachloride	1.94E-07	1.36E-03
	67561	Methanol	3.35E-05	2.35E-01
	67663	Chloroform	1.50E-07	1.05E-03
	71432	Benzene	2.33E-05	1.64E-01
	71432	Benzene	1.73E-05	1.21E-01
	75014	Vinyl chloride	5.35E-06	3.75E-02
	75014	Vinyl chloride	7.85E-08	5.50E-04
	75070	Acetaldehyde	3.05E-05	2.14E-01
	75092	Methylene chloride {Dichloromethane}	2.51E-05	1.76E-01
	75092	Methylene chloride {Dichloromethane}	4.51E-07	3.16E-03
	78875	1,2-Dichloropropane	1.42E-07	9.96E-04
	79005	1,1,2-Trichloroethane	1.67E-07	1.17E-03
	79345	1,1,2,2-Tetrachloroethane	2.77E-07	1.94E-03
	91203	Naphthalene	4.79E-04	3.36E+00
	91203	Naphthalene	1.06E-06	7.44E-03
	100414	Ethyl benzene	2.71E-07	1.90E-03
	100425	Styrene	1.30E-07	9.12E-04
	106934	Ethylene dibromide {EDB}	1.05E-04	7.37E-01
	106934	Ethylene dibromide {EDB}	2.33E-07	1.63E-03
	106990	1,3-Butadiene	2.76E-05	1.93E-01
	106990	1,3-Butadiene	7.25E-06	5.08E-02
	107028	Acrolein	2.88E-05	2.02E-01
	107062	Ethylene dichloride {EDC}	1.42E-05	9.95E-02
	107062	Ethylene dichloride {EDC}	1.24E-07	8.66E-04
	108883	Toluene	6.10E-06	4.28E-02
	542756	1,3-Dichloropropene	1.39E-07	9.73E-04
	1330207	Xylenes (mixed)	2.13E-06	1.49E-02
	7664417	Ammonia	4.40E-02	3.09E+02
	7664417	Ammonia	3.63E-05	2.54E-01
SIPS #2	50000	Formaldehyde	8.55E-05	5.99E-01
	50000	Formaldehyde	1.12E-04	7.85E-01
	56235	Carbon tetrachloride	3.51E-06	2.46E-02
	56235	Carbon tetrachloride	9.68E-08	6.78E-04
	67561	Methanol	1.67E-05	1.17E-01
	67663	Chloroform	7.49E-08	5.25E-04
	71432	Benzene	1.32E-05	9.28E-02
	71432	Benzene	8.64E-06	6.05E-02
	75014	Vinyl chloride	3.03E-06	2.13E-02
	75014	Vinyl chloride	3.93E-08	2.75E-04
	75070	Acetaldehyde	1.53E-05	1.07E-01
	75092	Methylene chloride {Dichloromethane}	1.42E-05	9.98E-02
	75092	Methylene chloride {Dichloromethane}	2.25E-07	1.58E-03
	78875	1,2-Dichloropropane	7.11E-08	4.98E-04
	79005	1,1,2-Trichloroethane	8.36E-08	5.86E-04
	79345	1,1,2,2-Tetrachloroethane	1.38E-07	9.69E-04
	91203	Naphthalene	2.72E-04	1.91E+00
	91203	Naphthalene	5.31E-07	3.72E-03
	100414	Ethyl benzene	1.36E-07	9.50E-04
	100425	Styrene	6.51E-08	4.56E-04
	106934	Ethylene dibromide {EDB}	5.96E-05	4.18E-01

Table A-1. TAC Emissions Summary - Baseline
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
SIPS #2 *(Cont'd)*	106934	Ethylene dibromide {EDB}	1.16E-07	8.16E-04
	106990	1,3-Butadiene	1.57E-05	1.10E-01
	106990	1,3-Butadiene	3.62E-06	2.54E-02
	107028	Acrolein	1.44E-05	1.01E-01
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	107062	Ethylene dichloride {EDC}	6.18E-08	4.33E-04
	108883	Toluene	3.05E-06	2.14E-02
	542756	1,3-Dichloropropene	6.94E-08	4.87E-04
	1330207	Xylenes (mixed)	1.07E-06	7.47E-03
	7664417	Ammonia	2.50E-02	1.75E+02
	7664417	Ammonia	1.81E-05	1.27E-01
SIPS #3	50000	Formaldehyde	1.32E-04	9.28E-01
	50000	Formaldehyde	2.16E-04	1.51E+00
	56235	Carbon tetrachloride	5.44E-06	3.81E-02
	56235	Carbon tetrachloride	1.86E-07	1.31E-03
	67561	Methanol	3.22E-05	2.26E-01
	67663	Chloroform	1.44E-07	1.01E-03
	71432	Benzene	2.05E-05	1.44E-01
	71432	Benzene	1.66E-05	1.17E-01
	75014	Vinyl chloride	4.70E-06	3.29E-02
	75014	Vinyl chloride	7.56E-08	5.30E-04
	75070	Acetaldehyde	2.94E-05	2.06E-01
	75092	Methylene chloride {Dichloromethane}	2.21E-05	1.55E-01
	75092	Methylene chloride {Dichloromethane}	4.34E-07	3.04E-03
	78875	1,2-Dichloropropane	1.37E-07	9.60E-04
	79005	1,1,2-Trichloroethane	1.61E-07	1.13E-03
	79345	1,1,2,2-Tetrachloroethane	2.67E-07	1.87E-03
	91203	Naphthalene	4.21E-04	2.95E+00
	91203	Naphthalene	1.02E-06	7.17E-03
	100414	Ethyl benzene	2.61E-07	1.83E-03
	100425	Styrene	1.25E-07	8.79E-04
	106934	Ethylene dibromide {EDB}	9.24E-05	6.47E-01
	106934	Ethylene dibromide {EDB}	2.24E-07	1.57E-03
	106990	1,3-Butadiene	2.43E-05	1.70E-01
	106990	1,3-Butadiene	6.99E-06	4.90E-02
	107028	Acrolein	2.77E-05	1.94E-01
	107062	Ethylene dichloride {EDC}	1.25E-05	8.75E-02
	107062	Ethylene dichloride {EDC}	1.19E-07	8.34E-04
	108883	Toluene	5.88E-06	4.12E-02
	542756	1,3-Dichloropropene	1.34E-07	9.38E-04
	1330207	Xylenes (mixed)	2.05E-06	1.44E-02
	7664417	Ammonia	3.87E-02	2.71E+02
	7664417	Ammonia	3.49E-05	2.45E-01
SIPS #4	50000	Formaldehyde	1.19E-04	8.31E-01
	50000	Formaldehyde	4.57E-04	3.20E+00
	56235	Carbon tetrachloride	4.87E-06	3.41E-02
	56235	Carbon tetrachloride	3.94E-07	2.76E-03
	67561	Methanol	6.82E-05	4.78E-01
	67663	Chloroform	3.05E-07	2.14E-03
	71432	Benzene	1.84E-05	1.29E-01
	71432	Benzene	3.52E-05	2.47E-01
	75014	Vinyl chloride	4.21E-06	2.95E-02
	75014	Vinyl chloride	1.60E-07	1.12E-03
	75070	Acetaldehyde	6.22E-05	4.36E-01
	75092	Methylene chloride {Dichloromethane}	1.98E-05	1.39E-01
	75092	Methylene chloride {Dichloromethane}	9.18E-07	6.43E-03
	78875	1,2-Dichloropropane	2.90E-07	2.03E-03
	79005	1,1,2-Trichloroethane	3.41E-07	2.39E-03
	79345	1,1,2,2-Tetrachloroethane	5.64E-07	3.95E-03
	91203	Naphthalene	3.77E-04	2.64E+00
	91203	Naphthalene	2.16E-06	1.52E-02
	100414	Ethyl benzene	5.53E-07	3.87E-03
	100425	Styrene	2.65E-07	1.86E-03
	106934	Ethylene dibromide {EDB}	8.27E-05	5.80E-01
	106934	Ethylene dibromide {EDB}	4.75E-07	3.33E-03
	106990	1,3-Butadiene	2.17E-05	1.52E-01
	106990	1,3-Butadiene	1.48E-05	1.04E-01
	107028	Acrolein	5.86E-05	4.11E-01
	107062	Ethylene dichloride {EDC}	1.12E-05	7.83E-02
	107062	Ethylene dichloride {EDC}	2.52E-07	1.76E-03
	108883	Toluene	1.24E-05	8.71E-02
	542756	1,3-Dichloropropene	2.83E-07	1.98E-03
	1330207	Xylenes (mixed)	4.35E-06	3.05E-02
	7664417	Ammonia	3.47E-02	2.43E+02
	7664417	Ammonia	7.39E-05	5.18E-01
PEPS #1 Engine	50000	Formaldehyde	1.02E-04	7.16E-01
	56235	Carbon tetrachloride	1.08E-05	7.53E-02
	67663	Chloroform	9.14E-06	6.40E-02
	75014	Vinyl chloride	1.94E-05	1.36E-01
	75070	Acetaldehyde	2.85E-05	2.00E-01
	75092	Methylene chloride {Dichloromethane}	6.99E-06	4.90E-02
	79016	Trichloroethylene	9.68E-06	6.78E-02
	106467	p-Dichlorobenzene	1.08E-05	7.53E-02
	106990	1,3-Butadiene	5.27E-06	3.69E-02
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.13E-05	7.91E-02
	7439921	Lead	1.83E-06	1.28E-02

Table A-1. TAC Emissions Summary - Baseline
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
PEPS #1 Engine *(Cont'd)*	7440020	Nickel	1.08E-06	7.53E-03
	7440382	Arsenic	9.51E-08	6.66E-04
	7440439	Cadmium	3.12E-07	2.18E-03
	7664417	Ammonia	2.87E-03	2.01E+01
	7782492	Selenium	5.91E-06	4.14E-02
PEPS #2 Engine	50000	Formaldehyde	1.02E-04	7.16E-01
	56235	Carbon tetrachloride	1.08E-05	7.53E-02
	67663	Chloroform	9.14E-06	6.40E-02
	75014	Vinyl chloride	1.94E-05	1.36E-01
	75070	Acetaldehyde	2.85E-05	2.00E-01
	75092	Methylene chloride {Dichloromethane}	6.99E-06	4.90E-02
	79016	Trichloroethylene	9.68E-06	6.78E-02
	106467	p-Dichlorobenzene	1.08E-05	7.53E-02
	106990	1,3-Butadiene	5.27E-06	3.69E-02
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.13E-05	7.91E-02
	7439921	Lead	1.83E-06	1.28E-02
	7440020	Nickel	1.08E-06	7.53E-03
	7440382	Arsenic	9.51E-08	6.66E-04
	7440439	Cadmium	3.12E-07	2.18E-03
	7664417	Ammonia	2.87E-03	2.01E+01
	7782492	Selenium	5.91E-06	4.14E-02
PEPS #3 Engine	50000	Formaldehyde	1.02E-04	7.16E-01
	56235	Carbon tetrachloride	1.08E-05	7.53E-02
	67663	Chloroform	9.14E-06	6.40E-02
	75014	Vinyl chloride	1.94E-05	1.36E-01
	75070	Acetaldehyde	2.85E-05	2.00E-01
	75092	Methylene chloride {Dichloromethane}	6.99E-06	4.90E-02
	79016	Trichloroethylene	9.68E-06	6.78E-02
	106467	p-Dichlorobenzene	1.08E-05	7.53E-02
	106990	1,3-Butadiene	5.27E-06	3.69E-02
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.13E-05	7.91E-02
	7439921	Lead	1.83E-06	1.28E-02
	7440020	Nickel	1.08E-06	7.53E-03
	7440382	Arsenic	9.51E-08	6.66E-04
	7440439	Cadmium	3.12E-07	2.18E-03
	7664417	Ammonia	2.87E-03	2.01E+01
	7782492	Selenium	5.91E-06	4.14E-02
PEPS #4 Engine	50000	Formaldehyde	1.02E-04	7.16E-01
	56235	Carbon tetrachloride	1.08E-05	7.53E-02
	67663	Chloroform	9.14E-06	6.40E-02
	75014	Vinyl chloride	1.94E-05	1.36E-01
	75070	Acetaldehyde	2.85E-05	2.00E-01
	75092	Methylene chloride {Dichloromethane}	6.99E-06	4.90E-02
	79016	Trichloroethylene	9.68E-06	6.78E-02
	106467	p-Dichlorobenzene	1.08E-05	7.53E-02
	106990	1,3-Butadiene	5.27E-06	3.69E-02
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.13E-05	7.91E-02
	7439921	Lead	1.83E-06	1.28E-02
	7440020	Nickel	1.08E-06	7.53E-03
	7440382	Arsenic	9.51E-08	6.66E-04
	7440439	Cadmium	3.12E-07	2.18E-03
	7664417	Ammonia	2.87E-03	2.01E+01
	7782492	Selenium	5.91E-06	4.14E-02
PEPS #5 Engine	50000	Formaldehyde	1.02E-04	7.16E-01
	56235	Carbon tetrachloride	1.08E-05	7.53E-02
	67663	Chloroform	9.14E-06	6.40E-02
	75014	Vinyl chloride	1.94E-05	1.36E-01
	75070	Acetaldehyde	2.85E-05	2.00E-01
	75092	Methylene chloride {Dichloromethane}	6.99E-06	4.90E-02
	79016	Trichloroethylene	9.68E-06	6.78E-02
	106467	p-Dichlorobenzene	1.08E-05	7.53E-02
	106990	1,3-Butadiene	5.27E-06	3.69E-02
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.13E-05	7.91E-02
	7439921	Lead	1.83E-06	1.28E-02
	7440020	Nickel	1.08E-06	7.53E-03
	7440382	Arsenic	9.51E-08	6.66E-04
	7440439	Cadmium	3.12E-07	2.18E-03
	7664417	Ammonia	2.87E-03	2.01E+01
	7782492	Selenium	5.91E-06	4.14E-02
SIPS #1	50000	Formaldehyde	1.21E-04	8.47E-01
	50000	Formaldehyde	2.51E-04	1.76E+00
	56235	Carbon tetrachloride	4.96E-06	3.48E-02
	56235	Carbon tetrachloride	2.17E-07	1.52E-03
	67561	Methanol	3.74E-05	2.62E-01
	67663	Chloroform	1.68E-07	1.17E-03
	71432	Benzene	1.87E-05	1.31E-01
	71432	Benzene	1.93E-05	1.35E-01
	75014	Vinyl chloride	4.29E-06	3.00E-02
	75014	Vinyl chloride	8.78E-08	6.16E-04
	75070	Acetaldehyde	3.41E-05	2.39E-01
	75092	Methylene chloride {Dichloromethane}	2.01E-05	1.41E-01
	75092	Methylene chloride {Dichloromethane}	5.04E-07	3.53E-03

Table A-1. TAC Emissions Summary - Baseline
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
SIPS #1 *(Cont'd)*	78875	1,2-Dichloropropane	1.59E-07	1.11E-03
	79005	1,1,2-Trichloroethane	1.87E-07	1.31E-03
	79345	1,1,2,2-Tetrachloroethane	3.09E-07	2.17E-03
	91203	Naphthalene	3.84E-04	2.69E+00
	91203	Naphthalene	1.19E-06	8.32E-03
	100414	Ethyl benzene	3.03E-07	2.13E-03
	100425	Styrene	1.46E-07	1.02E-03
	106934	Ethylene dibromide {EDB}	8.43E-05	5.91E-01
	106934	Ethylene dibromide {EDB}	2.61E-07	1.83E-03
	106990	1,3-Butadiene	2.21E-05	1.55E-01
	106990	1,3-Butadiene	8.11E-06	5.68E-02
	107028	Acrolein	3.22E-05	2.25E-01
	107062	Ethylene dichloride {EDC}	1.14E-05	7.98E-02
	107062	Ethylene dichloride {EDC}	1.38E-07	9.69E-04
	108883	Toluene	6.83E-06	4.78E-02
	542756	1,3-Dichloropropene	1.55E-07	1.09E-03
	1330207	Xylenes (mixed)	2.39E-06	1.67E-02
	7664417	Ammonia	3.53E-02	2.47E+02
	7664417	Ammonia	4.06E-05	2.84E-01
South Flare #1	1151	PAHs, total	5.13E-06	3.59E-02
	50000	Formaldehyde	7.55E-04	5.29E+00
	56235	Carbon tetrachloride	9.62E-06	6.74E-02
	71432	Benzene	4.88E-06	3.42E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	8.34E-06	5.85E-02
	75014	Vinyl chloride	3.91E-06	2.74E-02
	75070	Acetaldehyde	4.62E-05	3.24E-01
	75092	Methylene chloride {Dichloromethane}	1.83E-05	1.28E-01
	79016	Trichloroethylene	8.22E-06	5.76E-02
	91203	Naphthalene	1.25E-06	8.77E-03
	100414	Ethyl benzene	4.35E-06	3.05E-02
	106990	1,3-Butadiene	3.38E-06	2.37E-02
	107062	Ethylene dichloride {EDC}	6.19E-06	4.34E-02
	108883	Toluene	9.06E-06	6.35E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.04E-05	7.27E-02
	1330207	Xylenes (mixed)	1.48E-05	1.04E-01
South Flare #2	1151	PAHs, total	5.13E-06	3.59E-02
	50000	Formaldehyde	7.55E-04	5.29E+00
	56235	Carbon tetrachloride	9.62E-06	6.74E-02
	71432	Benzene	4.88E-06	3.42E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	8.34E-06	5.85E-02
	75014	Vinyl chloride	3.91E-06	2.74E-02
	75070	Acetaldehyde	4.62E-05	3.24E-01
	75092	Methylene chloride {Dichloromethane}	1.83E-05	1.28E-01
	79016	Trichloroethylene	8.22E-06	5.76E-02
	91203	Naphthalene	1.25E-06	8.77E-03
	100414	Ethyl benzene	4.35E-06	3.05E-02
	106990	1,3-Butadiene	3.38E-06	2.37E-02
	107062	Ethylene dichloride {EDC}	6.19E-06	4.34E-02
	108883	Toluene	9.06E-06	6.35E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.04E-05	7.27E-02
	1330207	Xylenes (mixed)	1.48E-05	1.04E-01
South Flare #3	1151	PAHs, total	5.13E-06	3.59E-02
	50000	Formaldehyde	7.55E-04	5.29E+00
	56235	Carbon tetrachloride	9.62E-06	6.74E-02
	71432	Benzene	4.88E-06	3.42E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	8.34E-06	5.85E-02
	75014	Vinyl chloride	3.91E-06	2.74E-02
	75070	Acetaldehyde	4.62E-05	3.24E-01
	75092	Methylene chloride {Dichloromethane}	1.83E-05	1.28E-01
	79016	Trichloroethylene	8.22E-06	5.76E-02
	91203	Naphthalene	1.25E-06	8.77E-03
	100414	Ethyl benzene	4.35E-06	3.05E-02
	106990	1,3-Butadiene	3.38E-06	2.37E-02
	107062	Ethylene dichloride {EDC}	6.19E-06	4.34E-02
	108883	Toluene	9.06E-06	6.35E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.04E-05	7.27E-02
	1330207	Xylenes (mixed)	1.48E-05	1.04E-01

Table A-1. TAC Emissions Summary - Baseline
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
South Flare #4	1151	PAHs, total	5.13E-06	3.59E-02
	50000	Formaldehyde	7.55E-04	5.29E+00
	56235	Carbon tetrachloride	9.62E-06	6.74E-02
	71432	Benzene	4.88E-06	3.42E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	8.34E-06	5.85E-02
	75014	Vinyl chloride	3.91E-06	2.74E-02
	75070	Acetaldehyde	4.62E-05	3.24E-01
	75092	Methylene chloride {Dichloromethane}	1.83E-05	1.28E-01
	79016	Trichloroethylene	8.22E-06	5.76E-02
	91203	Naphthalene	1.25E-06	8.77E-03
	100414	Ethyl benzene	4.35E-06	3.05E-02
	106990	1,3-Butadiene	3.38E-06	2.37E-02
	107062	Ethylene dichloride {EDC}	6.19E-06	4.34E-02
	108883	Toluene	9.06E-06	6.35E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.04E-05	7.27E-02
	1330207	Xylenes (mixed)	1.48E-05	1.04E-01
South Flare #5	1151	PAHs, total	5.13E-06	3.59E-02
	50000	Formaldehyde	7.55E-04	5.29E+00
	56235	Carbon tetrachloride	9.62E-06	6.74E-02
	71432	Benzene	4.88E-06	3.42E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	8.34E-06	5.85E-02
	75014	Vinyl chloride	3.91E-06	2.74E-02
	75070	Acetaldehyde	4.62E-05	3.24E-01
	75092	Methylene chloride {Dichloromethane}	1.83E-05	1.28E-01
	79016	Trichloroethylene	8.22E-06	5.76E-02
	91203	Naphthalene	1.25E-06	8.77E-03
	100414	Ethyl benzene	4.35E-06	3.05E-02
	106990	1,3-Butadiene	3.38E-06	2.37E-02
	107062	Ethylene dichloride {EDC}	6.19E-06	4.34E-02
	108883	Toluene	9.06E-06	6.35E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.04E-05	7.27E-02
	1330207	Xylenes (mixed)	1.48E-05	1.04E-01
North Laboratory Boiler	1151	PAHs, total	6.35E-08	4.45E-04
	50000	Formaldehyde	1.08E-05	7.56E-02
	71432	Benzene	5.08E-06	3.56E-02
	75070	Acetaldehyde	2.73E-06	1.91E-02
	91203	Naphthalene	1.90E-07	1.33E-03
	100414	Ethyl benzene	6.03E-06	4.23E-02
	107028	Acrolein	1.71E-06	1.20E-02
	108883	Toluene	2.32E-05	1.63E-01
	110543	Hexane	4.00E-06	2.80E-02
	1330207	Xylenes (mixed)	1.73E-05	1.21E-01
	7664417	Ammonia	2.03E-03	1.42E+01
South Laboratory Boiler	1151	PAHs, total	6.35E-08	4.45E-04
	50000	Formaldehyde	1.08E-05	7.56E-02
	71432	Benzene	5.08E-06	3.56E-02
	75070	Acetaldehyde	2.73E-06	1.91E-02
	91203	Naphthalene	1.90E-07	1.33E-03
	100414	Ethyl benzene	6.03E-06	4.23E-02
	107028	Acrolein	1.71E-06	1.20E-02
	108883	Toluene	2.32E-05	1.63E-01
	110543	Hexane	4.00E-06	2.80E-02
	1330207	Xylenes (mixed)	1.73E-05	1.21E-01
	7664417	Ammonia	2.03E-03	1.42E+01
Digester Cleaning Operations at #12	71432	Benzene	2.28E-03	1.37E+00
	106467	p-Dichlorobenzene	3.35E-02	2.01E+01
	108883	Toluene	6.69E-02	4.02E+01
	127184	Perchloroethylene {Tetrachloroethene}	5.13E-03	3.08E+00
	1330207	Xylenes (mixed)	1.51E-01	9.08E+01
Digester Cleaning Operations at #11	71432	Benzene	2.28E-03	1.37E+00
	106467	p-Dichlorobenzene	3.35E-02	2.01E+01
	108883	Toluene	6.69E-02	4.02E+01
	127184	Perchloroethylene {Tetrachloroethene}	5.13E-03	3.08E+00
	1330207	Xylenes (mixed)	1.51E-01	9.08E+01
Digester Cleaning Operations at #16	71432	Benzene	2.28E-03	1.37E+00
	106467	p-Dichlorobenzene	3.35E-02	2.01E+01
	108883	Toluene	6.69E-02	4.02E+01
	127184	Perchloroethylene {Tetrachloroethene}	5.13E-03	3.08E+00
	1330207	Xylenes (mixed)	1.51E-01	9.08E+01
Scrubber P15	71432	Benzene	2.32E-04	1.62E+00
Scrubber SP1	71432	Benzene	1.62E-04	1.13E+00
Scrubber SP2	71432	Benzene	2.32E-04	1.62E+00
Scrubber SP3	71432	Benzene	1.85E-04	1.30E+00
Scrubber SP5	71432	Benzene	6.95E-04	4.75E+00

Table A-1. TAC Emissions Summary - Baseline
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Reactor E pH Adjustment Vent	56235	Carbon tetrachloride	1.22E-04	8.53E-01
	67663	Chloroform	5.86E-02	4.11E+02
	71432	Benzene	6.17E-05	4.33E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.05E-04	7.39E-01
	75014	Vinyl chloride	4.94E-05	3.46E-01
	75092	Methylene chloride {Dichloromethane}	7.03E-03	4.92E+01
	75343	1,1-Dichloroethane	7.82E-05	5.48E-01
	79016	Trichloroethylene	1.04E-04	7.28E-01
	106467	p-Dichlorobenzene	1.16E-04	8.14E-01
	106990	1,3-Butadiene	4.27E-05	3.00E-01
	108883	Toluene	7.34E-03	5.14E+01
	127184	Perchloroethylene {Tetrachloroethene}	2.13E-03	1.49E+01
	540590	1,2-Dichloroethylene	7.82E-05	5.48E-01
	1634044	Methyl tert-butyl ether	6.97E-05	4.88E-01
Reactor F pH Adjustment Vent	56235	Carbon tetrachloride	1.22E-04	8.52E-01
	67663	Chloroform	5.86E-02	4.11E+02
	71432	Benzene	6.17E-05	4.32E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.05E-04	7.39E-01
	75014	Vinyl chloride	4.94E-05	3.46E-01
	75092	Methylene chloride {Dichloromethane}	7.02E-03	4.92E+01
	75343	1,1-Dichloroethane	7.82E-05	5.48E-01
	79016	Trichloroethylene	1.04E-04	7.27E-01
	106467	p-Dichlorobenzene	1.16E-04	8.14E-01
	106990	1,3-Butadiene	4.27E-05	2.99E-01
	108883	Toluene	7.34E-03	5.14E+01
	127184	Perchloroethylene {Tetrachloroethene}	2.13E-03	1.49E+01
	540590	1,2-Dichloroethylene	7.82E-05	5.48E-01
	1634044	Methyl tert-butyl ether	6.96E-05	4.88E-01
Reactor G pH Adjustment Vent	56235	Carbon tetrachloride	1.18E-04	8.24E-01
	67663	Chloroform	5.67E-02	3.97E+02
	71432	Benzene	5.97E-05	4.18E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.02E-04	7.14E-01
	75014	Vinyl chloride	4.78E-05	3.35E-01
	75092	Methylene chloride {Dichloromethane}	6.79E-03	4.76E+01
	75343	1,1-Dichloroethane	7.56E-05	5.30E-01
	79016	Trichloroethylene	1.00E-04	7.04E-01
	106467	p-Dichlorobenzene	1.12E-04	7.87E-01
	106990	1,3-Butadiene	4.13E-05	2.90E-01
	108883	Toluene	7.10E-03	4.97E+01
	127184	Perchloroethylene {Tetrachloroethene}	2.06E-03	1.44E+01
	540590	1,2-Dichloroethylene	7.56E-05	5.30E-01
	1634044	Methyl tert-butyl ether	6.74E-05	4.72E-01
Reactor H pH Adjustment Vent	56235	Carbon tetrachloride	7.05E-05	4.94E-01
	67663	Chloroform	3.40E-02	2.38E+02
	71432	Benzene	3.58E-05	2.51E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	6.11E-05	4.28E-01
	75014	Vinyl chloride	2.86E-05	2.01E-01
	75092	Methylene chloride {Dichloromethane}	4.07E-03	2.86E+01
	75343	1,1-Dichloroethane	4.54E-05	3.18E-01
	79016	Trichloroethylene	6.02E-05	4.22E-01
	106467	p-Dichlorobenzene	6.74E-05	4.72E-01
	106990	1,3-Butadiene	2.48E-05	1.74E-01
	108883	Toluene	4.26E-03	2.98E+01
	127184	Perchloroethylene {Tetrachloroethene}	1.24E-03	8.66E+00
	540590	1,2-Dichloroethylene	4.54E-05	3.18E-01
	1634044	Methyl tert-butyl ether	4.04E-05	2.83E-01
SEC Effluent Conveyance Channel Vent	67663	Chloroform	1.12E-03	9.83E+00
	71432	Benzene	1.03E-03	9.00E+00
	71556	Methyl chloroform {1,1,1-Trichloroethane}	3.12E-04	2.73E+00
	75092	Methylene chloride {Dichloromethane}	2.16E-04	1.89E+00
	79016	Trichloroethylene	1.67E-05	1.46E-01
	106467	p-Dichlorobenzene	1.44E-05	1.26E-01
	108883	Toluene	1.08E-03	9.48E+00
	127184	Perchloroethylene {Tetrachloroethene}	3.49E-03	3.06E+01
	1330207	Xylenes (mixed)	7.97E-04	6.99E+00
	7783064	Hydrogen sulfide	9.17E-06	8.03E-02
SIPS Standby Generator #2	9901	Diesel particulate matter (DPM)	2.63E-04	1.84E+00
Switchboard 1B/1C Standby Generator	9901	Diesel particulate matter (DPM)	3.89E-04	2.73E+00
VEC Loader at Central Odor	9901	Diesel particulate matter (DPM)	7.29E-04	5.11E+00
VEC Loader at Skimmings Scrubbers	9901	Diesel particulate matter (DPM)	9.95E-05	6.97E-01
VEC Loader at S-1 and S-2	9901	Diesel particulate matter (DPM)	1.31E-05	9.15E-02
VEC Loader at S-5 and S-6	9901	Diesel particulate matter (DPM)	1.24E-05	8.72E-02
VEC Loader at Solids Processing	9901	Diesel particulate matter (DPM)	7.65E-05	5.36E-01
Plasma Arc Cutter	7440020	Nickel	4.92E-07	3.45E-03
	18540299	Chromium, hexavalent (& compounds)	3.74E-09	2.62E-05

Table A-1. TAC Emissions Summary - Baseline
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Portable Equipment Use at Primary	9901	Diesel particulate matter (DPM)	1.17E-03	8.20E+00
	50000	Formaldehyde	3.08E-04	2.16E+00
	67561	Methanol	6.91E-05	4.84E-01
	71432	Benzene	3.39E-04	2.38E+00
	75070	Acetaldehyde	7.40E-05	5.19E-01
	78933	Methyl ethyl ketone {2-Butanone}	5.92E-06	4.15E-02
	91203	Naphthalene	1.28E-05	8.99E-02
	95476	o-Xylene	1.53E-04	1.07E+00
	95636	1,2,4-Trimethylbenzene	1.24E-04	8.71E-01
	100414	Ethyl benzene	1.48E-04	1.04E+00
	100425	Styrene	1.28E-05	8.99E-02
	106990	1,3-Butadiene	8.19E-05	5.74E-01
	107028	Acrolein	1.78E-05	1.25E-01
	108383	m-Xylene	4.39E-04	3.08E+00
	108883	Toluene	6.70E-04	4.70E+00
	110543	Hexane	1.29E-04	9.06E-01
	1634044	Methyl tert-butyl ether	1.84E-04	1.29E+00
	7439965	Manganese	2.94E-07	2.06E-03
	7440020	Nickel	2.94E-07	2.06E-03
	7440508	Copper	2.94E-07	2.06E-03
	7782505	Chlorine	4.06E-05	2.84E-01
Portable Equipment Use at Secondary	9901	Diesel particulate matter (DPM)	3.60E-04	2.52E+00
	50000	Formaldehyde	1.37E-04	9.59E-01
	67561	Methanol	3.07E-05	2.15E-01
	71432	Benzene	1.51E-04	1.06E+00
	75070	Acetaldehyde	3.29E-05	2.31E-01
	78933	Methyl ethyl ketone {2-Butanone}	2.63E-06	1.84E-02
	91203	Naphthalene	5.70E-06	3.99E-02
	95476	o-Xylene	6.80E-05	4.76E-01
	95636	1,2,4-Trimethylbenzene	5.53E-05	3.87E-01
	100414	Ethyl benzene	6.58E-05	4.61E-01
	100425	Styrene	5.70E-06	3.99E-02
	106990	1,3-Butadiene	3.64E-05	2.55E-01
	107028	Acrolein	7.90E-06	5.53E-02
	108383	m-Xylene	1.95E-04	1.37E+00
	108883	Toluene	2.98E-04	2.09E+00
	110543	Hexane	5.75E-05	4.03E-01
	1634044	Methyl tert-butyl ether	8.16E-05	5.72E-01
	7439965	Manganese	1.31E-07	9.17E-04
	7440020	Nickel	1.31E-07	9.17E-04
	7440508	Copper	1.31E-07	9.17E-04
	7782505	Chlorine	1.80E-05	1.26E-01
Portable Equipment Use at Solids	9901	Diesel particulate matter (DPM)	6.37E-04	4.47E+00
	50000	Formaldehyde	1.25E-04	8.79E-01
	67561	Methanol	2.81E-05	1.97E-01
	71432	Benzene	1.38E-04	9.69E-01
	75070	Acetaldehyde	3.02E-05	2.11E-01
	78933	Methyl ethyl ketone {2-Butanone}	2.41E-06	1.69E-02
	91203	Naphthalene	5.23E-06	3.66E-02
	95476	o-Xylene	6.23E-05	4.37E-01
	95636	1,2,4-Trimethylbenzene	5.07E-05	3.55E-01
	100414	Ethyl benzene	6.03E-05	4.23E-01
	100425	Styrene	5.23E-06	3.66E-02
	106990	1,3-Butadiene	3.34E-05	2.34E-01
	107028	Acrolein	7.24E-06	5.07E-02
	108383	m-Xylene	1.79E-04	1.25E+00
	108883	Toluene	2.73E-04	1.91E+00
	110543	Hexane	5.27E-05	3.69E-01
	1634044	Methyl tert-butyl ether	7.48E-05	5.24E-01
	7439965	Manganese	1.20E-07	8.40E-04
	7440020	Nickel	1.20E-07	8.40E-04
	7440508	Copper	1.20E-07	8.40E-04
	7782505	Chlorine	1.65E-05	1.16E-01
South Solids Biofilter	56235	Carbon tetrachloride	1.43E-04	1.25E+00
	67663	Chloroform	4.43E-04	3.88E+00
	75092	Methylene chloride {Dichloromethane}	1.73E-02	1.52E+02
	79016	Trichloroethylene	1.22E-04	1.07E+00
	127184	Perchloroethylene {Tetrachloroethene}	1.54E-04	1.35E+00
	7664417	Ammonia	3.48E-02	3.04E+02
East Solids Biofilter	56235	Carbon tetrachloride	1.80E-04	1.57E+00
	67663	Chloroform	2.79E-04	2.44E+00
	75092	Methylene chloride {Dichloromethane}	2.18E-02	1.91E+02
	79016	Trichloroethylene	1.54E-04	1.35E+00
	7664417	Ammonia	7.17E-02	6.28E+02
Reactor A Clarifiers + Weir	67663	Chloroform	4.75E-03	3.33E+01
	75092	Methylene chloride {Dichloromethane}	2.53E-03	1.77E+01
	108883	Toluene	1.25E-03	8.74E+00
Reactor B Clarifiers + Weir	67663	Chloroform	4.75E-03	3.33E+01
	75092	Methylene chloride {Dichloromethane}	2.53E-03	1.77E+01
	108883	Toluene	1.25E-03	8.73E+00
Reactor C Clarifiers + Weir	67663	Chloroform	1.43E-04	1.00E+00
	75092	Methylene chloride {Dichloromethane}	7.59E-05	5.32E-01
	108883	Toluene	3.75E-05	2.63E-01
Reactor D Clarifiers + Weir	67663	Chloroform	2.70E-03	1.89E+01
	75092	Methylene chloride {Dichloromethane}	1.44E-03	1.01E+01
	108883	Toluene	7.08E-04	4.96E+00

Table A-1. TAC Emissions Summary - Baseline
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Reactor E Clarifiers + Weir	67663	Chloroform	4.77E-03	3.35E+01
	75092	Methylene chloride {Dichloromethane}	2.54E-03	1.78E+01
	108883	Toluene	1.25E-03	8.78E+00
Reactor F Clarifiers + Weir	67663	Chloroform	4.77E-03	3.34E+01
	75092	Methylene chloride {Dichloromethane}	2.54E-03	1.78E+01
	108883	Toluene	1.25E-03	8.78E+00
Reactor G Clarifiers + Weir	67663	Chloroform	4.62E-03	3.23E+01
	75092	Methylene chloride {Dichloromethane}	2.45E-03	1.72E+01
	108883	Toluene	1.21E-03	8.49E+00
Reactor H Clarifiers + Weir	67663	Chloroform	2.77E-03	1.94E+01
	75092	Methylene chloride {Dichloromethane}	1.47E-03	1.03E+01
	108883	Toluene	7.26E-04	5.09E+00
MLCC for Clarifier Banks A and B	67663	Chloroform	1.02E-03	7.17E+00
	75092	Methylene chloride {Dichloromethane}	1.81E-04	1.27E+00
	108883	Toluene	2.48E-05	1.74E-01
	127184	Perchloroethylene {Tetrachloroethene}	5.32E-05	3.73E-01
MLCC for Clarifier Banks C and D	67663	Chloroform	3.06E-04	2.14E+00
	75092	Methylene chloride {Dichloromethane}	5.40E-05	3.78E-01
	108883	Toluene	7.42E-06	5.20E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.59E-05	1.12E-01
MLCC for Clarifier Banks E and F	67663	Chloroform	1.03E-03	7.20E+00
	75092	Methylene chloride {Dichloromethane}	1.81E-04	1.27E+00
	108883	Toluene	2.49E-05	1.75E-01
	127184	Perchloroethylene {Tetrachloroethene}	5.35E-05	3.75E-01
MLCC for Clarifier Banks G and H	67663	Chloroform	7.95E-04	5.57E+00
	75092	Methylene chloride {Dichloromethane}	1.40E-04	9.83E-01
	108883	Toluene	1.93E-05	1.35E-01
	127184	Perchloroethylene {Tetrachloroethene}	4.14E-05	2.90E-01
Gasoline Storage and Dispensing	71432	Benzene	1.44E-05	1.01E-01
	91203	Naphthalene	1.27E-08	8.88E-05
	100414	Ethyl benzene	3.39E-06	2.37E-02
Scrubber P16C	56235	Carbon tetrachloride	3.04E-06	3.68E-03
	67663	Chloroform	2.36E-06	2.85E-03
	100414	Ethyl benzene	2.10E-06	2.54E-03
	108883	Toluene	9.11E-06	1.10E-02
	1330207	Xylenes (mixed)	8.39E-06	1.02E-02
PEPS Inside Standby Generator	9901	Diesel particulate matter (DPM)	1.29E-03	9.01E+00
Portable Generator (Asset 8216)	9901	Diesel particulate matter (DPM)	4.65E-03	3.26E+01
Reactor A Stage 3 Vent	67663	Chloroform	1.32E-03	9.25E+00
	75092	Methylene chloride {Dichloromethane}	1.44E-04	1.01E+00
	108883	Toluene	5.12E-06	3.59E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.19E-04	8.33E-01
Reactor B Stage 3 Vent	67663	Chloroform	1.32E-03	9.24E+00
	75092	Methylene chloride {Dichloromethane}	1.44E-04	1.01E+00
	108883	Toluene	5.11E-06	3.58E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.19E-04	8.33E-01
Reactor C Stage 3 Vent	67663	Chloroform	3.97E-05	2.78E-01
	75092	Methylene chloride {Dichloromethane}	4.33E-06	3.03E-02
	108883	Toluene	1.54E-07	1.08E-03
	127184	Perchloroethylene {Tetrachloroethene}	3.57E-06	2.50E-02
Reactor D Stage 3 Vent	67663	Chloroform	7.50E-04	5.25E+00
	75092	Methylene chloride {Dichloromethane}	8.19E-05	5.74E-01
	108883	Toluene	2.91E-06	2.04E-02
	127184	Perchloroethylene {Tetrachloroethene}	6.75E-05	4.73E-01
Reactor E Stage 3 Vent	67663	Chloroform	1.33E-03	9.29E+00
	75092	Methylene chloride {Dichloromethane}	1.45E-04	1.01E+00
	108883	Toluene	5.14E-06	3.60E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.19E-04	8.37E-01
Reactor F Stage 3 Vent	67663	Chloroform	1.33E-03	9.29E+00
	75092	Methylene chloride {Dichloromethane}	1.45E-04	1.01E+00
	108883	Toluene	5.14E-06	3.60E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.19E-04	8.37E-01
Reactor G Stage 3 Vent	67663	Chloroform	1.28E-03	8.98E+00
	75092	Methylene chloride {Dichloromethane}	1.40E-04	9.81E-01
	108883	Toluene	4.97E-06	3.48E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.16E-04	8.10E-01
Reactor H Stage 3 Vent	67663	Chloroform	7.69E-04	5.39E+00
	75092	Methylene chloride {Dichloromethane}	8.40E-05	5.88E-01
	108883	Toluene	2.98E-06	2.09E-02
	127184	Perchloroethylene {Tetrachloroethene}	6.93E-05	4.86E-01

Table A-1. TAC Emissions Summary - Baseline
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
PWSC Demonstration Plant	67561	Methanol	7.49E-06	6.56E-02
	67630	Isopropyl alcohol	6.35E-05	5.56E-01
	67641	Acetone	8.46E-05	7.41E-01
	67663	Chloroform	1.57E-03	1.38E+01
	71432	Benzene	1.09E-04	9.54E-01
	74873	Methyl chloride {Chloromethane}	6.83E-05	5.99E-01
	75003	Ethyl chloride {Chlorethane}	4.71E-05	4.12E-01
	75092	Methylene chloride {Dichloromethane}	9.75E-05	8.54E-01
	75150	Carbon disulfide	7.22E-05	6.32E-01
	75274	Bromodichloromethane	4.96E-05	4.35E-01
	75343	1,1-Dichloroethane	6.29E-06	5.51E-02
	75718	Dichlorodifluoromethane {Freon 12}	1.85E-05	1.62E-01
	78875	1,2-Dichloropropane	3.29E-06	2.89E-02
	78933	Methyl ethyl ketone {2-Butanone}	3.23E-06	2.83E-02
	95476	o-Xylene	5.06E-05	4.43E-01
	95636	1,2,4-Trimethylbenzene	4.00E-05	3.51E-01
	100414	Ethyl benzene	3.15E-05	2.76E-01
	100425	Styrene	5.63E-06	4.94E-02
	106423	p-Xylene	1.24E-04	1.09E+00
	106467	p-Dichlorobenzene	1.66E-05	1.46E-01
	108054	Vinyl acetate	2.23E-05	1.95E-01
	108383	m-Xylene	1.24E-04	1.09E+00
	108678	1,3,5-Trimethylbenzene	8.55E-06	7.49E-02
	108883	Toluene	2.02E-04	1.77E+00
	110543	Hexane	2.46E-05	2.15E-01
	123911	1,4-Dioxane	6.54E-06	5.73E-02
	124481	Chlorodibromomethane	1.92E-06	1.68E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.92E-05	1.68E-01
	1634044	Methyl tert-butyl ether	4.70E-05	4.12E-01
	7664417	Ammonia	3.02E-04	2.65E+00

Table A-2. TAC Emissions Summary - Scenario 1
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
E-1 Skimmings Scrubber #1	56235	Carbon tetrachloride	1.79E-06	1.25E-02
	67663	Chloroform	6.93E-07	4.86E-03
	71432	Benzene	4.53E-06	3.18E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.55E-06	1.09E-02
	75014	Vinyl chloride	3.19E-06	2.24E-02
	75058	Acetonitrile	1.03E-04	7.22E-01
	75092	Methylene chloride {Dichloromethane}	1.07E-04	7.46E-01
	75343	1,1-Dichloroethane	1.15E-06	8.05E-03
	79016	Trichloroethylene	1.53E-06	1.07E-02
	95476	o-Xylene	1.28E-05	8.98E-02
	100414	Ethyl benzene	6.90E-06	4.84E-02
	100425	Styrene	2.42E-05	1.69E-01
	106467	p-Dichlorobenzene	2.83E-05	1.99E-01
	106990	1,3-Butadiene	3.01E-06	2.11E-02
	108883	Toluene	2.14E-05	1.50E-01
	127184	Perchloroethylene {Tetrachloroethene}	1.93E-06	1.35E-02
	540590	1,2-Dichloroethylene	1.13E-06	7.89E-03
	1330207	Xylenes (mixed)	2.47E-05	1.73E-01
	1634044	Methyl tert-butyl ether	4.71E-06	3.30E-02
	7783064	Hydrogen sulfide	3.96E-03	2.77E+01
E-1 Skimmings Scrubber #2	56235	Carbon tetrachloride	1.79E-06	1.25E-02
	67663	Chloroform	6.93E-07	4.86E-03
	71432	Benzene	4.53E-06	3.18E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.55E-06	1.09E-02
	75014	Vinyl chloride	3.19E-06	2.24E-02
	75058	Acetonitrile	1.03E-04	7.22E-01
	75092	Methylene chloride {Dichloromethane}	1.07E-04	7.46E-01
	75343	1,1-Dichloroethane	1.15E-06	8.05E-03
	79016	Trichloroethylene	1.53E-06	1.07E-02
	95476	o-Xylene	1.28E-05	8.98E-02
	100414	Ethyl benzene	6.90E-06	4.84E-02
	100425	Styrene	2.42E-05	1.69E-01
	106467	p-Dichlorobenzene	2.83E-05	1.99E-01
	106990	1,3-Butadiene	3.01E-06	2.11E-02
	108883	Toluene	2.14E-05	1.50E-01
	127184	Perchloroethylene {Tetrachloroethene}	1.93E-06	1.35E-02
	540590	1,2-Dichloroethylene	1.13E-06	7.89E-03
	1330207	Xylenes (mixed)	2.47E-05	1.73E-01
	1634044	Methyl tert-butyl ether	4.71E-06	3.30E-02
	7783064	Hydrogen sulfide	3.96E-03	2.77E+01
E-2 Skimmings Scrubber #1	56235	Carbon tetrachloride	1.82E-06	1.28E-02
	67663	Chloroform	2.52E-04	1.76E+00
	71432	Benzene	6.43E-07	4.51E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.14E-06	8.01E-03
	75014	Vinyl chloride	1.77E-06	1.24E-02
	75058	Acetonitrile	2.16E-06	1.52E-02
	75092	Methylene chloride {Dichloromethane}	5.60E-05	3.92E-01
	75343	1,1-Dichloroethane	1.56E-06	1.10E-02
	79016	Trichloroethylene	2.16E-07	1.52E-03
	95476	o-Xylene	1.82E-06	1.27E-02
	100414	Ethyl benzene	9.79E-07	6.86E-03
	100425	Styrene	3.43E-06	2.40E-02
	106467	p-Dichlorobenzene	4.02E-06	2.82E-02
	106990	1,3-Butadiene	1.21E-05	8.49E-02
	108883	Toluene	3.04E-06	2.13E-02
	127184	Perchloroethylene {Tetrachloroethene}	2.73E-07	1.91E-03
	540590	1,2-Dichloroethylene	8.94E-07	6.27E-03
	1330207	Xylenes (mixed)	3.50E-06	2.45E-02
	1634044	Methyl tert-butyl ether	1.68E-05	1.18E-01
	7783064	Hydrogen sulfide	5.62E-04	3.94E+00
E-2 Skimmings Scrubber #2	56235	Carbon tetrachloride	1.82E-06	1.28E-02
	67663	Chloroform	2.52E-04	1.76E+00
	71432	Benzene	6.43E-07	4.51E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.14E-06	8.01E-03
	75014	Vinyl chloride	1.77E-06	1.24E-02
	75058	Acetonitrile	2.16E-06	1.52E-02
	75092	Methylene chloride {Dichloromethane}	5.60E-05	3.92E-01
	75343	1,1-Dichloroethane	1.56E-06	1.10E-02
	79016	Trichloroethylene	2.16E-07	1.52E-03
	95476	o-Xylene	1.82E-06	1.27E-02
	100414	Ethyl benzene	9.79E-07	6.86E-03
	100425	Styrene	3.43E-06	2.40E-02
	106467	p-Dichlorobenzene	4.02E-06	2.82E-02
	106990	1,3-Butadiene	1.21E-05	8.49E-02
	108883	Toluene	3.04E-06	2.13E-02
	127184	Perchloroethylene {Tetrachloroethene}	2.73E-07	1.91E-03
	540590	1,2-Dichloroethylene	8.94E-07	6.27E-03
	1330207	Xylenes (mixed)	3.50E-06	2.45E-02
	1634044	Methyl tert-butyl ether	1.68E-05	1.18E-01
	7783064	Hydrogen sulfide	5.62E-04	3.94E+00

Table A-2. TAC Emissions Summary - Scenario 1
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
E-2 Skimmings Scrubber #3	56235	Carbon tetrachloride	1.82E-06	1.28E-02
	67663	Chloroform	2.52E-04	1.76E+00
	71432	Benzene	6.43E-07	4.51E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.14E-06	8.01E-03
	75014	Vinyl chloride	1.77E-06	1.24E-02
	75058	Acetonitrile	2.16E-06	1.52E-02
	75092	Methylene chloride {Dichloromethane}	5.60E-05	3.92E-01
	75343	1,1-Dichloroethane	1.56E-06	1.10E-02
	79016	Trichloroethylene	2.16E-07	1.52E-03
	95476	o-Xylene	1.82E-06	1.27E-02
	100414	Ethyl benzene	9.79E-07	6.86E-03
	100425	Styrene	3.43E-06	2.40E-02
	106467	p-Dichlorobenzene	4.02E-06	2.82E-02
	106990	1,3-Butadiene	1.21E-05	8.49E-02
	108883	Toluene	3.04E-06	2.13E-02
	127184	Perchloroethylene {Tetrachloroethene}	2.73E-07	1.91E-03
	540590	1,2-Dichloroethylene	8.94E-07	6.27E-03
	1330207	Xylenes (mixed)	3.50E-06	2.45E-02
	1634044	Methyl tert-butyl ether	1.68E-05	1.18E-01
	7783064	Hydrogen sulfide	5.62E-04	3.94E+00
E-3 Skimmings Scrubber #1	56235	Carbon tetrachloride	2.13E-05	1.49E-01
	67663	Chloroform	4.02E-03	2.82E+01
	71432	Benzene	1.17E-04	8.23E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	2.58E-05	1.81E-01
	75014	Vinyl chloride	1.38E-05	9.70E-02
	75058	Acetonitrile	1.51E-04	1.06E+00
	75092	Methylene chloride {Dichloromethane}	1.41E-03	9.88E+00
	75343	1,1-Dichloroethane	2.83E-05	1.98E-01
	79016	Trichloroethylene	3.51E-05	2.46E-01
	95476	o-Xylene	2.55E-05	1.78E-01
	100414	Ethyl benzene	1.37E-05	9.61E-02
	100425	Styrene	4.80E-05	3.37E-01
	106467	p-Dichlorobenzene	5.63E-05	3.94E-01
	106990	1,3-Butadiene	5.49E-04	3.85E+00
	108883	Toluene	4.25E-05	2.98E-01
	127184	Perchloroethylene {Tetrachloroethene}	3.82E-06	2.68E-02
	540590	1,2-Dichloroethylene	4.65E-05	3.26E-01
	1330207	Xylenes (mixed)	4.90E-05	3.43E-01
	1634044	Methyl tert-butyl ether	5.28E-04	3.70E+00
	7783064	Hydrogen sulfide	7.86E-03	5.51E+01
E-3 Skimmings Scrubber #2	56235	Carbon tetrachloride	2.13E-05	1.49E-01
	67663	Chloroform	4.02E-03	2.82E+01
	71432	Benzene	1.17E-04	8.23E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	2.58E-05	1.81E-01
	75014	Vinyl chloride	1.38E-05	9.70E-02
	75058	Acetonitrile	1.51E-04	1.06E+00
	75092	Methylene chloride {Dichloromethane}	1.41E-03	9.88E+00
	75343	1,1-Dichloroethane	2.83E-05	1.98E-01
	79016	Trichloroethylene	3.51E-05	2.46E-01
	95476	o-Xylene	2.55E-05	1.78E-01
	100414	Ethyl benzene	1.37E-05	9.61E-02
	100425	Styrene	4.80E-05	3.37E-01
	106467	p-Dichlorobenzene	5.63E-05	3.94E-01
	106990	1,3-Butadiene	5.49E-04	3.85E+00
	108883	Toluene	4.25E-05	2.98E-01
	127184	Perchloroethylene {Tetrachloroethene}	3.82E-06	2.68E-02
	540590	1,2-Dichloroethylene	4.65E-05	3.26E-01
	1330207	Xylenes (mixed)	4.90E-05	3.43E-01
	1634044	Methyl tert-butyl ether	5.28E-04	3.70E+00
	7783064	Hydrogen sulfide	7.86E-03	5.51E+01
E-3 Skimmings Scrubber #3	56235	Carbon tetrachloride	2.13E-05	1.49E-01
	67663	Chloroform	4.02E-03	2.82E+01
	71432	Benzene	1.17E-04	8.23E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	2.58E-05	1.81E-01
	75014	Vinyl chloride	1.38E-05	9.70E-02
	75058	Acetonitrile	1.51E-04	1.06E+00
	75092	Methylene chloride {Dichloromethane}	1.41E-03	9.88E+00
	75343	1,1-Dichloroethane	2.83E-05	1.98E-01
	79016	Trichloroethylene	3.51E-05	2.46E-01
	95476	o-Xylene	2.55E-05	1.78E-01
	100414	Ethyl benzene	1.37E-05	9.61E-02
	100425	Styrene	4.80E-05	3.37E-01
	106467	p-Dichlorobenzene	5.63E-05	3.94E-01
	106990	1,3-Butadiene	5.49E-04	3.85E+00
	108883	Toluene	4.25E-05	2.98E-01
	127184	Perchloroethylene {Tetrachloroethene}	3.82E-06	2.68E-02
	540590	1,2-Dichloroethylene	4.65E-05	3.26E-01
	1330207	Xylenes (mixed)	4.90E-05	3.43E-01
	1634044	Methyl tert-butyl ether	5.28E-04	3.70E+00
	7783064	Hydrogen sulfide	7.86E-03	5.51E+01

Table A-2. TAC Emissions Summary - Scenario 1
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Scrubber S1; Inlet Channel to Reactors A/B	56235	Carbon tetrachloride	3.99E-05	2.77E-01
	67663	Chloroform	9.17E-04	6.37E+00
	71432	Benzene	2.41E-05	1.67E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	3.46E-05	2.40E-01
	75014	Vinyl chloride	1.62E-05	1.13E-01
	75092	Methylene chloride {Dichloromethane}	3.29E-04	2.28E+00
	75343	1,1-Dichloroethane	2.56E-05	1.78E-01
	79016	Trichloroethylene	3.40E-05	2.37E-01
	100414	Ethyl benzene	2.75E-05	1.91E-01
	100425	Styrene	2.70E-05	1.88E-01
	106467	p-Dichlorobenzene	3.81E-05	2.65E-01
	108883	Toluene	6.04E-05	4.20E-01
	127184	Perchloroethylene {Tetrachloroethene}	4.30E-05	2.99E-01
	1330207	Xylenes (mixed)	8.21E-05	5.71E-01
	1634044	Methyl tert-butyl ether	2.18E-04	1.52E+00
	7783064	Hydrogen sulfide	3.71E-03	2.58E+01
Scrubber S2; Inlet Channel to Reactors C/D	56235	Carbon tetrachloride	3.99E-05	2.79E-01
	67663	Chloroform	9.17E-04	6.41E+00
	71432	Benzene	2.41E-05	1.68E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	3.46E-05	2.42E-01
	75014	Vinyl chloride	1.62E-05	1.13E-01
	75092	Methylene chloride {Dichloromethane}	3.29E-04	2.30E+00
	75343	1,1-Dichloroethane	2.56E-05	1.79E-01
	79016	Trichloroethylene	3.40E-05	2.38E-01
	100414	Ethyl benzene	2.75E-05	1.92E-01
	100425	Styrene	2.70E-05	1.89E-01
	106467	p-Dichlorobenzene	3.81E-05	2.66E-01
	108883	Toluene	6.04E-05	4.22E-01
	127184	Perchloroethylene {Tetrachloroethene}	4.30E-05	3.00E-01
	1330207	Xylenes (mixed)	8.21E-05	5.74E-01
	1634044	Methyl tert-butyl ether	2.18E-04	1.53E+00
	7783064	Hydrogen sulfide	3.71E-03	2.59E+01
Scrubber S5; Inlet Channel to Reactors E/F	56235	Carbon tetrachloride	7.25E-05	5.04E-01
	67663	Chloroform	1.67E-03	1.16E+01
	71432	Benzene	4.37E-05	3.04E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	6.28E-05	4.37E-01
	75014	Vinyl chloride	2.94E-05	2.05E-01
	75092	Methylene chloride {Dichloromethane}	5.98E-04	4.15E+00
	75343	1,1-Dichloroethane	4.66E-05	3.24E-01
	79016	Trichloroethylene	6.19E-05	4.30E-01
	100414	Ethyl benzene	5.00E-05	3.48E-01
	100425	Styrene	4.91E-05	3.41E-01
	106467	p-Dichlorobenzene	6.92E-05	4.81E-01
	108883	Toluene	1.10E-04	7.64E-01
	127184	Perchloroethylene {Tetrachloroethene}	7.81E-05	5.43E-01
	1330207	Xylenes (mixed)	1.49E-04	1.04E+00
	1634044	Methyl tert-butyl ether	3.97E-04	2.76E+00
	7783064	Hydrogen sulfide	6.74E-03	4.68E+01
Scrubber S6; Inlet Channel to Reactors G/H	56235	Carbon tetrachloride	7.25E-05	5.05E-01
	67663	Chloroform	1.67E-03	1.16E+01
	71432	Benzene	4.37E-05	3.05E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	6.28E-05	4.38E-01
	75014	Vinyl chloride	2.94E-05	2.05E-01
	75092	Methylene chloride {Dichloromethane}	5.98E-04	4.16E+00
	75343	1,1-Dichloroethane	4.66E-05	3.25E-01
	79016	Trichloroethylene	6.19E-05	4.31E-01
	100414	Ethyl benzene	5.00E-05	3.49E-01
	100425	Styrene	4.91E-05	3.42E-01
	106467	p-Dichlorobenzene	6.92E-05	4.83E-01
	108883	Toluene	1.10E-04	7.66E-01
	127184	Perchloroethylene {Tetrachloroethene}	7.81E-05	5.44E-01
	1330207	Xylenes (mixed)	1.49E-04	1.04E+00
	1634044	Methyl tert-butyl ether	3.97E-04	2.77E+00
	7783064	Hydrogen sulfide	6.74E-03	4.70E+01
PEPS Outside Standby Generator	9901	Diesel particulate matter (DPM)	4.62E-05	3.24E-01
SIPS Standby Generator #1	9901	Diesel particulate matter (DPM)	5.18E-05	3.63E-01
TEF Black Start Standby Generator	9901	Diesel particulate matter (DPM)	2.89E-04	2.02E+00
Laboratory Annex Standby Generator	9901	Diesel particulate matter (DPM)	1.66E-05	1.16E-01
Boiler #7	1151	PAHs, total	1.71E-06	1.20E-02
	50000	Formaldehyde	2.11E-04	1.48E+00
	71432	Benzene	6.28E-06	4.40E-02
	75070	Acetaldehyde	5.31E-05	3.72E-01
	91203	Naphthalene	5.14E-06	3.60E-02
	100414	Ethyl benzene	1.18E-04	8.29E-01
	107028	Acrolein	4.63E-05	3.24E-01
	108883	Toluene	3.04E-05	2.13E-01
	110543	Hexane	7.89E-05	5.53E-01
	1330207	Xylenes (mixed)	2.56E-05	1.79E-01
	7664417	Ammonia	5.49E-02	3.84E+02

Table A-2. TAC Emissions Summary - Scenario 1
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Boiler #8	1151	PAHs, total	1.28E-06	8.99E-03
	50000	Formaldehyde	1.58E-04	1.11E+00
	71432	Benzene	4.70E-06	3.29E-02
	75070	Acetaldehyde	3.98E-05	2.79E-01
	91203	Naphthalene	3.85E-06	2.70E-02
	100414	Ethyl benzene	8.85E-05	6.20E-01
	107028	Acrolein	3.46E-05	2.43E-01
	108883	Toluene	2.27E-05	1.59E-01
	110543	Hexane	5.90E-05	4.13E-01
	1330207	Xylenes (mixed)	1.91E-05	1.34E-01
	7664417	Ammonia	4.10E-02	2.88E+02
Boiler #9	1151	PAHs, total	1.41E-06	9.91E-03
	50000	Formaldehyde	1.74E-04	1.22E+00
	71432	Benzene	5.18E-06	3.63E-02
	75070	Acetaldehyde	4.38E-05	3.07E-01
	91203	Naphthalene	4.24E-06	2.97E-02
	100414	Ethyl benzene	9.76E-05	6.84E-01
	107028	Acrolein	3.82E-05	2.68E-01
	108883	Toluene	2.50E-05	1.75E-01
	110543	Hexane	6.51E-05	4.56E-01
	1330207	Xylenes (mixed)	2.11E-05	1.48E-01
	7664417	Ammonia	4.53E-02	3.17E+02
Boiler #10	1151	PAHs, total	4.41E-07	3.09E-03
	50000	Formaldehyde	5.43E-05	3.80E-01
	71432	Benzene	1.62E-06	1.13E-02
	75070	Acetaldehyde	1.37E-05	9.59E-02
	91203	Naphthalene	1.32E-06	9.28E-03
	100414	Ethyl benzene	3.05E-05	2.13E-01
	107028	Acrolein	1.19E-05	8.35E-02
	108883	Toluene	7.82E-06	5.48E-02
	110543	Hexane	2.03E-05	1.42E-01
	1330207	Xylenes (mixed)	6.58E-06	4.61E-02
	7664417	Ammonia	1.41E-02	9.90E+01
Scrubber S4 at DAF	56235	Carbon tetrachloride	5.78E-05	4.04E-01
	67663	Chloroform	1.24E-03	8.64E+00
	71432	Benzene	6.29E-05	4.40E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	5.01E-05	3.50E-01
	75014	Vinyl chloride	2.35E-05	1.64E-01
	75092	Methylene chloride {Dichloromethane}	3.27E-04	2.29E+00
	75343	1,1-Dichloroethane	3.72E-05	2.60E-01
	79016	Trichloroethylene	4.93E-05	3.45E-01
	100414	Ethyl benzene	3.99E-05	2.79E-01
	100425	Styrene	3.91E-05	2.73E-01
	106467	p-Dichlorobenzene	5.52E-05	3.86E-01
	108883	Toluene	1.99E-04	1.39E+00
	127184	Perchloroethylene {Tetrachloroethene}	6.23E-05	4.35E-01
	1330207	Xylenes (mixed)	1.20E-04	8.36E-01
	1634044	Methyl tert-butyl ether	2.46E-04	1.72E+00
	7783064	Hydrogen sulfide	5.05E-03	3.53E+01
Central Odor South Carbon Unit	56235	Carbon tetrachloride	1.40E-04	9.78E-01
	67663	Chloroform	2.27E-02	1.59E+02
	71432	Benzene	1.32E-02	9.25E+01
	75092	Methylene chloride {Dichloromethane}	5.99E-03	4.20E+01
	95476	o-Xylene	3.39E-04	2.37E+00
	100414	Ethyl benzene	1.96E-04	1.37E+00
	100425	Styrene	7.35E-04	5.15E+00
	106467	p-Dichlorobenzene	8.15E-04	5.71E+00
	108883	Toluene	6.50E-04	4.56E+00
	127184	Perchloroethylene {Tetrachloroethene}	9.75E-05	6.83E-01
	1330207	Xylenes (mixed)	7.49E-04	5.25E+00
	1634044	Methyl tert-butyl ether	4.74E-04	3.32E+00
	7783064	Hydrogen sulfide	5.73E-02	4.01E+02
Central Odor Middle Carbon Unit	56235	Carbon tetrachloride	1.40E-04	9.78E-01
	67663	Chloroform	2.27E-02	1.59E+02
	71432	Benzene	1.32E-02	9.25E+01
	75092	Methylene chloride {Dichloromethane}	5.99E-03	4.20E+01
	95476	o-Xylene	3.39E-04	2.37E+00
	100414	Ethyl benzene	1.96E-04	1.37E+00
	100425	Styrene	7.35E-04	5.15E+00
	106467	p-Dichlorobenzene	8.15E-04	5.71E+00
	108883	Toluene	6.50E-04	4.56E+00
	127184	Perchloroethylene {Tetrachloroethene}	9.75E-05	6.83E-01
	1330207	Xylenes (mixed)	7.49E-04	5.25E+00
	1634044	Methyl tert-butyl ether	4.74E-04	3.32E+00
	7783064	Hydrogen sulfide	5.73E-02	4.01E+02
Central Odor North Carbon Unit	56235	Carbon tetrachloride	1.40E-04	9.78E-01
	67663	Chloroform	2.27E-02	1.59E+02
	71432	Benzene	1.32E-02	9.25E+01
	75092	Methylene chloride {Dichloromethane}	5.99E-03	4.20E+01
	95476	o-Xylene	3.39E-04	2.37E+00
	100414	Ethyl benzene	1.96E-04	1.37E+00
	100425	Styrene	7.35E-04	5.15E+00
	106467	p-Dichlorobenzene	8.15E-04	5.71E+00
	108883	Toluene	6.50E-04	4.56E+00
	127184	Perchloroethylene {Tetrachloroethene}	9.75E-05	6.83E-01
	1330207	Xylenes (mixed)	7.49E-04	5.25E+00
	1634044	Methyl tert-butyl ether	4.74E-04	3.32E+00
	7783064	Hydrogen sulfide	5.73E-02	4.01E+02

Table A-2. TAC Emissions Summary - Scenario 1
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Scrubber P16A	56235	Carbon tetrachloride	3.04E-06	2.13E-02
	67663	Chloroform	8.97E-06	6.28E-02
	100414	Ethyl benzene	6.71E-06	4.71E-02
	108883	Toluene	9.11E-06	6.38E-02
	1330207	Xylenes (mixed)	8.39E-06	5.88E-02
Scrubber P16B	56235	Carbon tetrachloride	3.04E-06	3.68E-03
	67663	Chloroform	1.18E-06	1.43E-03
	100414	Ethyl benzene	2.10E-06	2.54E-03
	108883	Toluene	9.11E-06	1.10E-02
	1330207	Xylenes (mixed)	8.39E-06	1.02E-02
Turbine #1 Stack West	1151	PAHs, total	8.11E-06	5.68E-02
	50000	Formaldehyde	7.94E-03	5.56E+01
	56235	Carbon tetrachloride	1.08E-04	7.54E-01
	67663	Chloroform	1.30E-03	9.12E+00
	71432	Benzene	5.31E-04	3.72E+00
	71556	Methyl chloroform {1,1,1-Trichloroethane}	9.33E-05	6.54E-01
	75014	Vinyl chloride	4.37E-05	3.06E-01
	75070	Acetaldehyde	1.53E-03	1.07E+01
	75092	Methylene chloride {Dichloromethane}	1.54E-02	1.08E+02
	79016	Trichloroethylene	9.19E-05	6.44E-01
	91203	Naphthalene	8.36E-06	5.86E-02
	106467	p-Dichlorobenzene	5.58E-04	3.91E+00
	106990	1,3-Butadiene	9.37E-04	6.56E+00
	107062	Ethylene dichloride {EDC}	6.92E-05	4.85E-01
	127184	Perchloroethylene {Tetrachloroethene}	1.16E-04	8.13E-01
	7439921	Lead	1.35E-05	9.49E-02
	7440020	Nickel	3.63E-05	2.54E-01
	7440382	Arsenic	1.35E-05	9.49E-02
	7440439	Cadmium	4.38E-06	3.07E-02
	7664417	Ammonia	4.08E-01	2.86E+03
	7782492	Selenium	4.52E-05	3.17E-01
Turbine #2 Stack West	1151	PAHs, total	7.85E-06	5.50E-02
	50000	Formaldehyde	7.69E-03	5.39E+01
	56235	Carbon tetrachloride	1.04E-04	7.30E-01
	67663	Chloroform	1.26E-03	8.84E+00
	71432	Benzene	5.14E-04	3.60E+00
	71556	Methyl chloroform {1,1,1-Trichloroethane}	9.04E-05	6.34E-01
	75014	Vinyl chloride	4.23E-05	2.97E-01
	75070	Acetaldehyde	1.49E-03	1.04E+01
	75092	Methylene chloride {Dichloromethane}	1.50E-02	1.05E+02
	79016	Trichloroethylene	8.90E-05	6.24E-01
	91203	Naphthalene	8.10E-06	5.68E-02
	106467	p-Dichlorobenzene	5.41E-04	3.79E+00
	106990	1,3-Butadiene	9.08E-04	6.36E+00
	107062	Ethylene dichloride {EDC}	6.71E-05	4.70E-01
	127184	Perchloroethylene {Tetrachloroethene}	1.12E-04	7.88E-01
	7439921	Lead	1.31E-05	9.20E-02
	7440020	Nickel	3.51E-05	2.46E-01
	7440382	Arsenic	1.31E-05	9.20E-02
	7440439	Cadmium	4.25E-06	2.98E-02
	7664417	Ammonia	3.96E-01	2.77E+03
	7782492	Selenium	4.38E-05	3.07E-01
Turbine #3 Stack West	1151	PAHs, total	6.90E-06	4.84E-02
	50000	Formaldehyde	6.76E-03	4.74E+01
	56235	Carbon tetrachloride	9.16E-05	6.42E-01
	67663	Chloroform	1.11E-03	7.77E+00
	71432	Benzene	4.52E-04	3.17E+00
	71556	Methyl chloroform {1,1,1-Trichloroethane}	7.94E-05	5.57E-01
	75014	Vinyl chloride	3.72E-05	2.61E-01
	75070	Acetaldehyde	1.31E-03	9.15E+00
	75092	Methylene chloride {Dichloromethane}	1.31E-02	9.21E+01
	79016	Trichloroethylene	7.82E-05	5.48E-01
	91203	Naphthalene	7.12E-06	4.99E-02
	106467	p-Dichlorobenzene	4.75E-04	3.33E+00
	106990	1,3-Butadiene	7.98E-04	5.59E+00
	107062	Ethylene dichloride {EDC}	5.89E-05	4.13E-01
	127184	Perchloroethylene {Tetrachloroethene}	9.87E-05	6.92E-01
	7439921	Lead	1.15E-05	8.08E-02
	7440020	Nickel	3.09E-05	2.16E-01
	7440382	Arsenic	1.15E-05	8.08E-02
	7440439	Cadmium	3.73E-06	2.61E-02
	7664417	Ammonia	3.48E-01	2.44E+03
	7782492	Selenium	3.85E-05	2.70E-01
Boiler #11	1151	PAHs, total	1.10E-09	7.70E-06
	50000	Formaldehyde	1.35E-07	9.47E-04
	71432	Benzene	6.37E-08	4.47E-04
	75070	Acetaldehyde	3.41E-08	2.39E-04
	91203	Naphthalene	3.30E-09	2.31E-05
	100414	Ethyl benzene	7.58E-08	5.31E-04
	107028	Acrolein	2.97E-08	2.08E-04
	108883	Toluene	2.91E-07	2.04E-03
	110543	Hexane	5.05E-08	3.54E-04
	1330207	Xylenes (mixed)	2.16E-07	1.52E-03
	7664417	Ammonia	3.52E-05	2.46E-01

Table A-2. TAC Emissions Summary - Scenario 1
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
North Flare Station - Flare #1	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
North Flare Station - Flare #2	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
North Flare Station - Flare #3	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
North Flare Station - Flare #4	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
North Flare Station - Flare #5	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02

Table A-2. TAC Emissions Summary - Scenario 1
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
North Flare Station - Flare #6	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
North Flare Station - Flare #7	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
SIPS #5	50000	Formaldehyde	1.51E-04	1.06E+00
	50000	Formaldehyde	2.24E-04	1.57E+00
	56235	Carbon tetrachloride	6.19E-06	4.34E-02
	56235	Carbon tetrachloride	1.94E-07	1.36E-03
	67561	Methanol	3.35E-05	2.35E-01
	67663	Chloroform	1.50E-07	1.05E-03
	71432	Benzene	2.33E-05	1.64E-01
	71432	Benzene	1.73E-05	1.21E-01
	75014	Vinyl chloride	5.35E-06	3.75E-02
	75014	Vinyl chloride	7.85E-08	5.50E-04
	75070	Acetaldehyde	3.05E-05	2.14E-01
	75092	Methylene chloride {Dichloromethane}	2.51E-05	1.76E-01
	75092	Methylene chloride {Dichloromethane}	4.51E-07	3.16E-03
	78875	1,2-Dichloropropane	1.42E-07	9.96E-04
	79005	1,1,2-Trichloroethane	1.67E-07	1.17E-03
	79345	1,1,2,2-Tetrachloroethane	2.77E-07	1.94E-03
	91203	Naphthalene	4.79E-04	3.36E+00
	91203	Naphthalene	1.06E-06	7.44E-03
	100414	Ethyl benzene	2.71E-07	1.90E-03
	100425	Styrene	1.30E-07	9.12E-04
	106934	Ethylene dibromide {EDB}	1.05E-04	7.37E-01
	106934	Ethylene dibromide {EDB}	2.33E-07	1.63E-03
	106990	1,3-Butadiene	2.76E-05	1.93E-01
	106990	1,3-Butadiene	7.25E-06	5.08E-02
	107028	Acrolein	2.88E-05	2.02E-01
	107062	Ethylene dichloride {EDC}	1.42E-05	9.95E-02
	107062	Ethylene dichloride {EDC}	1.24E-07	8.66E-04
	108883	Toluene	6.10E-06	4.28E-02
	542756	1,3-Dichloropropene	1.39E-07	9.73E-04
	1330207	Xylenes (mixed)	2.13E-06	1.49E-02
	7664417	Ammonia	4.40E-02	3.09E+02
	7664417	Ammonia	3.63E-05	2.54E-01
SIPS #2	50000	Formaldehyde	8.55E-05	5.99E-01
	50000	Formaldehyde	1.12E-04	7.85E-01
	56235	Carbon tetrachloride	3.51E-06	2.46E-02
	56235	Carbon tetrachloride	9.68E-08	6.78E-04
	67561	Methanol	1.67E-05	1.17E-01
	67663	Chloroform	7.49E-08	5.25E-04
	71432	Benzene	1.32E-05	9.28E-02
	71432	Benzene	8.64E-06	6.05E-02
	75014	Vinyl chloride	3.03E-06	2.13E-02
	75014	Vinyl chloride	3.93E-08	2.75E-04
	75070	Acetaldehyde	1.53E-05	1.07E-01
	75092	Methylene chloride {Dichloromethane}	1.42E-05	9.98E-02
	75092	Methylene chloride {Dichloromethane}	2.25E-07	1.58E-03
	78875	1,2-Dichloropropane	7.11E-08	4.98E-04
	79005	1,1,2-Trichloroethane	8.36E-08	5.86E-04
	79345	1,1,2,2-Tetrachloroethane	1.38E-07	9.69E-04
	91203	Naphthalene	2.72E-04	1.91E+00
	91203	Naphthalene	5.31E-07	3.72E-03
	100414	Ethyl benzene	1.36E-07	9.50E-04
	100425	Styrene	6.51E-08	4.56E-04
	106934	Ethylene dibromide {EDB}	5.96E-05	4.18E-01
	106934	Ethylene dibromide {EDB}	1.16E-07	8.16E-04
	106990	1,3-Butadiene	1.57E-05	1.10E-01

Table A-2. TAC Emissions Summary - Scenario 1
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
SIPS #2 *(Cont'd)*	106990	1,3-Butadiene	3.62E-06	2.54E-02
	107028	Acrolein	1.44E-05	1.01E-01
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	107062	Ethylene dichloride {EDC}	6.18E-08	4.33E-04
	108883	Toluene	3.05E-06	2.14E-02
	542756	1,3-Dichloropropene	6.94E-08	4.87E-04
	1330207	Xylenes (mixed)	1.07E-06	7.47E-03
	7664417	Ammonia	2.50E-02	1.75E+02
	7664417	Ammonia	1.81E-05	1.27E-01
SIPS #3	50000	Formaldehyde	1.32E-04	9.28E-01
	50000	Formaldehyde	2.16E-04	1.51E+00
	56235	Carbon tetrachloride	5.44E-06	3.81E-02
	56235	Carbon tetrachloride	1.86E-07	1.31E-03
	67561	Methanol	3.22E-05	2.26E-01
	67663	Chloroform	1.44E-07	1.01E-03
	71432	Benzene	2.05E-05	1.44E-01
	71432	Benzene	1.66E-05	1.17E-01
	75014	Vinyl chloride	4.70E-06	3.29E-02
	75014	Vinyl chloride	7.56E-08	5.30E-04
	75070	Acetaldehyde	2.94E-05	2.06E-01
	75092	Methylene chloride {Dichloromethane}	2.21E-05	1.55E-01
	75092	Methylene chloride {Dichloromethane}	4.34E-07	3.04E-03
	78875	1,2-Dichloropropane	1.37E-07	9.60E-04
	79005	1,1,2-Trichloroethane	1.61E-07	1.13E-03
	79345	1,1,2,2-Tetrachloroethane	2.67E-07	1.87E-03
	91203	Naphthalene	4.21E-04	2.95E+00
	91203	Naphthalene	1.02E-06	7.17E-03
	100414	Ethyl benzene	2.61E-07	1.83E-03
	100425	Styrene	1.25E-07	8.79E-04
	106934	Ethylene dibromide {EDB}	9.24E-05	6.47E-01
	106934	Ethylene dibromide {EDB}	2.24E-07	1.57E-03
	106990	1,3-Butadiene	2.43E-05	1.70E-01
	106990	1,3-Butadiene	6.99E-06	4.90E-02
	107028	Acrolein	2.77E-05	1.94E-01
	107062	Ethylene dichloride {EDC}	1.25E-05	8.75E-02
	107062	Ethylene dichloride {EDC}	1.19E-07	8.34E-04
	108883	Toluene	5.88E-06	4.12E-02
	542756	1,3-Dichloropropene	1.34E-07	9.38E-04
	1330207	Xylenes (mixed)	2.05E-06	1.44E-02
	7664417	Ammonia	3.87E-02	2.71E+02
	7664417	Ammonia	3.49E-05	2.45E-01
SIPS #4	50000	Formaldehyde	1.19E-04	8.31E-01
	50000	Formaldehyde	4.57E-04	3.20E+00
	56235	Carbon tetrachloride	4.87E-06	3.41E-02
	56235	Carbon tetrachloride	3.94E-07	2.76E-03
	67561	Methanol	6.82E-05	4.78E-01
	67663	Chloroform	3.05E-07	2.14E-03
	71432	Benzene	1.84E-05	1.29E-01
	71432	Benzene	3.52E-05	2.47E-01
	75014	Vinyl chloride	4.21E-06	2.95E-02
	75014	Vinyl chloride	1.60E-07	1.12E-03
	75070	Acetaldehyde	6.22E-05	4.36E-01
	75092	Methylene chloride {Dichloromethane}	1.98E-05	1.39E-01
	75092	Methylene chloride {Dichloromethane}	9.18E-07	6.43E-03
	78875	1,2-Dichloropropane	2.90E-07	2.03E-03
	79005	1,1,2-Trichloroethane	3.41E-07	2.39E-03
	79345	1,1,2,2-Tetrachloroethane	5.64E-07	3.95E-03
	91203	Naphthalene	3.77E-04	2.64E+00
	91203	Naphthalene	2.16E-06	1.52E-02
	100414	Ethyl benzene	5.53E-07	3.87E-03
	100425	Styrene	2.65E-07	1.86E-03
	106934	Ethylene dibromide {EDB}	8.27E-05	5.80E-01
	106934	Ethylene dibromide {EDB}	4.75E-07	3.33E-03
	106990	1,3-Butadiene	2.17E-05	1.52E-01
	106990	1,3-Butadiene	1.48E-05	1.04E-01
	107028	Acrolein	5.86E-05	4.11E-01
	107062	Ethylene dichloride {EDC}	1.12E-05	7.83E-02
	107062	Ethylene dichloride {EDC}	2.52E-07	1.76E-03
	108883	Toluene	1.24E-05	8.71E-02
	542756	1,3-Dichloropropene	2.83E-07	1.98E-03
	1330207	Xylenes (mixed)	4.35E-06	3.05E-02
	7664417	Ammonia	3.47E-02	2.43E+02
	7664417	Ammonia	7.39E-05	5.18E-01
PEPS #1 Engine	50000	Formaldehyde	1.02E-04	7.16E-01
	56235	Carbon tetrachloride	1.08E-05	7.53E-02
	67663	Chloroform	9.14E-06	6.40E-02
	75014	Vinyl chloride	1.94E-05	1.36E-01
	75070	Acetaldehyde	2.85E-05	2.00E-01
	75092	Methylene chloride {Dichloromethane}	6.99E-06	4.90E-02
	79016	Trichloroethylene	9.68E-06	6.78E-02
	106467	p-Dichlorobenzene	1.08E-05	7.53E-02
	106990	1,3-Butadiene	5.27E-06	3.69E-02
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.13E-05	7.91E-02
	7439921	Lead	1.83E-06	1.28E-02
	7440020	Nickel	1.08E-06	7.53E-03
	7440382	Arsenic	9.51E-08	6.66E-04

Table A-2. TAC Emissions Summary - Scenario 1
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
PEPS #1 Engine *(Cont'd)*	7440439	Cadmium	3.12E-07	2.18E-03
	7664417	Ammonia	2.87E-03	2.01E+01
	7782492	Selenium	5.91E-06	4.14E-02
PEPS #2 Engine	50000	Formaldehyde	1.02E-04	7.16E-01
	56235	Carbon tetrachloride	1.08E-05	7.53E-02
	67663	Chloroform	9.14E-06	6.40E-02
	75014	Vinyl chloride	1.94E-05	1.36E-01
	75070	Acetaldehyde	2.85E-05	2.00E-01
	75092	Methylene chloride {Dichloromethane}	6.99E-06	4.90E-02
	79016	Trichloroethylene	9.68E-06	6.78E-02
	106467	p-Dichlorobenzene	1.08E-05	7.53E-02
	106990	1,3-Butadiene	5.27E-06	3.69E-02
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.13E-05	7.91E-02
	7439921	Lead	1.83E-06	1.28E-02
	7440020	Nickel	1.08E-06	7.53E-03
	7440382	Arsenic	9.51E-08	6.66E-04
	7440439	Cadmium	3.12E-07	2.18E-03
	7664417	Ammonia	2.87E-03	2.01E+01
	7782492	Selenium	5.91E-06	4.14E-02
PEPS #3 Engine	50000	Formaldehyde	1.02E-04	7.16E-01
	56235	Carbon tetrachloride	1.08E-05	7.53E-02
	67663	Chloroform	9.14E-06	6.40E-02
	75014	Vinyl chloride	1.94E-05	1.36E-01
	75070	Acetaldehyde	2.85E-05	2.00E-01
	75092	Methylene chloride {Dichloromethane}	6.99E-06	4.90E-02
	79016	Trichloroethylene	9.68E-06	6.78E-02
	106467	p-Dichlorobenzene	1.08E-05	7.53E-02
	106990	1,3-Butadiene	5.27E-06	3.69E-02
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.13E-05	7.91E-02
	7439921	Lead	1.83E-06	1.28E-02
	7440020	Nickel	1.08E-06	7.53E-03
	7440382	Arsenic	9.51E-08	6.66E-04
	7440439	Cadmium	3.12E-07	2.18E-03
	7664417	Ammonia	2.87E-03	2.01E+01
	7782492	Selenium	5.91E-06	4.14E-02
PEPS #4 Engine	50000	Formaldehyde	1.02E-04	7.16E-01
	56235	Carbon tetrachloride	1.08E-05	7.53E-02
	67663	Chloroform	9.14E-06	6.40E-02
	75014	Vinyl chloride	1.94E-05	1.36E-01
	75070	Acetaldehyde	2.85E-05	2.00E-01
	75092	Methylene chloride {Dichloromethane}	6.99E-06	4.90E-02
	79016	Trichloroethylene	9.68E-06	6.78E-02
	106467	p-Dichlorobenzene	1.08E-05	7.53E-02
	106990	1,3-Butadiene	5.27E-06	3.69E-02
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.13E-05	7.91E-02
	7439921	Lead	1.83E-06	1.28E-02
	7440020	Nickel	1.08E-06	7.53E-03
	7440382	Arsenic	9.51E-08	6.66E-04
	7440439	Cadmium	3.12E-07	2.18E-03
	7664417	Ammonia	2.87E-03	2.01E+01
	7782492	Selenium	5.91E-06	4.14E-02
PEPS #5 Engine	50000	Formaldehyde	1.02E-04	7.16E-01
	56235	Carbon tetrachloride	1.08E-05	7.53E-02
	67663	Chloroform	9.14E-06	6.40E-02
	75014	Vinyl chloride	1.94E-05	1.36E-01
	75070	Acetaldehyde	2.85E-05	2.00E-01
	75092	Methylene chloride {Dichloromethane}	6.99E-06	4.90E-02
	79016	Trichloroethylene	9.68E-06	6.78E-02
	106467	p-Dichlorobenzene	1.08E-05	7.53E-02
	106990	1,3-Butadiene	5.27E-06	3.69E-02
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.13E-05	7.91E-02
	7439921	Lead	1.83E-06	1.28E-02
	7440020	Nickel	1.08E-06	7.53E-03
	7440382	Arsenic	9.51E-08	6.66E-04
	7440439	Cadmium	3.12E-07	2.18E-03
	7664417	Ammonia	2.87E-03	2.01E+01
	7782492	Selenium	5.91E-06	4.14E-02
SIPS #1	50000	Formaldehyde	1.21E-04	8.47E-01
	50000	Formaldehyde	2.51E-04	1.76E+00
	56235	Carbon tetrachloride	4.96E-06	3.48E-02
	56235	Carbon tetrachloride	2.17E-07	1.52E-03
	67561	Methanol	3.74E-05	2.62E-01
	67663	Chloroform	1.68E-07	1.17E-03
	71432	Benzene	1.87E-05	1.31E-01
	71432	Benzene	1.93E-05	1.35E-01
	75014	Vinyl chloride	4.29E-06	3.00E-02
	75014	Vinyl chloride	8.78E-08	6.16E-04
	75070	Acetaldehyde	3.41E-05	2.39E-01
	75092	Methylene chloride {Dichloromethane}	2.01E-05	1.41E-01
	75092	Methylene chloride {Dichloromethane}	5.04E-07	3.53E-03
	78875	1,2-Dichloropropane	1.59E-07	1.11E-03
	79005	1,1,2-Trichloroethane	1.87E-07	1.31E-03

Table A-2. TAC Emissions Summary - Scenario 1
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
SIPS #1 *(Cont'd)*	79345	1,1,2,2-Tetrachloroethane	3.09E-07	2.17E-03
	91203	Naphthalene	3.84E-04	2.69E+00
	91203	Naphthalene	1.19E-06	8.32E-03
	100414	Ethyl benzene	3.03E-07	2.13E-03
	100425	Styrene	1.46E-07	1.02E-03
	106934	Ethylene dibromide {EDB}	8.43E-05	5.91E-01
	106934	Ethylene dibromide {EDB}	2.61E-07	1.83E-03
	106990	1,3-Butadiene	2.21E-05	1.55E-01
	106990	1,3-Butadiene	8.11E-06	5.68E-02
	107028	Acrolein	3.22E-05	2.25E-01
	107062	Ethylene dichloride {EDC}	1.14E-05	7.98E-02
	107062	Ethylene dichloride {EDC}	1.38E-07	9.69E-04
	108883	Toluene	6.83E-06	4.78E-02
	542756	1,3-Dichloropropene	1.55E-07	1.09E-03
	1330207	Xylenes (mixed)	2.39E-06	1.67E-02
	7664417	Ammonia	3.53E-02	2.47E+02
	7664417	Ammonia	4.06E-05	2.84E-01
South Flare #1	1151	PAHs, total	5.13E-06	3.59E-02
	50000	Formaldehyde	7.55E-04	5.29E+00
	56235	Carbon tetrachloride	9.62E-06	6.74E-02
	71432	Benzene	4.88E-06	3.42E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	8.34E-06	5.85E-02
	75014	Vinyl chloride	3.91E-06	2.74E-02
	75070	Acetaldehyde	4.62E-05	3.24E-01
	75092	Methylene chloride {Dichloromethane}	1.83E-05	1.28E-01
	79016	Trichloroethylene	8.22E-06	5.76E-02
	91203	Naphthalene	1.25E-06	8.77E-03
	100414	Ethyl benzene	4.35E-06	3.05E-02
	106990	1,3-Butadiene	3.38E-06	2.37E-02
	107062	Ethylene dichloride {EDC}	6.19E-06	4.34E-02
	108883	Toluene	9.06E-06	6.35E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.04E-05	7.27E-02
	1330207	Xylenes (mixed)	1.48E-05	1.04E-01
South Flare #2	1151	PAHs, total	5.13E-06	3.59E-02
	50000	Formaldehyde	7.55E-04	5.29E+00
	56235	Carbon tetrachloride	9.62E-06	6.74E-02
	71432	Benzene	4.88E-06	3.42E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	8.34E-06	5.85E-02
	75014	Vinyl chloride	3.91E-06	2.74E-02
	75070	Acetaldehyde	4.62E-05	3.24E-01
	75092	Methylene chloride {Dichloromethane}	1.83E-05	1.28E-01
	79016	Trichloroethylene	8.22E-06	5.76E-02
	91203	Naphthalene	1.25E-06	8.77E-03
	100414	Ethyl benzene	4.35E-06	3.05E-02
	106990	1,3-Butadiene	3.38E-06	2.37E-02
	107062	Ethylene dichloride {EDC}	6.19E-06	4.34E-02
	108883	Toluene	9.06E-06	6.35E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.04E-05	7.27E-02
	1330207	Xylenes (mixed)	1.48E-05	1.04E-01
South Flare #3	1151	PAHs, total	5.13E-06	3.59E-02
	50000	Formaldehyde	7.55E-04	5.29E+00
	56235	Carbon tetrachloride	9.62E-06	6.74E-02
	71432	Benzene	4.88E-06	3.42E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	8.34E-06	5.85E-02
	75014	Vinyl chloride	3.91E-06	2.74E-02
	75070	Acetaldehyde	4.62E-05	3.24E-01
	75092	Methylene chloride {Dichloromethane}	1.83E-05	1.28E-01
	79016	Trichloroethylene	8.22E-06	5.76E-02
	91203	Naphthalene	1.25E-06	8.77E-03
	100414	Ethyl benzene	4.35E-06	3.05E-02
	106990	1,3-Butadiene	3.38E-06	2.37E-02
	107062	Ethylene dichloride {EDC}	6.19E-06	4.34E-02
	108883	Toluene	9.06E-06	6.35E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.04E-05	7.27E-02
	1330207	Xylenes (mixed)	1.48E-05	1.04E-01
South Flare #4	1151	PAHs, total	5.13E-06	3.59E-02
	50000	Formaldehyde	7.55E-04	5.29E+00
	56235	Carbon tetrachloride	9.62E-06	6.74E-02
	71432	Benzene	4.88E-06	3.42E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	8.34E-06	5.85E-02
	75014	Vinyl chloride	3.91E-06	2.74E-02
	75070	Acetaldehyde	4.62E-05	3.24E-01
	75092	Methylene chloride {Dichloromethane}	1.83E-05	1.28E-01
	79016	Trichloroethylene	8.22E-06	5.76E-02
	91203	Naphthalene	1.25E-06	8.77E-03
	100414	Ethyl benzene	4.35E-06	3.05E-02
	106990	1,3-Butadiene	3.38E-06	2.37E-02
	107062	Ethylene dichloride {EDC}	6.19E-06	4.34E-02
	108883	Toluene	9.06E-06	6.35E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.04E-05	7.27E-02
	1330207	Xylenes (mixed)	1.48E-05	1.04E-01

Table A-2. TAC Emissions Summary - Scenario 1
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
South Flare #5	1151	PAHs, total	5.13E-06	3.59E-02
	50000	Formaldehyde	7.55E-04	5.29E+00
	56235	Carbon tetrachloride	9.62E-06	6.74E-02
	71432	Benzene	4.88E-06	3.42E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	8.34E-06	5.85E-02
	75014	Vinyl chloride	3.91E-06	2.74E-02
	75070	Acetaldehyde	4.62E-05	3.24E-01
	75092	Methylene chloride {Dichloromethane}	1.83E-05	1.28E-01
	79016	Trichloroethylene	8.22E-06	5.76E-02
	91203	Naphthalene	1.25E-06	8.77E-03
	100414	Ethyl benzene	4.35E-06	3.05E-02
	106990	1,3-Butadiene	3.38E-06	2.37E-02
	107062	Ethylene dichloride {EDC}	6.19E-06	4.34E-02
	108883	Toluene	9.06E-06	6.35E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.04E-05	7.27E-02
	1330207	Xylenes (mixed)	1.48E-05	1.04E-01
North Laboratory Boiler	1151	PAHs, total	6.35E-08	4.45E-04
	50000	Formaldehyde	1.08E-05	7.56E-02
	71432	Benzene	5.08E-06	3.56E-02
	75070	Acetaldehyde	2.73E-06	1.91E-02
	91203	Naphthalene	1.90E-07	1.33E-03
	100414	Ethyl benzene	6.03E-06	4.23E-02
	107028	Acrolein	1.71E-06	1.20E-02
	108883	Toluene	2.32E-05	1.63E-01
	110543	Hexane	4.00E-06	2.80E-02
	1330207	Xylenes (mixed)	1.73E-05	1.21E-01
	7664417	Ammonia	2.03E-03	1.42E+01
South Laboratory Boiler	1151	PAHs, total	6.35E-08	4.45E-04
	50000	Formaldehyde	1.08E-05	7.56E-02
	71432	Benzene	5.08E-06	3.56E-02
	75070	Acetaldehyde	2.73E-06	1.91E-02
	91203	Naphthalene	1.90E-07	1.33E-03
	100414	Ethyl benzene	6.03E-06	4.23E-02
	107028	Acrolein	1.71E-06	1.20E-02
	108883	Toluene	2.32E-05	1.63E-01
	110543	Hexane	4.00E-06	2.80E-02
	1330207	Xylenes (mixed)	1.73E-05	1.21E-01
	7664417	Ammonia	2.03E-03	1.42E+01
Digester Cleaning Operations at #12	71432	Benzene	2.28E-03	1.37E+00
	106467	p-Dichlorobenzene	3.35E-02	2.01E+01
	108883	Toluene	6.69E-02	4.02E+01
	127184	Perchloroethylene {Tetrachloroethene}	5.13E-03	3.08E+00
	1330207	Xylenes (mixed)	1.51E-01	9.08E+01
Digester Cleaning Operations at #11	71432	Benzene	2.28E-03	1.37E+00
	106467	p-Dichlorobenzene	3.35E-02	2.01E+01
	108883	Toluene	6.69E-02	4.02E+01
	127184	Perchloroethylene {Tetrachloroethene}	5.13E-03	3.08E+00
	1330207	Xylenes (mixed)	1.51E-01	9.08E+01
Digester Cleaning Operations at #16	71432	Benzene	2.28E-03	1.37E+00
	106467	p-Dichlorobenzene	3.35E-02	2.01E+01
	108883	Toluene	6.69E-02	4.02E+01
	127184	Perchloroethylene {Tetrachloroethene}	5.13E-03	3.08E+00
	1330207	Xylenes (mixed)	1.51E-01	9.08E+01
Scrubber P15	71432	Benzene	2.32E-04	1.62E+00
Scrubber SP1	71432	Benzene	1.62E-04	1.13E+00
Scrubber SP2	71432	Benzene	2.32E-04	1.62E+00
Scrubber SP3	71432	Benzene	1.85E-04	1.30E+00
Scrubber SP5	71432	Benzene	6.95E-04	4.75E+00
Reactor E pH Adjustment Vent	56235	Carbon tetrachloride	1.19E-04	8.32E-01
	67663	Chloroform	2.86E-02	2.00E+02
	71432	Benzene	6.02E-05	4.22E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.03E-04	7.21E-01
	75014	Vinyl chloride	4.82E-05	3.38E-01
	75092	Methylene chloride {Dichloromethane}	6.85E-03	4.80E+01
	75343	1,1-Dichloroethane	7.63E-05	5.35E-01
	79016	Trichloroethylene	1.01E-04	7.10E-01
	106467	p-Dichlorobenzene	1.13E-04	7.94E-01
	106990	1,3-Butadiene	4.17E-05	2.92E-01
	108883	Toluene	7.16E-03	5.02E+01
	127184	Perchloroethylene {Tetrachloroethene}	2.08E-03	1.46E+01
	540590	1,2-Dichloroethylene	7.63E-05	5.35E-01
	1634044	Methyl tert-butyl ether	6.79E-05	4.76E-01
Reactor F pH Adjustment Vent	56235	Carbon tetrachloride	1.19E-04	8.32E-01
	67663	Chloroform	2.86E-02	2.00E+02
	71432	Benzene	6.02E-05	4.22E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.03E-04	7.21E-01
	75014	Vinyl chloride	4.82E-05	3.38E-01
	75092	Methylene chloride {Dichloromethane}	6.85E-03	4.80E+01
	75343	1,1-Dichloroethane	7.63E-05	5.35E-01
	79016	Trichloroethylene	1.01E-04	7.10E-01
	106467	p-Dichlorobenzene	1.13E-04	7.94E-01
	106990	1,3-Butadiene	4.17E-05	2.92E-01
	108883	Toluene	7.16E-03	5.02E+01

Table A-2. TAC Emissions Summary - Scenario 1
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Reactor F pH Adjustment Vent *(Cont'd)*	127184	Perchloroethylene {Tetrachloroethene}	2.08E-03	1.46E+01
	540590	1,2-Dichloroethylene	7.63E-05	5.35E-01
	1634044	Methyl tert-butyl ether	6.79E-05	4.76E-01
Reactor G pH Adjustment Vent	56235	Carbon tetrachloride	1.19E-04	8.32E-01
	67663	Chloroform	2.86E-02	2.00E+02
	71432	Benzene	6.02E-05	4.22E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.03E-04	7.21E-01
	75014	Vinyl chloride	4.82E-05	3.38E-01
	75092	Methylene chloride {Dichloromethane}	6.85E-03	4.80E+01
	75343	1,1-Dichloroethane	7.63E-05	5.35E-01
	79016	Trichloroethylene	1.01E-04	7.10E-01
	106467	p-Dichlorobenzene	1.13E-04	7.94E-01
	106990	1,3-Butadiene	4.17E-05	2.92E-01
	108883	Toluene	7.16E-03	5.02E+01
	127184	Perchloroethylene {Tetrachloroethene}	2.08E-03	1.46E+01
	540590	1,2-Dichloroethylene	7.63E-05	5.35E-01
	1634044	Methyl tert-butyl ether	6.79E-05	4.76E-01
Reactor H pH Adjustment Vent	56235	Carbon tetrachloride	1.19E-04	8.32E-01
	67663	Chloroform	2.86E-02	2.00E+02
	71432	Benzene	6.02E-05	4.22E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.03E-04	7.21E-01
	75014	Vinyl chloride	4.82E-05	3.38E-01
	75092	Methylene chloride {Dichloromethane}	6.85E-03	4.80E+01
	75343	1,1-Dichloroethane	7.63E-05	5.35E-01
	79016	Trichloroethylene	1.01E-04	7.10E-01
	106467	p-Dichlorobenzene	1.13E-04	7.94E-01
	106990	1,3-Butadiene	4.17E-05	2.92E-01
	108883	Toluene	7.16E-03	5.02E+01
	127184	Perchloroethylene {Tetrachloroethene}	2.08E-03	1.46E+01
	540590	1,2-Dichloroethylene	7.63E-05	5.35E-01
	1634044	Methyl tert-butyl ether	6.79E-05	4.76E-01
SEC Effluent Conveyance Channel Vent	67663	Chloroform	5.60E-04	4.92E+00
	71432	Benzene	1.03E-03	9.00E+00
	71556	Methyl chloroform {1,1,1-Trichloroethane}	3.12E-04	2.73E+00
	75092	Methylene chloride {Dichloromethane}	2.16E-04	1.89E+00
	79016	Trichloroethylene	1.67E-05	1.46E-01
	106467	p-Dichlorobenzene	1.44E-05	1.26E-01
	108883	Toluene	1.08E-03	9.48E+00
	127184	Perchloroethylene {Tetrachloroethene}	3.49E-03	3.06E+01
	1330207	Xylenes (mixed)	7.97E-04	6.99E+00
	7783064	Hydrogen sulfide	9.17E-06	8.03E-02
SIPS Standby Generator #2	9901	Diesel particulate matter (DPM)	3.95E-05	2.77E-01
Switchboard 1B/1C Standby Generator	9901	Diesel particulate matter (DPM)	3.89E-04	2.73E+00
VEC Loader at Central Odor	9901	Diesel particulate matter (DPM)	7.29E-04	5.11E+00
VEC Loader at Skimmings Scrubbers	9901	Diesel particulate matter (DPM)	9.95E-05	6.97E-01
VEC Loader at S-1 and S-2	9901	Diesel particulate matter (DPM)	1.31E-05	9.15E-02
VEC Loader at S-5 and S-6	9901	Diesel particulate matter (DPM)	1.24E-05	8.72E-02
VEC Loader at Solids Processing	9901	Diesel particulate matter (DPM)	7.65E-05	5.36E-01
Plasma Arc Cutter	7440020	Nickel	4.92E-07	3.45E-03
	18540299	Chromium, hexavalent (& compounds)	3.74E-09	2.62E-05
Portable Equipment Use at Primary	9901	Diesel particulate matter (DPM)	1.17E-03	8.20E+00
	50000	Formaldehyde	3.08E-04	2.16E+00
	67561	Methanol	6.91E-05	4.84E-01
	71432	Benzene	3.39E-04	2.38E+00
	75070	Acetaldehyde	7.40E-05	5.19E-01
	78933	Methyl ethyl ketone {2-Butanone}	5.92E-06	4.15E-02
	91203	Naphthalene	1.28E-05	8.99E-02
	95476	o-Xylene	1.53E-04	1.07E+00
	95636	1,2,4-Trimethylbenzene	1.24E-04	8.71E-01
	100414	Ethyl benzene	1.48E-04	1.04E+00
	100425	Styrene	1.28E-05	8.99E-02
	106990	1,3-Butadiene	8.19E-05	5.74E-01
	107028	Acrolein	1.78E-05	1.25E-01
	108383	m-Xylene	4.39E-04	3.08E+00
	108883	Toluene	6.70E-04	4.70E+00
	110543	Hexane	1.29E-04	9.06E-01
	1634044	Methyl tert-butyl ether	1.84E-04	1.29E+00
	7439965	Manganese	2.94E-07	2.06E-03
	7440020	Nickel	2.94E-07	2.06E-03
	7440508	Copper	2.94E-07	2.06E-03
	7782505	Chlorine	4.06E-05	2.84E-01
Portable Equipment Use at Secondary	9901	Diesel particulate matter (DPM)	3.60E-04	2.52E+00
	50000	Formaldehyde	1.37E-04	9.59E-01
	67561	Methanol	3.07E-05	2.15E-01
	71432	Benzene	1.51E-04	1.06E+00
	75070	Acetaldehyde	3.29E-05	2.31E-01
	78933	Methyl ethyl ketone {2-Butanone}	2.63E-06	1.84E-02
	91203	Naphthalene	5.70E-06	3.99E-02
	95476	o-Xylene	6.80E-05	4.76E-01
	95636	1,2,4-Trimethylbenzene	5.53E-05	3.87E-01
	100414	Ethyl benzene	6.58E-05	4.61E-01
	100425	Styrene	5.70E-06	3.99E-02
	106990	1,3-Butadiene	3.64E-05	2.55E-01

Table A-2. TAC Emissions Summary - Scenario 1
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Portable Equipment Use at Secondary *(Cont'd)*	107028	Acrolein	7.90E-06	5.53E-02
	108383	m-Xylene	1.95E-04	1.37E+00
	108883	Toluene	2.98E-04	2.09E+00
	110543	Hexane	5.75E-05	4.03E-01
	1634044	Methyl tert-butyl ether	8.16E-05	5.72E-01
	7439965	Manganese	1.31E-07	9.17E-04
	7440020	Nickel	1.31E-07	9.17E-04
	7440508	Copper	1.31E-07	9.17E-04
	7782505	Chlorine	1.80E-05	1.26E-01
Portable Equipment Use at Solids	9901	Diesel particulate matter (DPM)	6.37E-04	4.47E+00
	50000	Formaldehyde	1.25E-04	8.79E-01
	67561	Methanol	2.81E-05	1.97E-01
	71432	Benzene	1.38E-04	9.69E-01
	75070	Acetaldehyde	3.02E-05	2.11E-01
	78933	Methyl ethyl ketone {2-Butanone}	2.41E-06	1.69E-02
	91203	Naphthalene	5.23E-06	3.66E-02
	95476	o-Xylene	6.23E-05	4.37E-01
	95636	1,2,4-Trimethylbenzene	5.07E-05	3.55E-01
	100414	Ethyl benzene	6.03E-05	4.23E-01
	100425	Styrene	5.23E-06	3.66E-02
	106990	1,3-Butadiene	3.34E-05	2.34E-01
	107028	Acrolein	7.24E-06	5.07E-02
	108383	m-Xylene	1.79E-04	1.25E+00
	108883	Toluene	2.73E-04	1.91E+00
	110543	Hexane	5.27E-05	3.69E-01
	1634044	Methyl tert-butyl ether	7.48E-05	5.24E-01
	7439965	Manganese	1.20E-07	8.40E-04
	7440020	Nickel	1.20E-07	8.40E-04
	7440508	Copper	1.20E-07	8.40E-04
	7782505	Chlorine	1.65E-05	1.16E-01
South Solids Biofilter	56235	Carbon tetrachloride	1.43E-04	1.25E+00
	67663	Chloroform	2.21E-04	1.94E+00
	75092	Methylene chloride {Dichloromethane}	1.73E-02	1.52E+02
	79016	Trichloroethylene	1.22E-04	1.07E+00
	127184	Perchloroethylene {Tetrachloroethene}	1.54E-04	1.35E+00
	7664417	Ammonia	3.48E-02	3.04E+02
East Solids Biofilter	56235	Carbon tetrachloride	1.80E-04	1.57E+00
	67663	Chloroform	1.40E-04	1.22E+00
	75092	Methylene chloride {Dichloromethane}	2.18E-02	1.91E+02
	79016	Trichloroethylene	1.54E-04	1.35E+00
	7664417	Ammonia	7.17E-02	6.28E+02
Reactor A Clarifiers + Weir	67663	Chloroform	2.33E-03	1.63E+01
	75092	Methylene chloride {Dichloromethane}	2.48E-03	1.74E+01
	108883	Toluene	1.22E-03	8.56E+00
Reactor B Clarifiers + Weir	67663	Chloroform	2.33E-03	1.63E+01
	75092	Methylene chloride {Dichloromethane}	2.48E-03	1.74E+01
	108883	Toluene	1.22E-03	8.56E+00
Reactor C Clarifiers + Weir	67663	Chloroform	2.07E-04	1.45E+00
	75092	Methylene chloride {Dichloromethane}	2.20E-04	1.54E+00
	108883	Toluene	1.09E-04	7.61E-01
Reactor E Clarifiers + Weir	67663	Chloroform	2.33E-03	1.63E+01
	75092	Methylene chloride {Dichloromethane}	2.48E-03	1.74E+01
	108883	Toluene	1.22E-03	8.56E+00
Reactor F Clarifiers + Weir	67663	Chloroform	2.33E-03	1.63E+01
	75092	Methylene chloride {Dichloromethane}	2.48E-03	1.74E+01
	108883	Toluene	1.22E-03	8.56E+00
Reactor G Clarifiers + Weir	67663	Chloroform	2.33E-03	1.63E+01
	75092	Methylene chloride {Dichloromethane}	2.48E-03	1.74E+01
	108883	Toluene	1.22E-03	8.56E+00
Reactor H Clarifiers + Weir	67663	Chloroform	2.33E-03	1.63E+01
	75092	Methylene chloride {Dichloromethane}	2.48E-03	1.74E+01
	108883	Toluene	1.22E-03	8.56E+00
MLCC for Clarifier Banks A and B	67663	Chloroform	5.01E-04	3.51E+00
	75092	Methylene chloride {Dichloromethane}	1.77E-04	1.24E+00
	108883	Toluene	2.43E-05	1.70E-01
	127184	Perchloroethylene {Tetrachloroethene}	5.22E-05	3.66E-01
MLCC for Clarifier Banks C and D	67663	Chloroform	2.23E-05	1.56E-01
	75092	Methylene chloride {Dichloromethane}	7.87E-06	5.51E-02
	108883	Toluene	1.08E-06	7.57E-03
	127184	Perchloroethylene {Tetrachloroethene}	2.32E-06	1.62E-02
MLCC for Clarifier Banks E and F	67663	Chloroform	5.01E-04	3.51E+00
	75092	Methylene chloride {Dichloromethane}	1.77E-04	1.24E+00
	108883	Toluene	2.43E-05	1.70E-01
	127184	Perchloroethylene {Tetrachloroethene}	5.22E-05	3.66E-01
MLCC for Clarifier Banks G and H	67663	Chloroform	5.01E-04	3.51E+00
	75092	Methylene chloride {Dichloromethane}	1.77E-04	1.24E+00
	108883	Toluene	2.43E-05	1.70E-01
	127184	Perchloroethylene {Tetrachloroethene}	5.22E-05	3.66E-01
Gasoline Storage and Dispensing	71432	Benzene	1.44E-05	1.01E-01
	91203	Naphthalene	1.27E-08	8.88E-05
	100414	Ethyl benzene	3.39E-06	2.37E-02

Table A-2. TAC Emissions Summary - Scenario 1
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Scrubber P16C	56235	Carbon tetrachloride	3.04E-06	3.68E-03
	67663	Chloroform	1.18E-06	1.43E-03
	100414	Ethyl benzene	2.10E-06	2.54E-03
	108883	Toluene	9.11E-06	1.10E-02
	1330207	Xylenes (mixed)	8.39E-06	1.02E-02

Table A-2. TAC Emissions Summary - Scenario 1
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
PEPS Inside Standby Generator	9901	Diesel particulate matter (DPM)	1.93E-04	1.35E+00
Portable Generator (Asset 8216)	9901	Diesel particulate matter (DPM)	6.98E-04	4.89E+00
Reactor A Stage 3 Vent	67663	Chloroform	6.47E-04	4.53E+00
	75092	Methylene chloride {Dichloromethane}	1.41E-04	9.90E-01
	108883	Toluene	5.01E-06	3.51E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.17E-04	8.17E-01
Reactor B Stage 3 Vent	67663	Chloroform	6.47E-04	4.53E+00
	75092	Methylene chloride {Dichloromethane}	1.41E-04	9.90E-01
	108883	Toluene	5.01E-06	3.51E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.17E-04	8.17E-01
Reactor C Stage 3 Vent	67663	Chloroform	5.75E-05	4.03E-01
	75092	Methylene chloride {Dichloromethane}	1.26E-05	8.80E-02
	108883	Toluene	4.46E-07	3.12E-03
	127184	Perchloroethylene {Tetrachloroethene}	1.04E-05	7.26E-02
Reactor E Stage 3 Vent	67663	Chloroform	6.47E-04	4.53E+00
	75092	Methylene chloride {Dichloromethane}	1.41E-04	9.90E-01
	108883	Toluene	5.01E-06	3.51E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.17E-04	8.17E-01
Reactor F Stage 3 Vent	67663	Chloroform	6.47E-04	4.53E+00
	75092	Methylene chloride {Dichloromethane}	1.41E-04	9.90E-01
	108883	Toluene	5.01E-06	3.51E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.17E-04	8.17E-01
Reactor G Stage 3 Vent	67663	Chloroform	6.47E-04	4.53E+00
	75092	Methylene chloride {Dichloromethane}	1.41E-04	9.90E-01
	108883	Toluene	5.01E-06	3.51E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.17E-04	8.17E-01
Reactor H Stage 3 Vent	67663	Chloroform	6.47E-04	4.53E+00
	75092	Methylene chloride {Dichloromethane}	1.41E-04	9.90E-01
	108883	Toluene	5.01E-06	3.51E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.17E-04	8.17E-01
PWSC Demonstration Plant	67561	Methanol	7.49E-06	6.56E-02
	67630	Isopropyl alcohol	6.35E-05	5.56E-01
	67641	Acetone	8.46E-05	7.41E-01
	67663	Chloroform	7.86E-04	6.88E+00
	71432	Benzene	1.09E-04	9.54E-01
	74873	Methyl chloride {Chloromethane}	6.83E-05	5.99E-01
	75003	Ethyl chloride {Chlorethane}	4.71E-05	4.12E-01
	75092	Methylene chloride {Dichloromethane}	9.75E-05	8.54E-01
	75150	Carbon disulfide	7.22E-05	6.32E-01
	75274	Bromodichloromethane	4.96E-05	4.35E-01
	75343	1,1-Dichloroethane	6.29E-06	5.51E-02
	75718	Dichlorodifluoromethane {Freon 12}	1.85E-05	1.62E-01
	78875	1,2-Dichloropropane	3.29E-06	2.89E-02
	78933	Methyl ethyl ketone {2-Butanone}	3.23E-06	2.83E-02
	95476	o-Xylene	5.06E-05	4.43E-01
	95636	1,2,4-Trimethylbenzene	4.00E-05	3.51E-01
	100414	Ethyl benzene	3.15E-05	2.76E-01
	100425	Styrene	5.63E-06	4.94E-02
	106423	p-Xylene	1.24E-04	1.09E+00
	106467	p-Dichlorobenzene	1.66E-05	1.46E-01
	108054	Vinyl acetate	2.23E-05	1.95E-01
	108383	m-Xylene	1.24E-04	1.09E+00
	108678	1,3,5-Trimethylbenzene	8.55E-06	7.49E-02
	108883	Toluene	2.02E-04	1.77E+00
	110543	Hexane	2.46E-05	2.15E-01
	123911	1,4-Dioxane	6.54E-06	5.73E-02
	124481	Chlorodibromomethane	1.92E-06	1.68E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.92E-05	1.68E-01
	1634044	Methyl tert-butyl ether	4.70E-05	4.12E-01
	7664417	Ammonia	3.02E-04	2.65E+00
PWSC Bioreactor #1	67663	Chloroform	1.08E-02	9.42E+01
	71432	Benzene	2.93E-05	2.56E-01
	75092	Methylene chloride {Dichloromethane}	2.68E-03	2.34E+01
	75343	1,1-Dichloroethane	4.93E-05	4.31E-01
	75694	Trichlorofluoromethane {Freon 11}	6.90E-05	6.04E-01
	107062	Ethylene dichloride {EDC}	3.70E-05	3.24E-01
	108883	Toluene	1.64E-04	1.43E+00
	127184	Perchloroethylene {Tetrachloroethene}	3.95E-04	3.46E+00
	1634044	Methyl tert-butyl ether	2.45E-03	2.14E+01
PWSC Bioreactor #2	67663	Chloroform	1.08E-02	9.42E+01
	71432	Benzene	2.93E-05	2.56E-01
	75092	Methylene chloride {Dichloromethane}	2.68E-03	2.34E+01
	75343	1,1-Dichloroethane	4.93E-05	4.31E-01
	75694	Trichlorofluoromethane {Freon 11}	6.90E-05	6.04E-01
	107062	Ethylene dichloride {EDC}	3.70E-05	3.24E-01
	108883	Toluene	1.64E-04	1.43E+00
	127184	Perchloroethylene {Tetrachloroethene}	3.95E-04	3.46E+00
	1634044	Methyl tert-butyl ether	2.45E-03	2.14E+01

Table A-2. TAC Emissions Summary - Scenario 1
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
PWSC Bioreactor #3	67663	Chloroform	1.08E-02	9.42E+01
	71432	Benzene	2.93E-05	2.56E-01
	75092	Methylene chloride {Dichloromethane}	2.68E-03	2.34E+01
	75343	1,1-Dichloroethane	4.93E-05	4.31E-01
	75694	Trichlorofluoromethane {Freon 11}	6.90E-05	6.04E-01
	107062	Ethylene dichloride {EDC}	3.70E-05	3.24E-01
	108883	Toluene	1.64E-04	1.43E+00
	127184	Perchloroethylene {Tetrachloroethene}	3.95E-04	3.46E+00
	1634044	Methyl tert-butyl ether	2.45E-03	2.14E+01
PWSC Backup Generator #1	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #2	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #3	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #4	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #5	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #6	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #7	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #8	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
MWD Centrate Treatment	71432	Benzene	5.98E-04	5.24E+00
	75058	Acetonitrile	1.19E-01	1.04E+03
	95476	o-Xylene	3.89E-03	3.40E+01
	100414	Ethyl benzene	3.29E-03	2.88E+01
	108883	Toluene	4.03E-03	3.53E+01
	1330207	Xylenes (mixed)	6.28E-03	5.50E+01
Mobile Travel and Idle Emissions	9901	Diesel particulate matter (DPM)	5.18E-05	1.37E-01

Table A-3. TAC Emissions Summary - Scenario 2
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
E-1 Skimmings Scrubber #1	56235	Carbon tetrachloride	1.79E-06	1.25E-02
	67663	Chloroform	6.93E-07	4.86E-03
	71432	Benzene	4.53E-06	3.18E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.55E-06	1.09E-02
	75014	Vinyl chloride	3.19E-06	2.24E-02
	75058	Acetonitrile	1.03E-04	7.22E-01
	75092	Methylene chloride {Dichloromethane}	1.07E-04	7.46E-01
	75343	1,1-Dichloroethane	1.15E-06	8.05E-03
	79016	Trichloroethylene	1.53E-06	1.07E-02
	95476	o-Xylene	1.28E-05	8.98E-02
	100414	Ethyl benzene	6.90E-06	4.84E-02
	100425	Styrene	2.42E-05	1.69E-01
	106467	p-Dichlorobenzene	2.83E-05	1.99E-01
	106990	1,3-Butadiene	3.01E-06	2.11E-02
	108883	Toluene	2.14E-05	1.50E-01
	127184	Perchloroethylene {Tetrachloroethene}	1.93E-06	1.35E-02
	540590	1,2-Dichloroethylene	1.13E-06	7.89E-03
	1330207	Xylenes (mixed)	2.47E-05	1.73E-01
	1634044	Methyl tert-butyl ether	4.71E-06	3.30E-02
	7783064	Hydrogen sulfide	3.96E-03	2.77E+01
E-1 Skimmings Scrubber #2	56235	Carbon tetrachloride	1.79E-06	1.25E-02
	67663	Chloroform	6.93E-07	4.86E-03
	71432	Benzene	4.53E-06	3.18E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.55E-06	1.09E-02
	75014	Vinyl chloride	3.19E-06	2.24E-02
	75058	Acetonitrile	1.03E-04	7.22E-01
	75092	Methylene chloride {Dichloromethane}	1.07E-04	7.46E-01
	75343	1,1-Dichloroethane	1.15E-06	8.05E-03
	79016	Trichloroethylene	1.53E-06	1.07E-02
	95476	o-Xylene	1.28E-05	8.98E-02
	100414	Ethyl benzene	6.90E-06	4.84E-02
	100425	Styrene	2.42E-05	1.69E-01
	106467	p-Dichlorobenzene	2.83E-05	1.99E-01
	106990	1,3-Butadiene	3.01E-06	2.11E-02
	108883	Toluene	2.14E-05	1.50E-01
	127184	Perchloroethylene {Tetrachloroethene}	1.93E-06	1.35E-02
	540590	1,2-Dichloroethylene	1.13E-06	7.89E-03
	1330207	Xylenes (mixed)	2.47E-05	1.73E-01
	1634044	Methyl tert-butyl ether	4.71E-06	3.30E-02
	7783064	Hydrogen sulfide	3.96E-03	2.77E+01
E-2 Skimmings Scrubber #1	56235	Carbon tetrachloride	1.82E-06	1.28E-02
	67663	Chloroform	2.52E-04	1.76E+00
	71432	Benzene	6.43E-07	4.51E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.14E-06	8.01E-03
	75014	Vinyl chloride	1.77E-06	1.24E-02
	75058	Acetonitrile	2.16E-06	1.52E-02
	75092	Methylene chloride {Dichloromethane}	5.60E-05	3.92E-01
	75343	1,1-Dichloroethane	1.56E-06	1.10E-02
	79016	Trichloroethylene	2.16E-07	1.52E-03
	95476	o-Xylene	1.82E-06	1.27E-02
	100414	Ethyl benzene	9.79E-07	6.86E-03
	100425	Styrene	3.43E-06	2.40E-02
	106467	p-Dichlorobenzene	4.02E-06	2.82E-02
	106990	1,3-Butadiene	1.21E-05	8.49E-02
	108883	Toluene	3.04E-06	2.13E-02
	127184	Perchloroethylene {Tetrachloroethene}	2.73E-07	1.91E-03
	540590	1,2-Dichloroethylene	8.94E-07	6.27E-03
	1330207	Xylenes (mixed)	3.50E-06	2.45E-02
	1634044	Methyl tert-butyl ether	1.68E-05	1.18E-01
	7783064	Hydrogen sulfide	5.62E-04	3.94E+00
E-2 Skimmings Scrubber #2	56235	Carbon tetrachloride	1.82E-06	1.28E-02
	67663	Chloroform	2.52E-04	1.76E+00
	71432	Benzene	6.43E-07	4.51E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.14E-06	8.01E-03
	75014	Vinyl chloride	1.77E-06	1.24E-02
	75058	Acetonitrile	2.16E-06	1.52E-02
	75092	Methylene chloride {Dichloromethane}	5.60E-05	3.92E-01
	75343	1,1-Dichloroethane	1.56E-06	1.10E-02
	79016	Trichloroethylene	2.16E-07	1.52E-03
	95476	o-Xylene	1.82E-06	1.27E-02
	100414	Ethyl benzene	9.79E-07	6.86E-03
	100425	Styrene	3.43E-06	2.40E-02
	106467	p-Dichlorobenzene	4.02E-06	2.82E-02
	106990	1,3-Butadiene	1.21E-05	8.49E-02
	108883	Toluene	3.04E-06	2.13E-02
	127184	Perchloroethylene {Tetrachloroethene}	2.73E-07	1.91E-03
	540590	1,2-Dichloroethylene	8.94E-07	6.27E-03
	1330207	Xylenes (mixed)	3.50E-06	2.45E-02
	1634044	Methyl tert-butyl ether	1.68E-05	1.18E-01
	7783064	Hydrogen sulfide	5.62E-04	3.94E+00

Table A-3. TAC Emissions Summary - Scenario 2
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
E-2 Skimmings Scrubber #3	56235	Carbon tetrachloride	1.82E-06	1.28E-02
	67663	Chloroform	2.52E-04	1.76E+00
	71432	Benzene	6.43E-07	4.51E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.14E-06	8.01E-03
	75014	Vinyl chloride	1.77E-06	1.24E-02
	75058	Acetonitrile	2.16E-06	1.52E-02
	75092	Methylene chloride {Dichloromethane}	5.60E-05	3.92E-01
	75343	1,1-Dichloroethane	1.56E-06	1.10E-02
	79016	Trichloroethylene	2.16E-07	1.52E-03
	95476	o-Xylene	1.82E-06	1.27E-02
	100414	Ethyl benzene	9.79E-07	6.86E-03
	100425	Styrene	3.43E-06	2.40E-02
	106467	p-Dichlorobenzene	4.02E-06	2.82E-02
	106990	1,3-Butadiene	1.21E-05	8.49E-02
	108883	Toluene	3.04E-06	2.13E-02
	127184	Perchloroethylene {Tetrachloroethene}	2.73E-07	1.91E-03
	540590	1,2-Dichloroethylene	8.94E-07	6.27E-03
	1330207	Xylenes (mixed)	3.50E-06	2.45E-02
	1634044	Methyl tert-butyl ether	1.68E-05	1.18E-01
	7783064	Hydrogen sulfide	5.62E-04	3.94E+00
E-3 Skimmings Scrubber #1	56235	Carbon tetrachloride	2.13E-05	1.49E-01
	67663	Chloroform	4.02E-03	2.82E+01
	71432	Benzene	1.17E-04	8.23E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	2.58E-05	1.81E-01
	75014	Vinyl chloride	1.38E-05	9.70E-02
	75058	Acetonitrile	1.51E-04	1.06E+00
	75092	Methylene chloride {Dichloromethane}	1.41E-03	9.88E+00
	75343	1,1-Dichloroethane	2.83E-05	1.98E-01
	79016	Trichloroethylene	3.51E-05	2.46E-01
	95476	o-Xylene	2.55E-05	1.78E-01
	100414	Ethyl benzene	1.37E-05	9.61E-02
	100425	Styrene	4.80E-05	3.37E-01
	106467	p-Dichlorobenzene	5.63E-05	3.94E-01
	106990	1,3-Butadiene	5.49E-04	3.85E+00
	108883	Toluene	4.25E-05	2.98E-01
	127184	Perchloroethylene {Tetrachloroethene}	3.82E-06	2.68E-02
	540590	1,2-Dichloroethylene	4.65E-05	3.26E-01
	1330207	Xylenes (mixed)	4.90E-05	3.43E-01
	1634044	Methyl tert-butyl ether	5.28E-04	3.70E+00
	7783064	Hydrogen sulfide	7.86E-03	5.51E+01
E-3 Skimmings Scrubber #2	56235	Carbon tetrachloride	2.13E-05	1.49E-01
	67663	Chloroform	4.02E-03	2.82E+01
	71432	Benzene	1.17E-04	8.23E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	2.58E-05	1.81E-01
	75014	Vinyl chloride	1.38E-05	9.70E-02
	75058	Acetonitrile	1.51E-04	1.06E+00
	75092	Methylene chloride {Dichloromethane}	1.41E-03	9.88E+00
	75343	1,1-Dichloroethane	2.83E-05	1.98E-01
	79016	Trichloroethylene	3.51E-05	2.46E-01
	95476	o-Xylene	2.55E-05	1.78E-01
	100414	Ethyl benzene	1.37E-05	9.61E-02
	100425	Styrene	4.80E-05	3.37E-01
	106467	p-Dichlorobenzene	5.63E-05	3.94E-01
	106990	1,3-Butadiene	5.49E-04	3.85E+00
	108883	Toluene	4.25E-05	2.98E-01
	127184	Perchloroethylene {Tetrachloroethene}	3.82E-06	2.68E-02
	540590	1,2-Dichloroethylene	4.65E-05	3.26E-01
	1330207	Xylenes (mixed)	4.90E-05	3.43E-01
	1634044	Methyl tert-butyl ether	5.28E-04	3.70E+00
	7783064	Hydrogen sulfide	7.86E-03	5.51E+01
E-3 Skimmings Scrubber #3	56235	Carbon tetrachloride	2.13E-05	1.49E-01
	67663	Chloroform	4.02E-03	2.82E+01
	71432	Benzene	1.17E-04	8.23E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	2.58E-05	1.81E-01
	75014	Vinyl chloride	1.38E-05	9.70E-02
	75058	Acetonitrile	1.51E-04	1.06E+00
	75092	Methylene chloride {Dichloromethane}	1.41E-03	9.88E+00
	75343	1,1-Dichloroethane	2.83E-05	1.98E-01
	79016	Trichloroethylene	3.51E-05	2.46E-01
	95476	o-Xylene	2.55E-05	1.78E-01
	100414	Ethyl benzene	1.37E-05	9.61E-02
	100425	Styrene	4.80E-05	3.37E-01
	106467	p-Dichlorobenzene	5.63E-05	3.94E-01
	106990	1,3-Butadiene	5.49E-04	3.85E+00
	108883	Toluene	4.25E-05	2.98E-01
	127184	Perchloroethylene {Tetrachloroethene}	3.82E-06	2.68E-02
	540590	1,2-Dichloroethylene	4.65E-05	3.26E-01
	1330207	Xylenes (mixed)	4.90E-05	3.43E-01
	1634044	Methyl tert-butyl ether	5.28E-04	3.70E+00
	7783064	Hydrogen sulfide	7.86E-03	5.51E+01

Table A-3. TAC Emissions Summary - Scenario 2
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Scrubber S1; Inlet Channel to Reactors A/B	56235	Carbon tetrachloride	3.99E-05	2.77E-01
	67663	Chloroform	9.17E-04	6.37E+00
	71432	Benzene	2.41E-05	1.67E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	3.46E-05	2.40E-01
	75014	Vinyl chloride	1.62E-05	1.13E-01
	75092	Methylene chloride {Dichloromethane}	3.29E-04	2.28E+00
	75343	1,1-Dichloroethane	2.56E-05	1.78E-01
	79016	Trichloroethylene	3.40E-05	2.37E-01
	100414	Ethyl benzene	2.75E-05	1.91E-01
	100425	Styrene	2.70E-05	1.88E-01
	106467	p-Dichlorobenzene	3.81E-05	2.65E-01
	108883	Toluene	6.04E-05	4.20E-01
	127184	Perchloroethylene {Tetrachloroethene}	4.30E-05	2.99E-01
	1330207	Xylenes (mixed)	8.21E-05	5.71E-01
	1634044	Methyl tert-butyl ether	2.18E-04	1.52E+00
	7783064	Hydrogen sulfide	3.71E-03	2.58E+01
Scrubber S2; Inlet Channel to Reactors C/D	56235	Carbon tetrachloride	3.99E-05	2.79E-01
	67663	Chloroform	9.17E-04	6.41E+00
	71432	Benzene	2.41E-05	1.68E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	3.46E-05	2.42E-01
	75014	Vinyl chloride	1.62E-05	1.13E-01
	75092	Methylene chloride {Dichloromethane}	3.29E-04	2.30E+00
	75343	1,1-Dichloroethane	2.56E-05	1.79E-01
	79016	Trichloroethylene	3.40E-05	2.38E-01
	100414	Ethyl benzene	2.75E-05	1.92E-01
	100425	Styrene	2.70E-05	1.89E-01
	106467	p-Dichlorobenzene	3.81E-05	2.66E-01
	108883	Toluene	6.04E-05	4.22E-01
	127184	Perchloroethylene {Tetrachloroethene}	4.30E-05	3.00E-01
	1330207	Xylenes (mixed)	8.21E-05	5.74E-01
	1634044	Methyl tert-butyl ether	2.18E-04	1.53E+00
	7783064	Hydrogen sulfide	3.71E-03	2.59E+01
Scrubber S5; Inlet Channel to Reactors E/F	56235	Carbon tetrachloride	7.25E-05	5.04E-01
	67663	Chloroform	1.67E-03	1.16E+01
	71432	Benzene	4.37E-05	3.04E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	6.28E-05	4.37E-01
	75014	Vinyl chloride	2.94E-05	2.05E-01
	75092	Methylene chloride {Dichloromethane}	5.98E-04	4.15E+00
	75343	1,1-Dichloroethane	4.66E-05	3.24E-01
	79016	Trichloroethylene	6.19E-05	4.30E-01
	100414	Ethyl benzene	5.00E-05	3.48E-01
	100425	Styrene	4.91E-05	3.41E-01
	106467	p-Dichlorobenzene	6.92E-05	4.81E-01
	108883	Toluene	1.10E-04	7.64E-01
	127184	Perchloroethylene {Tetrachloroethene}	7.81E-05	5.43E-01
	1330207	Xylenes (mixed)	1.49E-04	1.04E+00
	1634044	Methyl tert-butyl ether	3.97E-04	2.76E+00
	7783064	Hydrogen sulfide	6.74E-03	4.68E+01
Scrubber S6; Inlet Channel to Reactors G/H	56235	Carbon tetrachloride	7.25E-05	5.05E-01
	67663	Chloroform	1.67E-03	1.16E+01
	71432	Benzene	4.37E-05	3.05E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	6.28E-05	4.38E-01
	75014	Vinyl chloride	2.94E-05	2.05E-01
	75092	Methylene chloride {Dichloromethane}	5.98E-04	4.16E+00
	75343	1,1-Dichloroethane	4.66E-05	3.25E-01
	79016	Trichloroethylene	6.19E-05	4.31E-01
	100414	Ethyl benzene	5.00E-05	3.49E-01
	100425	Styrene	4.91E-05	3.42E-01
	106467	p-Dichlorobenzene	6.92E-05	4.83E-01
	108883	Toluene	1.10E-04	7.66E-01
	127184	Perchloroethylene {Tetrachloroethene}	7.81E-05	5.44E-01
	1330207	Xylenes (mixed)	1.49E-04	1.04E+00
	1634044	Methyl tert-butyl ether	3.97E-04	2.77E+00
	7783064	Hydrogen sulfide	6.74E-03	4.70E+01
PEPS Outside Standby Generator	9901	Diesel particulate matter (DPM)	4.62E-05	3.24E-01
SIPS Standby Generator #1	9901	Diesel particulate matter (DPM)	5.18E-05	3.63E-01
TEF Black Start Standby Generator	9901	Diesel particulate matter (DPM)	2.89E-04	2.02E+00
Laboratory Annex Standby Generator	9901	Diesel particulate matter (DPM)	1.66E-05	1.16E-01
Boiler #7	1151	PAHs, total	1.71E-06	1.20E-02
	50000	Formaldehyde	2.11E-04	1.48E+00
	71432	Benzene	6.28E-06	4.40E-02
	75070	Acetaldehyde	5.31E-05	3.72E-01
	91203	Naphthalene	5.14E-06	3.60E-02
	100414	Ethyl benzene	1.18E-04	8.29E-01
	107028	Acrolein	4.63E-05	3.24E-01
	108883	Toluene	3.04E-05	2.13E-01
	110543	Hexane	7.89E-05	5.53E-01
	1330207	Xylenes (mixed)	2.56E-05	1.79E-01
	7664417	Ammonia	5.49E-02	3.84E+02

Table A-3. TAC Emissions Summary - Scenario 2
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Boiler #8	1151	PAHs, total	1.28E-06	8.99E-03
	50000	Formaldehyde	1.58E-04	1.11E+00
	71432	Benzene	4.70E-06	3.29E-02
	75070	Acetaldehyde	3.98E-05	2.79E-01
	91203	Naphthalene	3.85E-06	2.70E-02
	100414	Ethyl benzene	8.85E-05	6.20E-01
	107028	Acrolein	3.46E-05	2.43E-01
	108883	Toluene	2.27E-05	1.59E-01
	110543	Hexane	5.90E-05	4.13E-01
	1330207	Xylenes (mixed)	1.91E-05	1.34E-01
	7664417	Ammonia	4.10E-02	2.88E+02
Boiler #9	1151	PAHs, total	1.41E-06	9.91E-03
	50000	Formaldehyde	1.74E-04	1.22E+00
	71432	Benzene	5.18E-06	3.63E-02
	75070	Acetaldehyde	4.38E-05	3.07E-01
	91203	Naphthalene	4.24E-06	2.97E-02
	100414	Ethyl benzene	9.76E-05	6.84E-01
	107028	Acrolein	3.82E-05	2.68E-01
	108883	Toluene	2.50E-05	1.75E-01
	110543	Hexane	6.51E-05	4.56E-01
	1330207	Xylenes (mixed)	2.11E-05	1.48E-01
	7664417	Ammonia	4.53E-02	3.17E+02
Boiler #10	1151	PAHs, total	4.41E-07	3.09E-03
	50000	Formaldehyde	5.43E-05	3.80E-01
	71432	Benzene	1.62E-06	1.13E-02
	75070	Acetaldehyde	1.37E-05	9.59E-02
	91203	Naphthalene	1.32E-06	9.28E-03
	100414	Ethyl benzene	3.05E-05	2.13E-01
	107028	Acrolein	1.19E-05	8.35E-02
	108883	Toluene	7.82E-06	5.48E-02
	110543	Hexane	2.03E-05	1.42E-01
	1330207	Xylenes (mixed)	6.58E-06	4.61E-02
	7664417	Ammonia	1.41E-02	9.90E+01
Scrubber S4 at DAF	56235	Carbon tetrachloride	5.78E-05	4.04E-01
	67663	Chloroform	1.24E-03	8.64E+00
	71432	Benzene	6.29E-05	4.40E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	5.01E-05	3.50E-01
	75014	Vinyl chloride	2.35E-05	1.64E-01
	75092	Methylene chloride {Dichloromethane}	3.27E-04	2.29E+00
	75343	1,1-Dichloroethane	3.72E-05	2.60E-01
	79016	Trichloroethylene	4.93E-05	3.45E-01
	100414	Ethyl benzene	3.99E-05	2.79E-01
	100425	Styrene	3.91E-05	2.73E-01
	106467	p-Dichlorobenzene	5.52E-05	3.86E-01
	108883	Toluene	1.99E-04	1.39E+00
	127184	Perchloroethylene {Tetrachloroethene}	6.23E-05	4.35E-01
	1330207	Xylenes (mixed)	1.20E-04	8.36E-01
	1634044	Methyl tert-butyl ether	2.46E-04	1.72E+00
	7783064	Hydrogen sulfide	5.05E-03	3.53E+01
Central Odor South Carbon Unit	56235	Carbon tetrachloride	1.40E-04	9.78E-01
	67663	Chloroform	2.27E-02	1.59E+02
	71432	Benzene	1.32E-02	9.25E+01
	75092	Methylene chloride {Dichloromethane}	5.99E-03	4.20E+01
	95476	o-Xylene	3.39E-04	2.37E+00
	100414	Ethyl benzene	1.96E-04	1.37E+00
	100425	Styrene	7.35E-04	5.15E+00
	106467	p-Dichlorobenzene	8.15E-04	5.71E+00
	108883	Toluene	6.50E-04	4.56E+00
	127184	Perchloroethylene {Tetrachloroethene}	9.75E-05	6.83E-01
	1330207	Xylenes (mixed)	7.49E-04	5.25E+00
	1634044	Methyl tert-butyl ether	4.74E-04	3.32E+00
	7783064	Hydrogen sulfide	5.73E-02	4.01E+02
Central Odor Middle Carbon Unit	56235	Carbon tetrachloride	1.40E-04	9.78E-01
	67663	Chloroform	2.27E-02	1.59E+02
	71432	Benzene	1.32E-02	9.25E+01
	75092	Methylene chloride {Dichloromethane}	5.99E-03	4.20E+01
	95476	o-Xylene	3.39E-04	2.37E+00
	100414	Ethyl benzene	1.96E-04	1.37E+00
	100425	Styrene	7.35E-04	5.15E+00
	106467	p-Dichlorobenzene	8.15E-04	5.71E+00
	108883	Toluene	6.50E-04	4.56E+00
	127184	Perchloroethylene {Tetrachloroethene}	9.75E-05	6.83E-01
	1330207	Xylenes (mixed)	7.49E-04	5.25E+00
	1634044	Methyl tert-butyl ether	4.74E-04	3.32E+00
	7783064	Hydrogen sulfide	5.73E-02	4.01E+02
Central Odor North Carbon Unit	56235	Carbon tetrachloride	1.40E-04	9.78E-01
	67663	Chloroform	2.27E-02	1.59E+02
	71432	Benzene	1.32E-02	9.25E+01
	75092	Methylene chloride {Dichloromethane}	5.99E-03	4.20E+01
	95476	o-Xylene	3.39E-04	2.37E+00
	100414	Ethyl benzene	1.96E-04	1.37E+00
	100425	Styrene	7.35E-04	5.15E+00
	106467	p-Dichlorobenzene	8.15E-04	5.71E+00
	108883	Toluene	6.50E-04	4.56E+00
	127184	Perchloroethylene {Tetrachloroethene}	9.75E-05	6.83E-01
	1330207	Xylenes (mixed)	7.49E-04	5.25E+00
	1634044	Methyl tert-butyl ether	4.74E-04	3.32E+00
	7783064	Hydrogen sulfide	5.73E-02	4.01E+02

Table A-3. TAC Emissions Summary - Scenario 2
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Scrubber P16A	56235	Carbon tetrachloride	3.04E-06	2.13E-02
	67663	Chloroform	8.97E-06	6.28E-02
	100414	Ethyl benzene	6.71E-06	4.71E-02
	108883	Toluene	9.11E-06	6.38E-02
	1330207	Xylenes (mixed)	8.39E-06	5.88E-02
Scrubber P16B	56235	Carbon tetrachloride	3.04E-06	3.68E-03
	67663	Chloroform	1.18E-06	1.43E-03
	100414	Ethyl benzene	2.10E-06	2.54E-03
	108883	Toluene	9.11E-06	1.10E-02
	1330207	Xylenes (mixed)	8.39E-06	1.02E-02
Turbine #1 Stack West	1151	PAHs, total	8.11E-06	5.68E-02
	50000	Formaldehyde	7.94E-03	5.56E+01
	56235	Carbon tetrachloride	1.08E-04	7.54E-01
	67663	Chloroform	1.30E-03	9.12E+00
	71432	Benzene	5.31E-04	3.72E+00
	71556	Methyl chloroform {1,1,1-Trichloroethane}	9.33E-05	6.54E-01
	75014	Vinyl chloride	4.37E-05	3.06E-01
	75070	Acetaldehyde	1.53E-03	1.07E+01
	75092	Methylene chloride {Dichloromethane}	1.54E-02	1.08E+02
	79016	Trichloroethylene	9.19E-05	6.44E-01
	91203	Naphthalene	8.36E-06	5.86E-02
	106467	p-Dichlorobenzene	5.58E-04	3.91E+00
	106990	1,3-Butadiene	9.37E-04	6.56E+00
	107062	Ethylene dichloride {EDC}	6.92E-05	4.85E-01
	127184	Perchloroethylene {Tetrachloroethene}	1.16E-04	8.13E-01
	7439921	Lead	1.35E-05	9.49E-02
	7440020	Nickel	3.63E-05	2.54E-01
	7440382	Arsenic	1.35E-05	9.49E-02
	7440439	Cadmium	4.38E-06	3.07E-02
	7664417	Ammonia	4.08E-01	2.86E+03
	7782492	Selenium	4.52E-05	3.17E-01
Turbine #2 Stack West	1151	PAHs, total	7.85E-06	5.50E-02
	50000	Formaldehyde	7.69E-03	5.39E+01
	56235	Carbon tetrachloride	1.04E-04	7.30E-01
	67663	Chloroform	1.26E-03	8.84E+00
	71432	Benzene	5.14E-04	3.60E+00
	71556	Methyl chloroform {1,1,1-Trichloroethane}	9.04E-05	6.34E-01
	75014	Vinyl chloride	4.23E-05	2.97E-01
	75070	Acetaldehyde	1.49E-03	1.04E+01
	75092	Methylene chloride {Dichloromethane}	1.50E-02	1.05E+02
	79016	Trichloroethylene	8.90E-05	6.24E-01
	91203	Naphthalene	8.10E-06	5.68E-02
	106467	p-Dichlorobenzene	5.41E-04	3.79E+00
	106990	1,3-Butadiene	9.08E-04	6.36E+00
	107062	Ethylene dichloride {EDC}	6.71E-05	4.70E-01
	127184	Perchloroethylene {Tetrachloroethene}	1.12E-04	7.88E-01
	7439921	Lead	1.31E-05	9.20E-02
	7440020	Nickel	3.51E-05	2.46E-01
	7440382	Arsenic	1.31E-05	9.20E-02
	7440439	Cadmium	4.25E-06	2.98E-02
	7664417	Ammonia	3.96E-01	2.77E+03
	7782492	Selenium	4.38E-05	3.07E-01
Turbine #3 Stack West	1151	PAHs, total	6.90E-06	4.84E-02
	50000	Formaldehyde	6.76E-03	4.74E+01
	56235	Carbon tetrachloride	9.16E-05	6.42E-01
	67663	Chloroform	1.11E-03	7.77E+00
	71432	Benzene	4.52E-04	3.17E+00
	71556	Methyl chloroform {1,1,1-Trichloroethane}	7.94E-05	5.57E-01
	75014	Vinyl chloride	3.72E-05	2.61E-01
	75070	Acetaldehyde	1.31E-03	9.15E+00
	75092	Methylene chloride {Dichloromethane}	1.31E-02	9.21E+01
	79016	Trichloroethylene	7.82E-05	5.48E-01
	91203	Naphthalene	7.12E-06	4.99E-02
	106467	p-Dichlorobenzene	4.75E-04	3.33E+00
	106990	1,3-Butadiene	7.98E-04	5.59E+00
	107062	Ethylene dichloride {EDC}	5.89E-05	4.13E-01
	127184	Perchloroethylene {Tetrachloroethene}	9.87E-05	6.92E-01
	7439921	Lead	1.15E-05	8.08E-02
	7440020	Nickel	3.09E-05	2.16E-01
	7440382	Arsenic	1.15E-05	8.08E-02
	7440439	Cadmium	3.73E-06	2.61E-02
	7664417	Ammonia	3.48E-01	2.44E+03
	7782492	Selenium	3.85E-05	2.70E-01
Boiler #11	1151	PAHs, total	1.10E-09	7.70E-06
	50000	Formaldehyde	1.35E-07	9.47E-04
	71432	Benzene	6.37E-08	4.47E-04
	75070	Acetaldehyde	3.41E-08	2.39E-04
	91203	Naphthalene	3.30E-09	2.31E-05
	100414	Ethyl benzene	7.58E-08	5.31E-04
	107028	Acrolein	2.97E-08	2.08E-04
	108883	Toluene	2.91E-07	2.04E-03
	110543	Hexane	5.05E-08	3.54E-04
	1330207	Xylenes (mixed)	2.16E-07	1.52E-03
	7664417	Ammonia	3.52E-05	2.46E-01

Table A-3. TAC Emissions Summary - Scenario 2
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
North Flare Station - Flare #1	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
North Flare Station - Flare #2	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
North Flare Station - Flare #3	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
North Flare Station - Flare #4	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
North Flare Station - Flare #5	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02

Table A-3. TAC Emissions Summary - Scenario 2
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
North Flare Station - Flare #6	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
North Flare Station - Flare #7	1151	PAHs, total	8.13E-07	5.70E-03
	50000	Formaldehyde	1.20E-04	8.39E-01
	56235	Carbon tetrachloride	1.53E-06	1.07E-02
	71432	Benzene	7.74E-07	5.43E-03
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.32E-06	9.27E-03
	75014	Vinyl chloride	6.20E-07	4.34E-03
	75070	Acetaldehyde	7.33E-06	5.14E-02
	75092	Methylene chloride {Dichloromethane}	2.90E-06	2.03E-02
	79016	Trichloroethylene	1.30E-06	9.13E-03
	91203	Naphthalene	1.99E-07	1.39E-03
	100414	Ethyl benzene	6.89E-07	4.83E-03
	106990	1,3-Butadiene	5.37E-07	3.76E-03
	107062	Ethylene dichloride {EDC}	9.81E-07	6.88E-03
	108883	Toluene	1.44E-06	1.01E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.64E-06	1.15E-02
	1330207	Xylenes (mixed)	2.34E-06	1.64E-02
SIPS #5	50000	Formaldehyde	1.51E-04	1.06E+00
	50000	Formaldehyde	2.24E-04	1.57E+00
	56235	Carbon tetrachloride	6.19E-06	4.34E-02
	56235	Carbon tetrachloride	1.94E-07	1.36E-03
	67561	Methanol	3.35E-05	2.35E-01
	67663	Chloroform	1.50E-07	1.05E-03
	71432	Benzene	2.33E-05	1.64E-01
	71432	Benzene	1.73E-05	1.21E-01
	75014	Vinyl chloride	5.35E-06	3.75E-02
	75014	Vinyl chloride	7.85E-08	5.50E-04
	75070	Acetaldehyde	3.05E-05	2.14E-01
	75092	Methylene chloride {Dichloromethane}	2.51E-05	1.76E-01
	75092	Methylene chloride {Dichloromethane}	4.51E-07	3.16E-03
	78875	1,2-Dichloropropane	1.42E-07	9.96E-04
	79005	1,1,2-Trichloroethane	1.67E-07	1.17E-03
	79345	1,1,2,2-Tetrachloroethane	2.77E-07	1.94E-03
	91203	Naphthalene	4.79E-04	3.36E+00
	91203	Naphthalene	1.06E-06	7.44E-03
	100414	Ethyl benzene	2.71E-07	1.90E-03
	100425	Styrene	1.30E-07	9.12E-04
	106934	Ethylene dibromide {EDB}	1.05E-04	7.37E-01
	106934	Ethylene dibromide {EDB}	2.33E-07	1.63E-03
	106990	1,3-Butadiene	2.76E-05	1.93E-01
	106990	1,3-Butadiene	7.25E-06	5.08E-02
	107028	Acrolein	2.88E-05	2.02E-01
	107062	Ethylene dichloride {EDC}	1.42E-05	9.95E-02
	107062	Ethylene dichloride {EDC}	1.24E-07	8.66E-04
	108883	Toluene	6.10E-06	4.28E-02
	542756	1,3-Dichloropropene	1.39E-07	9.73E-04
	1330207	Xylenes (mixed)	2.13E-06	1.49E-02
	7664417	Ammonia	4.40E-02	3.09E+02
	7664417	Ammonia	3.63E-05	2.54E-01
SIPS #2	50000	Formaldehyde	8.55E-05	5.99E-01
	50000	Formaldehyde	1.12E-04	7.85E-01
	56235	Carbon tetrachloride	3.51E-06	2.46E-02
	56235	Carbon tetrachloride	9.68E-08	6.78E-04
	67561	Methanol	1.67E-05	1.17E-01
	67663	Chloroform	7.49E-08	5.25E-04
	71432	Benzene	1.32E-05	9.28E-02
	71432	Benzene	8.64E-06	6.05E-02
	75014	Vinyl chloride	3.03E-06	2.13E-02
	75014	Vinyl chloride	3.93E-08	2.75E-04
	75070	Acetaldehyde	1.53E-05	1.07E-01
	75092	Methylene chloride {Dichloromethane}	1.42E-05	9.98E-02
	75092	Methylene chloride {Dichloromethane}	2.25E-07	1.58E-03
	78875	1,2-Dichloropropane	7.11E-08	4.98E-04
	79005	1,1,2-Trichloroethane	8.36E-08	5.86E-04
	79345	1,1,2,2-Tetrachloroethane	1.38E-07	9.69E-04
	91203	Naphthalene	2.72E-04	1.91E+00
	91203	Naphthalene	5.31E-07	3.72E-03
	100414	Ethyl benzene	1.36E-07	9.50E-04
	100425	Styrene	6.51E-08	4.56E-04
	106934	Ethylene dibromide {EDB}	5.96E-05	4.18E-01
	106934	Ethylene dibromide {EDB}	1.16E-07	8.16E-04

Table A-3. TAC Emissions Summary - Scenario 2
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
SIPS #2 *(Cont'd)*	106990	1,3-Butadiene	1.57E-05	1.10E-01
	106990	1,3-Butadiene	3.62E-06	2.54E-02
	107028	Acrolein	1.44E-05	1.01E-01
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	107062	Ethylene dichloride {EDC}	6.18E-08	4.33E-04
	108883	Toluene	3.05E-06	2.14E-02
	542756	1,3-Dichloropropene	6.94E-08	4.87E-04
	1330207	Xylenes (mixed)	1.07E-06	7.47E-03
	7664417	Ammonia	2.50E-02	1.75E+02
	7664417	Ammonia	1.81E-05	1.27E-01
SIPS #3	50000	Formaldehyde	1.32E-04	9.28E-01
	50000	Formaldehyde	2.16E-04	1.51E+00
	56235	Carbon tetrachloride	5.44E-06	3.81E-02
	56235	Carbon tetrachloride	1.86E-07	1.31E-03
	67561	Methanol	3.22E-05	2.26E-01
	67663	Chloroform	1.44E-07	1.01E-03
	71432	Benzene	2.05E-05	1.44E-01
	71432	Benzene	1.66E-05	1.17E-01
	75014	Vinyl chloride	4.70E-06	3.29E-02
	75014	Vinyl chloride	7.56E-08	5.30E-04
	75070	Acetaldehyde	2.94E-05	2.06E-01
	75092	Methylene chloride {Dichloromethane}	2.21E-05	1.55E-01
	75092	Methylene chloride {Dichloromethane}	4.34E-07	3.04E-03
	78875	1,2-Dichloropropane	1.37E-07	9.60E-04
	79005	1,1,2-Trichloroethane	1.61E-07	1.13E-03
	79345	1,1,2,2-Tetrachloroethane	2.67E-07	1.87E-03
	91203	Naphthalene	4.21E-04	2.95E+00
	91203	Naphthalene	1.02E-06	7.17E-03
	100414	Ethyl benzene	2.61E-07	1.83E-03
	100425	Styrene	1.25E-07	8.79E-04
	106934	Ethylene dibromide {EDB}	9.24E-05	6.47E-01
	106934	Ethylene dibromide {EDB}	2.24E-07	1.57E-03
	106990	1,3-Butadiene	2.43E-05	1.70E-01
	106990	1,3-Butadiene	6.99E-06	4.90E-02
	107028	Acrolein	2.77E-05	1.94E-01
	107062	Ethylene dichloride {EDC}	1.25E-05	8.75E-02
	107062	Ethylene dichloride {EDC}	1.19E-07	8.34E-04
	108883	Toluene	5.88E-06	4.12E-02
	542756	1,3-Dichloropropene	1.34E-07	9.38E-04
	1330207	Xylenes (mixed)	2.05E-06	1.44E-02
	7664417	Ammonia	3.87E-02	2.71E+02
	7664417	Ammonia	3.49E-05	2.45E-01
SIPS #4	50000	Formaldehyde	1.19E-04	8.31E-01
	50000	Formaldehyde	4.57E-04	3.20E+00
	56235	Carbon tetrachloride	4.87E-06	3.41E-02
	56235	Carbon tetrachloride	3.94E-07	2.76E-03
	67561	Methanol	6.82E-05	4.78E-01
	67663	Chloroform	3.05E-07	2.14E-03
	71432	Benzene	1.84E-05	1.29E-01
	71432	Benzene	3.52E-05	2.47E-01
	75014	Vinyl chloride	4.21E-06	2.95E-02
	75014	Vinyl chloride	1.60E-07	1.12E-03
	75070	Acetaldehyde	6.22E-05	4.36E-01
	75092	Methylene chloride {Dichloromethane}	1.98E-05	1.39E-01
	75092	Methylene chloride {Dichloromethane}	9.18E-07	6.43E-03
	78875	1,2-Dichloropropane	2.90E-07	2.03E-03
	79005	1,1,2-Trichloroethane	3.41E-07	2.39E-03
	79345	1,1,2,2-Tetrachloroethane	5.64E-07	3.95E-03
	91203	Naphthalene	3.77E-04	2.64E+00
	91203	Naphthalene	2.16E-06	1.52E-02
	100414	Ethyl benzene	5.53E-07	3.87E-03
	100425	Styrene	2.65E-07	1.86E-03
	106934	Ethylene dibromide {EDB}	8.27E-05	5.80E-01
	106934	Ethylene dibromide {EDB}	4.75E-07	3.33E-03
	106990	1,3-Butadiene	2.17E-05	1.52E-01
	106990	1,3-Butadiene	1.48E-05	1.04E-01
	107028	Acrolein	5.86E-05	4.11E-01
	107062	Ethylene dichloride {EDC}	1.12E-05	7.83E-02
	107062	Ethylene dichloride {EDC}	2.52E-07	1.76E-03
	108883	Toluene	1.24E-05	8.71E-02
	542756	1,3-Dichloropropene	2.83E-07	1.98E-03
	1330207	Xylenes (mixed)	4.35E-06	3.05E-02
	7664417	Ammonia	3.47E-02	2.43E+02
	7664417	Ammonia	7.39E-05	5.18E-01
PEPS #1 Engine	50000	Formaldehyde	1.02E-04	7.16E-01
	56235	Carbon tetrachloride	1.08E-05	7.53E-02
	67663	Chloroform	9.14E-06	6.40E-02
	75014	Vinyl chloride	1.94E-05	1.36E-01
	75070	Acetaldehyde	2.85E-05	2.00E-01
	75092	Methylene chloride {Dichloromethane}	6.99E-06	4.90E-02
	79016	Trichloroethylene	9.68E-06	6.78E-02
	106467	p-Dichlorobenzene	1.08E-05	7.53E-02
	106990	1,3-Butadiene	5.27E-06	3.69E-02
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.13E-05	7.91E-02
	7439921	Lead	1.83E-06	1.28E-02
	7440020	Nickel	1.08E-06	7.53E-03
	7440382	Arsenic	9.51E-08	6.66E-04
	7440439	Cadmium	3.12E-07	2.18E-03
	7664417	Ammonia	2.87E-03	2.01E+01

Table A-3. TAC Emissions Summary - Scenario 2
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
	7782492	Selenium	5.91E-06	4.14E-02
PEPS #2 Engine	50000	Formaldehyde	1.02E-04	7.16E-01
	56235	Carbon tetrachloride	1.08E-05	7.53E-02
	67663	Chloroform	9.14E-06	6.40E-02
	75014	Vinyl chloride	1.94E-05	1.36E-01
	75070	Acetaldehyde	2.85E-05	2.00E-01
	75092	Methylene chloride {Dichloromethane}	6.99E-06	4.90E-02
	79016	Trichloroethylene	9.68E-06	6.78E-02
	106467	p-Dichlorobenzene	1.08E-05	7.53E-02
	106990	1,3-Butadiene	5.27E-06	3.69E-02
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.13E-05	7.91E-02
	7439921	Lead	1.83E-06	1.28E-02
	7440020	Nickel	1.08E-06	7.53E-03
	7440382	Arsenic	9.51E-08	6.66E-04
	7440439	Cadmium	3.12E-07	2.18E-03
	7664417	Ammonia	2.87E-03	2.01E+01
	7782492	Selenium	5.91E-06	4.14E-02
PEPS #3 Engine	50000	Formaldehyde	1.02E-04	7.16E-01
	56235	Carbon tetrachloride	1.08E-05	7.53E-02
	67663	Chloroform	9.14E-06	6.40E-02
	75014	Vinyl chloride	1.94E-05	1.36E-01
	75070	Acetaldehyde	2.85E-05	2.00E-01
	75092	Methylene chloride {Dichloromethane}	6.99E-06	4.90E-02
	79016	Trichloroethylene	9.68E-06	6.78E-02
	106467	p-Dichlorobenzene	1.08E-05	7.53E-02
	106990	1,3-Butadiene	5.27E-06	3.69E-02
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.13E-05	7.91E-02
	7439921	Lead	1.83E-06	1.28E-02
	7440020	Nickel	1.08E-06	7.53E-03
	7440382	Arsenic	9.51E-08	6.66E-04
	7440439	Cadmium	3.12E-07	2.18E-03
	7664417	Ammonia	2.87E-03	2.01E+01
	7782492	Selenium	5.91E-06	4.14E-02
PEPS #4 Engine	50000	Formaldehyde	1.02E-04	7.16E-01
	56235	Carbon tetrachloride	1.08E-05	7.53E-02
	67663	Chloroform	9.14E-06	6.40E-02
	75014	Vinyl chloride	1.94E-05	1.36E-01
	75070	Acetaldehyde	2.85E-05	2.00E-01
	75092	Methylene chloride {Dichloromethane}	6.99E-06	4.90E-02
	79016	Trichloroethylene	9.68E-06	6.78E-02
	106467	p-Dichlorobenzene	1.08E-05	7.53E-02
	106990	1,3-Butadiene	5.27E-06	3.69E-02
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.13E-05	7.91E-02
	7439921	Lead	1.83E-06	1.28E-02
	7440020	Nickel	1.08E-06	7.53E-03
	7440382	Arsenic	9.51E-08	6.66E-04
	7440439	Cadmium	3.12E-07	2.18E-03
	7664417	Ammonia	2.87E-03	2.01E+01
	7782492	Selenium	5.91E-06	4.14E-02
PEPS #5 Engine	50000	Formaldehyde	1.02E-04	7.16E-01
	56235	Carbon tetrachloride	1.08E-05	7.53E-02
	67663	Chloroform	9.14E-06	6.40E-02
	75014	Vinyl chloride	1.94E-05	1.36E-01
	75070	Acetaldehyde	2.85E-05	2.00E-01
	75092	Methylene chloride {Dichloromethane}	6.99E-06	4.90E-02
	79016	Trichloroethylene	9.68E-06	6.78E-02
	106467	p-Dichlorobenzene	1.08E-05	7.53E-02
	106990	1,3-Butadiene	5.27E-06	3.69E-02
	107062	Ethylene dichloride {EDC}	8.06E-06	5.65E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.13E-05	7.91E-02
	7439921	Lead	1.83E-06	1.28E-02
	7440020	Nickel	1.08E-06	7.53E-03
	7440382	Arsenic	9.51E-08	6.66E-04
	7440439	Cadmium	3.12E-07	2.18E-03
	7664417	Ammonia	2.87E-03	2.01E+01
	7782492	Selenium	5.91E-06	4.14E-02
SIPS #1	50000	Formaldehyde	1.21E-04	8.47E-01
	50000	Formaldehyde	2.51E-04	1.76E+00
	56235	Carbon tetrachloride	4.96E-06	3.48E-02
	56235	Carbon tetrachloride	2.17E-07	1.52E-03
	67561	Methanol	3.74E-05	2.62E-01
	67663	Chloroform	1.68E-07	1.17E-03
	71432	Benzene	1.87E-05	1.31E-01
	71432	Benzene	1.93E-05	1.35E-01
	75014	Vinyl chloride	4.29E-06	3.00E-02
	75014	Vinyl chloride	8.78E-08	6.16E-04
	75070	Acetaldehyde	3.41E-05	2.39E-01
	75092	Methylene chloride {Dichloromethane}	2.01E-05	1.41E-01
	75092	Methylene chloride {Dichloromethane}	5.04E-07	3.53E-03
	78875	1,2-Dichloropropane	1.59E-07	1.11E-03
	79005	1,1,2-Trichloroethane	1.87E-07	1.31E-03
	79345	1,1,2,2-Tetrachloroethane	3.09E-07	2.17E-03
	91203	Naphthalene	3.84E-04	2.69E+00
	91203	Naphthalene	1.19E-06	8.32E-03

Table A-3. TAC Emissions Summary - Scenario 2
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
	100414	Ethyl benzene	3.03E-07	2.13E-03

Table A-3. TAC Emissions Summary - Scenario 2
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
SIPS #1 *(Cont'd)*	100425	Styrene	1.46E-07	1.02E-03
	106934	Ethylene dibromide {EDB}	8.43E-05	5.91E-01
	106934	Ethylene dibromide {EDB}	2.61E-07	1.83E-03
	106990	1,3-Butadiene	2.21E-05	1.55E-01
	106990	1,3-Butadiene	8.11E-06	5.68E-02
	107028	Acrolein	3.22E-05	2.25E-01
	107062	Ethylene dichloride {EDC}	1.14E-05	7.98E-02
	107062	Ethylene dichloride {EDC}	1.38E-07	9.69E-04
	108883	Toluene	6.83E-06	4.78E-02
	542756	1,3-Dichloropropene	1.55E-07	1.09E-03
	1330207	Xylenes (mixed)	2.39E-06	1.67E-02
	7664417	Ammonia	3.53E-02	2.47E+02
	7664417	Ammonia	4.06E-05	2.84E-01
South Flare #1	1151	PAHs, total	5.13E-06	3.59E-02
	50000	Formaldehyde	7.55E-04	5.29E+00
	56235	Carbon tetrachloride	9.62E-06	6.74E-02
	71432	Benzene	4.88E-06	3.42E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	8.34E-06	5.85E-02
	75014	Vinyl chloride	3.91E-06	2.74E-02
	75070	Acetaldehyde	4.62E-05	3.24E-01
	75092	Methylene chloride {Dichloromethane}	1.83E-05	1.28E-01
	79016	Trichloroethylene	8.22E-06	5.76E-02
	91203	Naphthalene	1.25E-06	8.77E-03
	100414	Ethyl benzene	4.35E-06	3.05E-02
	106990	1,3-Butadiene	3.38E-06	2.37E-02
	107062	Ethylene dichloride {EDC}	6.19E-06	4.34E-02
	108883	Toluene	9.06E-06	6.35E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.04E-05	7.27E-02
	1330207	Xylenes (mixed)	1.48E-05	1.04E-01
South Flare #2	1151	PAHs, total	5.13E-06	3.59E-02
	50000	Formaldehyde	7.55E-04	5.29E+00
	56235	Carbon tetrachloride	9.62E-06	6.74E-02
	71432	Benzene	4.88E-06	3.42E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	8.34E-06	5.85E-02
	75014	Vinyl chloride	3.91E-06	2.74E-02
	75070	Acetaldehyde	4.62E-05	3.24E-01
	75092	Methylene chloride {Dichloromethane}	1.83E-05	1.28E-01
	79016	Trichloroethylene	8.22E-06	5.76E-02
	91203	Naphthalene	1.25E-06	8.77E-03
	100414	Ethyl benzene	4.35E-06	3.05E-02
	106990	1,3-Butadiene	3.38E-06	2.37E-02
	107062	Ethylene dichloride {EDC}	6.19E-06	4.34E-02
	108883	Toluene	9.06E-06	6.35E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.04E-05	7.27E-02
	1330207	Xylenes (mixed)	1.48E-05	1.04E-01
South Flare #3	1151	PAHs, total	5.13E-06	3.59E-02
	50000	Formaldehyde	7.55E-04	5.29E+00
	56235	Carbon tetrachloride	9.62E-06	6.74E-02
	71432	Benzene	4.88E-06	3.42E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	8.34E-06	5.85E-02
	75014	Vinyl chloride	3.91E-06	2.74E-02
	75070	Acetaldehyde	4.62E-05	3.24E-01
	75092	Methylene chloride {Dichloromethane}	1.83E-05	1.28E-01
	79016	Trichloroethylene	8.22E-06	5.76E-02
	91203	Naphthalene	1.25E-06	8.77E-03
	100414	Ethyl benzene	4.35E-06	3.05E-02
	106990	1,3-Butadiene	3.38E-06	2.37E-02
	107062	Ethylene dichloride {EDC}	6.19E-06	4.34E-02
	108883	Toluene	9.06E-06	6.35E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.04E-05	7.27E-02
	1330207	Xylenes (mixed)	1.48E-05	1.04E-01
South Flare #4	1151	PAHs, total	5.13E-06	3.59E-02
	50000	Formaldehyde	7.55E-04	5.29E+00
	56235	Carbon tetrachloride	9.62E-06	6.74E-02
	71432	Benzene	4.88E-06	3.42E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	8.34E-06	5.85E-02
	75014	Vinyl chloride	3.91E-06	2.74E-02
	75070	Acetaldehyde	4.62E-05	3.24E-01
	75092	Methylene chloride {Dichloromethane}	1.83E-05	1.28E-01
	79016	Trichloroethylene	8.22E-06	5.76E-02
	91203	Naphthalene	1.25E-06	8.77E-03
	100414	Ethyl benzene	4.35E-06	3.05E-02
	106990	1,3-Butadiene	3.38E-06	2.37E-02
	107062	Ethylene dichloride {EDC}	6.19E-06	4.34E-02
	108883	Toluene	9.06E-06	6.35E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.04E-05	7.27E-02
	1330207	Xylenes (mixed)	1.48E-05	1.04E-01

Table A-3. TAC Emissions Summary - Scenario 2
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
South Flare #5	1151	PAHs, total	5.13E-06	3.59E-02
	50000	Formaldehyde	7.55E-04	5.29E+00
	56235	Carbon tetrachloride	9.62E-06	6.74E-02
	71432	Benzene	4.88E-06	3.42E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	8.34E-06	5.85E-02
	75014	Vinyl chloride	3.91E-06	2.74E-02
	75070	Acetaldehyde	4.62E-05	3.24E-01
	75092	Methylene chloride {Dichloromethane}	1.83E-05	1.28E-01
	79016	Trichloroethylene	8.22E-06	5.76E-02
	91203	Naphthalene	1.25E-06	8.77E-03
	100414	Ethyl benzene	4.35E-06	3.05E-02
	106990	1,3-Butadiene	3.38E-06	2.37E-02
	107062	Ethylene dichloride {EDC}	6.19E-06	4.34E-02
	108883	Toluene	9.06E-06	6.35E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.04E-05	7.27E-02
	1330207	Xylenes (mixed)	1.48E-05	1.04E-01
North Laboratory Boiler	1151	PAHs, total	6.35E-08	4.45E-04
	50000	Formaldehyde	1.08E-05	7.56E-02
	71432	Benzene	5.08E-06	3.56E-02
	75070	Acetaldehyde	2.73E-06	1.91E-02
	91203	Naphthalene	1.90E-07	1.33E-03
	100414	Ethyl benzene	6.03E-06	4.23E-02
	107028	Acrolein	1.71E-06	1.20E-02
	108883	Toluene	2.32E-05	1.63E-01
	110543	Hexane	4.00E-06	2.80E-02
	1330207	Xylenes (mixed)	1.73E-05	1.21E-01
	7664417	Ammonia	2.03E-03	1.42E+01
South Laboratory Boiler	1151	PAHs, total	6.35E-08	4.45E-04
	50000	Formaldehyde	1.08E-05	7.56E-02
	71432	Benzene	5.08E-06	3.56E-02
	75070	Acetaldehyde	2.73E-06	1.91E-02
	91203	Naphthalene	1.90E-07	1.33E-03
	100414	Ethyl benzene	6.03E-06	4.23E-02
	107028	Acrolein	1.71E-06	1.20E-02
	108883	Toluene	2.32E-05	1.63E-01
	110543	Hexane	4.00E-06	2.80E-02
	1330207	Xylenes (mixed)	1.73E-05	1.21E-01
	7664417	Ammonia	2.03E-03	1.42E+01
Digester Cleaning Operations at #12	71432	Benzene	2.28E-03	1.37E+00
	106467	p-Dichlorobenzene	3.35E-02	2.01E+01
	108883	Toluene	6.69E-02	4.02E+01
	127184	Perchloroethylene {Tetrachloroethene}	5.13E-03	3.08E+00
	1330207	Xylenes (mixed)	1.51E-01	9.08E+01
Digester Cleaning Operations at #11	71432	Benzene	2.28E-03	1.37E+00
	106467	p-Dichlorobenzene	3.35E-02	2.01E+01
	108883	Toluene	6.69E-02	4.02E+01
	127184	Perchloroethylene {Tetrachloroethene}	5.13E-03	3.08E+00
	1330207	Xylenes (mixed)	1.51E-01	9.08E+01
Digester Cleaning Operations at #16	71432	Benzene	2.28E-03	1.37E+00
	106467	p-Dichlorobenzene	3.35E-02	2.01E+01
	108883	Toluene	6.69E-02	4.02E+01
	127184	Perchloroethylene {Tetrachloroethene}	5.13E-03	3.08E+00
	1330207	Xylenes (mixed)	1.51E-01	9.08E+01
Scrubber P15	71432	Benzene	2.32E-04	1.62E+00
Scrubber SP1	71432	Benzene	1.62E-04	1.13E+00
Scrubber SP2	71432	Benzene	2.32E-04	1.62E+00
Scrubber SP3	71432	Benzene	1.85E-04	1.30E+00
Scrubber SP5	71432	Benzene	6.95E-04	4.75E+00
Reactor E pH Adjustment Vent	56235	Carbon tetrachloride	1.19E-04	8.32E-01
	67663	Chloroform	2.86E-02	2.00E+02
	71432	Benzene	6.02E-05	4.22E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.03E-04	7.21E-01
	75014	Vinyl chloride	4.82E-05	3.38E-01
	75092	Methylene chloride {Dichloromethane}	6.85E-03	4.80E+01
	75343	1,1-Dichloroethane	7.63E-05	5.35E-01
	79016	Trichloroethylene	1.01E-04	7.10E-01
	106467	p-Dichlorobenzene	1.13E-04	7.94E-01
	106990	1,3-Butadiene	4.17E-05	2.92E-01
	108883	Toluene	7.16E-03	5.02E+01
	127184	Perchloroethylene {Tetrachloroethene}	2.08E-03	1.46E+01
	540590	1,2-Dichloroethylene	7.63E-05	5.35E-01
	1634044	Methyl tert-butyl ether	6.79E-05	4.76E-01
Reactor F pH Adjustment Vent	56235	Carbon tetrachloride	1.19E-04	8.32E-01
	67663	Chloroform	2.86E-02	2.00E+02
	71432	Benzene	6.02E-05	4.22E-01
	71556	Methyl chloroform {1,1,1-Trichloroethane}	1.03E-04	7.21E-01
	75014	Vinyl chloride	4.82E-05	3.38E-01
	75092	Methylene chloride {Dichloromethane}	6.85E-03	4.80E+01
	75343	1,1-Dichloroethane	7.63E-05	5.35E-01
	79016	Trichloroethylene	1.01E-04	7.10E-01
	106467	p-Dichlorobenzene	1.13E-04	7.94E-01
	106990	1,3-Butadiene	4.17E-05	2.92E-01
	108883	Toluene	7.16E-03	5.02E+01
	127184	Perchloroethylene {Tetrachloroethene}	2.08E-03	1.46E+01
	540590	1,2-Dichloroethylene	7.63E-05	5.35E-01
	1634044	Methyl tert-butyl ether	6.79E-05	4.76E-01

Table A-3. TAC Emissions Summary - Scenario 2
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Reactor G pH Adjustment Vent	56235	Carbon tetrachloride	1.05E-05	7.39E-02
	67663	Chloroform	2.54E-03	1.78E+01
	71432	Benzene	5.35E-06	3.75E-02
	71556	Methyl chloroform {1,1,1-Trichloroethane}	9.14E-06	6.41E-02
	75014	Vinyl chloride	4.28E-06	3.00E-02
	75092	Methylene chloride {Dichloromethane}	6.09E-04	4.27E+00
	75343	1,1-Dichloroethane	6.78E-06	4.75E-02
	79016	Trichloroethylene	9.00E-06	6.31E-02
	106467	p-Dichlorobenzene	1.01E-05	7.06E-02
	106990	1,3-Butadiene	3.71E-06	2.60E-02
	108883	Toluene	6.36E-04	4.46E+00
	127184	Perchloroethylene {Tetrachloroethene}	1.85E-04	1.30E+00
	540590	1,2-Dichloroethylene	6.78E-06	4.75E-02
	1634044	Methyl tert-butyl ether	6.04E-06	4.23E-02
SEC Effluent Conveyance Channel Vent	67663	Chloroform	5.60E-04	4.92E+00
	71432	Benzene	1.03E-03	9.00E+00
	71556	Methyl chloroform {1,1,1-Trichloroethane}	3.12E-04	2.73E+00
	75092	Methylene chloride {Dichloromethane}	2.16E-04	1.89E+00
	79016	Trichloroethylene	1.67E-05	1.46E-01
	106467	p-Dichlorobenzene	1.44E-05	1.26E-01
	108883	Toluene	1.08E-03	9.48E+00
	127184	Perchloroethylene {Tetrachloroethene}	3.49E-03	3.06E+01
	1330207	Xylenes (mixed)	7.97E-04	6.99E+00
	7783064	Hydrogen sulfide	9.17E-06	8.03E-02
SIPS Standby Generator #2	9901	Diesel particulate matter (DPM)	3.95E-05	2.77E-01
Switchboard 1B/1C Standby Generator	9901	Diesel particulate matter (DPM)	3.89E-04	2.73E+00
VEC Loader at Central Odor	9901	Diesel particulate matter (DPM)	7.29E-04	5.11E+00
VEC Loader at Skimmings Scrubbers	9901	Diesel particulate matter (DPM)	9.95E-05	6.97E-01
VEC Loader at S-1 and S-2	9901	Diesel particulate matter (DPM)	1.31E-05	9.15E-02
VEC Loader at S-5 and S-6	9901	Diesel particulate matter (DPM)	1.24E-05	8.72E-02
VEC Loader at Solids Processing	9901	Diesel particulate matter (DPM)	7.65E-05	5.36E-01
Plasma Arc Cutter	7440020	Nickel	4.92E-07	3.45E-03
	18540299	Chromium, hexavalent (& compounds)	3.74E-09	2.62E-05
Portable Equipment Use at Primary	9901	Diesel particulate matter (DPM)	1.17E-03	8.20E+00
	50000	Formaldehyde	3.08E-04	2.16E+00
	67561	Methanol	6.91E-05	4.84E-01
	71432	Benzene	3.39E-04	2.38E+00
	75070	Acetaldehyde	7.40E-05	5.19E-01
	78933	Methyl ethyl ketone {2-Butanone}	5.92E-06	4.15E-02
	91203	Naphthalene	1.28E-05	8.99E-02
	95476	o-Xylene	1.53E-04	1.07E+00
	95636	1,2,4-Trimethylbenzene	1.24E-04	8.71E-01
	100414	Ethyl benzene	1.48E-04	1.04E+00
	100425	Styrene	1.28E-05	8.99E-02
	106990	1,3-Butadiene	8.19E-05	5.74E-01
	107028	Acrolein	1.78E-05	1.25E-01
	108383	m-Xylene	4.39E-04	3.08E+00
	108883	Toluene	6.70E-04	4.70E+00
	110543	Hexane	1.29E-04	9.06E-01
	1634044	Methyl tert-butyl ether	1.84E-04	1.29E+00
	7439965	Manganese	2.94E-07	2.06E-03
	7440020	Nickel	2.94E-07	2.06E-03
	7440508	Copper	2.94E-07	2.06E-03
	7782505	Chlorine	4.06E-05	2.84E-01
Portable Equipment Use at Secondary	9901	Diesel particulate matter (DPM)	3.60E-04	2.52E+00
	50000	Formaldehyde	1.37E-04	9.59E-01
	67561	Methanol	3.07E-05	2.15E-01
	71432	Benzene	1.51E-04	1.06E+00
	75070	Acetaldehyde	3.29E-05	2.31E-01
	78933	Methyl ethyl ketone {2-Butanone}	2.63E-06	1.84E-02
	91203	Naphthalene	5.70E-06	3.99E-02
	95476	o-Xylene	6.80E-05	4.76E-01
	95636	1,2,4-Trimethylbenzene	5.53E-05	3.87E-01
	100414	Ethyl benzene	6.58E-05	4.61E-01
	100425	Styrene	5.70E-06	3.99E-02
	106990	1,3-Butadiene	3.64E-05	2.55E-01
	107028	Acrolein	7.90E-06	5.53E-02
	108383	m-Xylene	1.95E-04	1.37E+00
	108883	Toluene	2.98E-04	2.09E+00
	110543	Hexane	5.75E-05	4.03E-01
	1634044	Methyl tert-butyl ether	8.16E-05	5.72E-01
	7439965	Manganese	1.31E-07	9.17E-04
	7440020	Nickel	1.31E-07	9.17E-04
	7440508	Copper	1.31E-07	9.17E-04
	7782505	Chlorine	1.80E-05	1.26E-01
Portable Equipment Use at Solids	9901	Diesel particulate matter (DPM)	6.37E-04	4.47E+00
	50000	Formaldehyde	1.25E-04	8.79E-01
	67561	Methanol	2.81E-05	1.97E-01
	71432	Benzene	1.38E-04	9.69E-01
	75070	Acetaldehyde	3.02E-05	2.11E-01
	78933	Methyl ethyl ketone {2-Butanone}	2.41E-06	1.69E-02
	91203	Naphthalene	5.23E-06	3.66E-02
	95476	o-Xylene	6.23E-05	4.37E-01
	95636	1,2,4-Trimethylbenzene	5.07E-05	3.55E-01
	100414	Ethyl benzene	6.03E-05	4.23E-01
	100425	Styrene	5.23E-06	3.66E-02
	106990	1,3-Butadiene	3.34E-05	2.34E-01

Table A-3. TAC Emissions Summary - Scenario 2
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Portable Equipment Use at Solids *(Cont'd)*	107028	Acrolein	7.24E-06	5.07E-02
	108383	m-Xylene	1.79E-04	1.25E+00
	108883	Toluene	2.73E-04	1.91E+00
	110543	Hexane	5.27E-05	3.69E-01
	1634044	Methyl tert-butyl ether	7.48E-05	5.24E-01
	7439965	Manganese	1.20E-07	8.40E-04
	7440020	Nickel	1.20E-07	8.40E-04
	7440508	Copper	1.20E-07	8.40E-04
	7782505	Chlorine	1.65E-05	1.16E-01
South Solids Biofilter	56235	Carbon tetrachloride	1.43E-04	1.25E+00
	67663	Chloroform	2.21E-04	1.94E+00
	75092	Methylene chloride {Dichloromethane}	1.73E-02	1.52E+02
	79016	Trichloroethylene	1.22E-04	1.07E+00
	127184	Perchloroethylene {Tetrachloroethene}	1.54E-04	1.35E+00
	7664417	Ammonia	3.48E-02	3.04E+02
East Solids Biofilter	56235	Carbon tetrachloride	1.80E-04	1.57E+00
	67663	Chloroform	1.40E-04	1.22E+00
	75092	Methylene chloride {Dichloromethane}	2.18E-02	1.91E+02
	79016	Trichloroethylene	1.54E-04	1.35E+00
	7664417	Ammonia	7.17E-02	6.28E+02
Reactor E Clarifiers + Weir	67663	Chloroform	2.33E-03	1.63E+01
	75092	Methylene chloride {Dichloromethane}	2.48E-03	1.74E+01
	108883	Toluene	1.22E-03	8.56E+00
Reactor F Clarifiers + Weir	67663	Chloroform	2.33E-03	1.63E+01
	75092	Methylene chloride {Dichloromethane}	2.48E-03	1.74E+01
	108883	Toluene	1.22E-03	8.56E+00
Reactor G Clarifiers + Weir	67663	Chloroform	2.07E-04	1.45E+00
	75092	Methylene chloride {Dichloromethane}	2.20E-04	1.54E+00
	108883	Toluene	1.09E-04	7.61E-01
MLCC for Clarifier Banks E and F	67663	Chloroform	5.01E-04	3.51E+00
	75092	Methylene chloride {Dichloromethane}	1.77E-04	1.24E+00
	108883	Toluene	2.43E-05	1.70E-01
	127184	Perchloroethylene {Tetrachloroethene}	5.22E-05	3.66E-01
MLCC for Clarifier Banks G and H	67663	Chloroform	2.23E-05	1.56E-01
	75092	Methylene chloride {Dichloromethane}	7.87E-06	5.51E-02
	108883	Toluene	1.08E-06	7.57E-03
	127184	Perchloroethylene {Tetrachloroethene}	2.32E-06	1.62E-02
Gasoline Storage and Dispensing	71432	Benzene	1.44E-05	1.01E-01
	91203	Naphthalene	1.27E-08	8.88E-05
	100414	Ethyl benzene	3.39E-06	2.37E-02
Scrubber P16C	56235	Carbon tetrachloride	3.04E-06	3.68E-03
	67663	Chloroform	1.18E-06	1.43E-03
	100414	Ethyl benzene	2.10E-06	2.54E-03
	108883	Toluene	9.11E-06	1.10E-02
	1330207	Xylenes (mixed)	8.39E-06	1.02E-02
PEPS Inside Standby Generator	9901	Diesel particulate matter (DPM)	1.93E-04	1.35E+00
Portable Generator (Asset 8216)	9901	Diesel particulate matter (DPM)	6.98E-04	4.89E+00
Reactor E Stage 3 Vent	67663	Chloroform	6.47E-04	4.53E+00
	75092	Methylene chloride {Dichloromethane}	1.41E-04	9.90E-01
	108883	Toluene	5.01E-06	3.51E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.17E-04	8.17E-01
Reactor F Stage 3 Vent	67663	Chloroform	6.47E-04	4.53E+00
	75092	Methylene chloride {Dichloromethane}	1.41E-04	9.90E-01
	108883	Toluene	5.01E-06	3.51E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.17E-04	8.17E-01
Reactor G Stage 3 Vent	67663	Chloroform	5.75E-05	4.03E-01
	75092	Methylene chloride {Dichloromethane}	1.26E-05	8.80E-02
	108883	Toluene	4.46E-07	3.12E-03
	127184	Perchloroethylene {Tetrachloroethene}	1.04E-05	7.26E-02
PWSC Demonstration Plant	67561	Methanol	7.49E-06	6.56E-02
	67630	Isopropyl alcohol	6.35E-05	5.56E-01
	67641	Acetone	8.46E-05	7.41E-01
	67663	Chloroform	7.86E-04	6.88E+00
	71432	Benzene	1.09E-04	9.54E-01
	74873	Methyl chloride {Chloromethane}	6.83E-05	5.99E-01
	75003	Ethyl chloride {Chlorethane}	4.71E-05	4.12E-01
	75092	Methylene chloride {Dichloromethane}	9.75E-05	8.54E-01
	75150	Carbon disulfide	7.22E-05	6.32E-01
	75274	Bromodichloromethane	4.96E-05	4.35E-01
	75343	1,1-Dichloroethane	6.29E-06	5.51E-02
	75718	Dichlorodifluoromethane {Freon 12}	1.85E-05	1.62E-01
	78875	1,2-Dichloropropane	3.29E-06	2.89E-02
	78933	Methyl ethyl ketone {2-Butanone}	3.23E-06	2.83E-02
	95476	o-Xylene	5.06E-05	4.43E-01
	95636	1,2,4-Trimethylbenzene	4.00E-05	3.51E-01
	100414	Ethyl benzene	3.15E-05	2.76E-01
	100425	Styrene	5.63E-06	4.94E-02
	106423	p-Xylene	1.24E-04	1.09E+00
	106467	p-Dichlorobenzene	1.66E-05	1.46E-01
	108054	Vinyl acetate	2.23E-05	1.95E-01
	108383	m-Xylene	1.24E-04	1.09E+00
	108678	1,3,5-Trimethylbenzene	8.55E-06	7.49E-02

Table A-3. TAC Emissions Summary - Scenario 2
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
	108883	Toluene	2.02E-04	1.77E+00

Table A-3. TAC Emissions Summary - Scenario 2
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
PWSC Demonstration Plant (Cont'd)	110543	Hexane	2.46E-05	2.15E-01
	123911	1,4-Dioxane	6.54E-06	5.73E-02
	124481	Chlorodibromomethane	1.92E-06	1.68E-02
	127184	Perchloroethylene {Tetrachloroethene}	1.92E-05	1.68E-01
	1634044	Methyl tert-butyl ether	4.70E-05	4.12E-01
	7664417	Ammonia	3.02E-04	2.65E+00
PWSC Bioreactor #1	67663	Chloroform	9.25E-02	8.10E+02
	71432	Benzene	1.28E-02	1.12E+02
	75092	Methylene chloride {Dichloromethane}	1.15E-02	1.00E+02
	75343	1,1-Dichloroethane	5.82E-04	5.10E+00
	100414	Ethyl benzene	3.19E-03	2.80E+01
	100425	Styrene	3.19E-03	2.80E+01
	106467	p-Dichlorobenzene	1.82E-03	1.59E+01
	108883	Toluene	2.36E-02	2.07E+02
	127184	Perchloroethylene {Tetrachloroethene}	2.14E-03	1.88E+01
	1634044	Methyl tert-butyl ether	5.30E-03	4.64E+01
PWSC Bioreactor #2	67663	Chloroform	9.25E-02	8.10E+02
	71432	Benzene	1.28E-02	1.12E+02
	75092	Methylene chloride {Dichloromethane}	1.15E-02	1.00E+02
	75343	1,1-Dichloroethane	5.82E-04	5.10E+00
	100414	Ethyl benzene	3.19E-03	2.80E+01
	100425	Styrene	3.19E-03	2.80E+01
	106467	p-Dichlorobenzene	1.82E-03	1.59E+01
	108883	Toluene	2.36E-02	2.07E+02
	127184	Perchloroethylene {Tetrachloroethene}	2.14E-03	1.88E+01
	1634044	Methyl tert-butyl ether	5.30E-03	4.64E+01
PWSC Bioreactor #3	67663	Chloroform	9.25E-02	8.10E+02
	71432	Benzene	1.28E-02	1.12E+02
	75092	Methylene chloride {Dichloromethane}	1.15E-02	1.00E+02
	75343	1,1-Dichloroethane	5.82E-04	5.10E+00
	100414	Ethyl benzene	3.19E-03	2.80E+01
	100425	Styrene	3.19E-03	2.80E+01
	106467	p-Dichlorobenzene	1.82E-03	1.59E+01
	108883	Toluene	2.36E-02	2.07E+02
	127184	Perchloroethylene {Tetrachloroethene}	2.14E-03	1.88E+01
	1634044	Methyl tert-butyl ether	5.30E-03	4.64E+01
PWSC Backup Generator #1	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #2	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #3	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #4	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #5	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #6	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #7	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #8	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
MWD Centrate Treatment	71432	Benzene	5.98E-04	5.24E+00
	75058	Acetonitrile	1.19E-01	1.04E+03
	95476	o-Xylene	3.89E-03	3.40E+01
	100414	Ethyl benzene	3.29E-03	2.88E+01
	108883	Toluene	4.03E-03	3.53E+01
	1330207	Xylenes (mixed)	6.28E-03	5.50E+01
Mobile Travel and Idle Emissions	9901	Diesel particulate matter (DPM)	5.18E-05	1.37E-01

Table A-4. TAC Emissions Summary - Scenario 3
Pure Water Southern California
Carson, California

Emission Units	Pollutant ID	Pollutant Name	Maximum Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
PWSC Bioreactor #1	67663	Chloroform	2.15E-02	1.88E+02
	71432	Benzene	2.93E-05	2.56E-01
	75092	Methylene chloride {Dichloromethane}	2.68E-03	2.34E+01
	75343	1,1-Dichloroethane	4.93E-05	4.31E-01
	75694	Trichlorofluoromethane {Freon 11}	6.90E-05	6.04E-01
	107062	Ethylene dichloride {EDC}	3.70E-05	3.24E-01
	108883	Toluene	1.64E-04	1.43E+00
	127184	Perchloroethylene {Tetrachloroethene}	3.95E-04	3.46E+00
	1634044	Methyl tert-butyl ether	2.45E-03	2.14E+01
PWSC Bioreactor #2	67663	Chloroform	2.15E-02	1.88E+02
	71432	Benzene	2.93E-05	2.56E-01
	75092	Methylene chloride {Dichloromethane}	2.68E-03	2.34E+01
	75343	1,1-Dichloroethane	4.93E-05	4.31E-01
	75694	Trichlorofluoromethane {Freon 11}	6.90E-05	6.04E-01
	107062	Ethylene dichloride {EDC}	3.70E-05	3.24E-01
	108883	Toluene	1.64E-04	1.43E+00
	127184	Perchloroethylene {Tetrachloroethene}	3.95E-04	3.46E+00
	1634044	Methyl tert-butyl ether	2.45E-03	2.14E+01
PWSC Bioreactor #3	67663	Chloroform	2.15E-02	1.88E+02
	71432	Benzene	2.93E-05	2.56E-01
	75092	Methylene chloride {Dichloromethane}	2.68E-03	2.34E+01
	75343	1,1-Dichloroethane	4.93E-05	4.31E-01
	75694	Trichlorofluoromethane {Freon 11}	6.90E-05	6.04E-01
	107062	Ethylene dichloride {EDC}	3.70E-05	3.24E-01
	108883	Toluene	1.64E-04	1.43E+00
	127184	Perchloroethylene {Tetrachloroethene}	3.95E-04	3.46E+00
	1634044	Methyl tert-butyl ether	2.45E-03	2.14E+01
PWSC Backup Generator #1	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #2	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #3	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #4	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #5	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #6	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #7	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
PWSC Backup Generator #8	9901	Diesel particulate matter (DPM)	2.08E-01	1.08E+01
MWD Centrate Treatment	71432	Benzene	5.98E-04	5.24E+00
	75058	Acetonitrile	1.19E-01	1.04E+03
	95476	o-Xylene	3.89E-03	3.40E+01
	100414	Ethyl benzene	3.29E-03	2.88E+01
	108883	Toluene	4.03E-03	3.53E+01
	1330207	Xylenes (mixed)	6.28E-03	5.50E+01
Mobile Travel and Idle Emissions	9901	Diesel particulate matter (DPM)	5.18E-05	1.37E-01

APPENDIX B
AERMOD AND HARP FILES
(PROVIDED ELECTRONICALLY)