Appendix B

Air Quality and Greenhouse Gas Technical Report

NCE has made every effort to provide this report and all associated information in an accessible format. If you need the appendices in an alternative format please contact Jeffrey Esquivel, (916) 341-6337, mailto:permittrainingassistance@calrecycle.ca.gov.

Air Quality and GHG Technical Report for Small/Medium Composting Project Permitting

California Department of Resources Recycling and Recovery

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August 2026

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ATTACHMENT 2 – MOBILE AND STATIONARY SOURCES OPERATIONAL EMISSIONS

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List of Acronyms and Abbreviations

$\mu g/m^3$	Micrograms per cubic meter
AB	Assembly Bill
APR	Ambient Air Quality Project Risk
AQIA	Air Quality Impact Assessment
AQMP	Air Quality Management Plan
ASP	Aerated Static Pile
BAAQMD	Bay Area Air District (formally known as the Bay Area Air Quality Management District)
BACT	Best Available Control Technology
BMP	Best Management Practice
BPS	Best Performance Standards
CAA	Clean Air Act
CAAA	Clean Air Act Amendment
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model®
CAPCOA	California Air Pollution Control Officers Association
CASP	Covered Aerated Static Pile
CEQA	California Environmental Quality Act
CERF	Compost Emission Reduction Factor
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalents
cy	Cubic Yards
DPM	Diesel Particulate Matter
E	Extreme
GAMAQI	Guidance for Assessing and Mitigating Air Quality Impacts
GHG	Greenhouse Gas
GWP	Global Warming Potential
HRA	Health Risk Assessment
lb	Pound
IPCC	Intergovernmental Panel on Climate Change
LEA	Local Enforcement Agency
LOS	Level of Service
LST	Localized Significance Threshold
LTS	Less Than Significant
MT/yr	Metric Ton per Year
MT CO_2e	Metric Tons of Carbon Dioxide Equivalent
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NF_3	Nitrogen Trifluoride

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NH_3	Ammonia
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
NSR	New Source Review
O_3	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
OIMP	Odor Impact Minimization Plan
PM	Particulate Matter
PM_{10}	Respirable Particulate Matter (Less Than 10 Microns in Size)
$PM_{2.5}$	Fine Particulate Matter (Less Than 2.5 Microns in Size)
POC	Precursor Organic Compound
ppm	Parts per million
PS	Potentially Significant
PTE	Potential to Emit
R	Refrigerants
RAQS	Regional Air Quality Strategy
ROG	Reactive Organic Gas
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SDAPCD	San Diego County Air Pollution Control District
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLCP	Short-Lived Climate Pollutant
SLT	Screening-Level Thresholds
SO_2	Sulfur Dioxide
SO_x	Sulfur Oxides
SRA	Source Receptor Area
TAC	Toxic Air Contaminant
TPM	Total Particulate Matter
TPY	Tons per Year
S	Severe
U	Unclassified
U.S. EPA	United States Environmental Protection Agency
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound

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Air Quality and GHG Technical Report for Small/Medium Composting Project Permitting

1.0 PROJECT OVERVIEW

The California Department of Resources Recycling and Recovery (CalRecycle) is preparing a Program Environmental Impact Report (PEIR) for a Statewide program intended to facilitate the permitting and development of small and medium compostable material handling facilities and operations pursuant to Senate Bill (SB) 1046. The program is designed to support implementation of SB 1383 by increasing California's capacity to process organic waste diverted from landfills through the development of additional composting facilities throughout the State.

Implementation of the program would result in the construction and operation of new small and medium composting facilities that process agricultural, food waste, and green waste materials. Operation of these facilities would generate emissions of criteria air pollutants, toxic air contaminants (TACs), and greenhouse gases (GHGs) from on-road vehicles, off-road equipment, and composting activities. This technical report provides the air quality and GHG impact analyses prepared for the PEIR. Emission estimates were developed for representative facility scenarios within four California air districts.

1.1 Project Location

The program area encompasses the entire State of California. The program is intended to facilitate the development and operation of new small and medium compostable material handling facilities and operations; however, specific facility locations have not been identified. Because future facility sites are unknown, potential air quality and GHG impacts were evaluated using representative facility scenarios developed for four regions of California, defined by the jurisdictional boundaries of the following air districts: the Bay Area Air District, San Joaquin Valley Air Pollution Control District (SJVAPCD), South Coast Air Quality Management District (SCAQMD), and San Diego County Air Pollution Control District (SDAPCD).

1.2 Facility Operations and Project Description

The Statewide program would facilitate the development and operation of small and medium compostable material handling facilities that process agricultural wastes, food waste, green waste, and other organic materials. 'Other organic materials' could include biosolids, digestate, or manure. These materials generally have a higher nitrogen concentration relative to green waste and can be used to improve the carbon to nitrogen ratio when blended with low-nitrogen feedstocks. Co-composting with biosolids, digestate, or manure is thought to lead to lower VOC emissions due to the improved nutrient ratio. For the purpose of this analysis, in order to be conservative (i.e., to ensure that emissions are not underestimated), the higher green waste emission factors are used to predict composting emissions rather than the lower co-composting emission factors.

As defined by SB 1046, small facilities, which are anticipated to occupy approximately 5 acres, would process up to 10,000 tons per year (TPY) of material with an on-site capacity of up to 5,000 cubic yards (cy). Medium facilities, which are anticipated to occupy approximately 11 acres, would process up to 25,000 TPY of material with an on-site capacity of up to 12,500 cy.

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Composting operations typically involve feedstock receiving and preparation, active composting, curing, screening, and product export. Incoming feedstocks may be ground, shredded, and sorted to remove contaminants before being placed into windrows, positively covered aerated static piles (CASPs), or negatively aerated static pile (ASP) systems for active composting. Following the active composting phase, material would be cured, screened to remove oversized materials and contaminants, and transported off-site for use as a soil amendment in agricultural, landscaping, and horticultural applications. Equipment commonly used during operations includes loaders, grinders, screeners, water trucks, and haul trucks.

1.3 Analysis Scenarios

1.3.1 Construction

Because the Statewide program does not identify specific facility locations or site designs, the construction analysis was based on representative facility scenarios. The scenarios were developed to capture the range of site development activities anticipated under the program.

Two construction scenarios were evaluated within each of the four air districts included in the analysis, representing development of small and medium composting facilities. The small facility scenarios assume development of 5-acre sites, while the medium facility scenarios assume development of 11-acre sites. For all scenarios, 25% of the site area was assumed to be paved. The scenarios and associated construction assumptions are included in Attachment 1.

1.3.2 Operations

Because the Statewide program does not identify specific facility locations or operational designs, the analyses were based on a series of representative composting facility scenarios. The scenarios were developed to capture the range of facility sizes, feedstocks, and composting technologies anticipated under the program.

Six scenarios were evaluated, representing small and medium composting facilities utilizing windrow, positive CASP, and negative ASP systems. Small facilities were assumed to have an on-site capacity of up to 5,000 cy and process up to 10,000 TPY of green waste, including food waste. Medium facilities were assumed to have an on-site capacity of up to 12,500 cy and process up to 25,000 TPY of green waste and food waste. The scenarios and associated operating assumptions are included in Attachment 2. Simplified descriptions of the scenarios are listed in Table 1-1.

Table 1-1: Representative Composting Facility Scenarios

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Facility Type	Small	Small	Small	Medium	Medium	Medium
Composting Technology	Windrows	Positive CASP	Negative ASP with Filter	Windrows	Positive CASP	Negative ASP with Filter
Throughput	10,000 TPY	10,000 TPY	10,000 TPY	25,000 TPY	25,000 TPY	25,000 TPY

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2.0 EMISSIONS

2.1 Construction

A project's construction phase produces many types of emissions, generally particulate matter less than 10 microns in size (PM_{10}), including particulate matter less than 2.5 microns in size ($PM_{2.5}$), in fugitive dust and diesel engine exhaust. Construction-related emissions can cause substantial increases in localized concentrations of PM_{10}, as well as affecting PM_{10} compliance with ambient air quality standards on a regional basis. Diesel-fueled construction equipment emits ozone (O_3) precursors nitrogen oxides (NO_x) and reactive organic gases (ROGs)[1], and diesel particulate matter (DPM). Use of architectural coatings and other materials associated with finishing buildings may also emit ROGs and TACs.

Construction emissions were evaluated for: 1) a small composting facility on a 5-acre site; and 2) a medium composting facility on an 11-acre site. It was assumed that 25% of the site would be developed with paved surfaces for both facility options.

Construction-related emissions were estimated using the California Emissions Estimator Model® (CalEEMod) Version 2022.1.1.45, the official Statewide land use computer model designed to provide a uniform platform for estimating potential criteria pollutant and GHG emissions associated with construction of land use projects. Attachment 1 provides additional detail on CalEEMod inputs, assumptions, and results.

Because construction-related criteria pollutant emissions were generally consistent across the four air districts evaluated[2], the maximum daily and annual construction emissions for each representative facility scenario are summarized in Table 2-1. Maximum construction GHG emissions, including total and amortized annual emissions, are summarized in Table 2-2. Because construction emissions occur over a finite construction period (less than a year) while operational emissions occur annually, construction GHG emissions are typically amortized over the anticipated project operational life and incorporated into annual GHG emissions for significance evaluation.

[1] ROG, volatile organic compounds (VOCs), and precursor organic compounds (POCs) all refer to photochemically ROGs and can be used interchangeably. For this report, VOC will generally be used to report emissions. POC and ROG will be used when the source document (study, report, software program, etc.) uses that nomenclature to avoid mis-representing the data. For example, CalEEMod is used for construction emission estimates; CalEEMod uses ROG in its documentation, so this report uses ROG in the construction emission discussion.

[2] The small and medium facility construction plans were identical for the four air districts. The predicted emissions varied because the criteria pollutant emission factors for the on-road and off-road vehicle fleets in the four jurisdictions vary due to differences in fleet composition and age. Overall, the emission totals for the four air districts varied by less than 2%. The maximum emissions are presented.

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Table 2-1: Construction Criteria Pollutants Emissions Summary

Pollutant	Small Facilities			Medium Facilities		
	Average Daily Emissions	Maximum Daily Emissions	Annual Emissions	Average Daily Emissions	Maximum Daily Emissions	Annual Emissions
	(lb/day)	(lb/day)	(TPY)	(lb/day)	(lb/day)	(TPY)
VOC	4.9	60.9	0.9	4.9	61.0	0.9
NO_x	6.2	28.1	1.1	6.5	28.1	1.2
CO	8.4	29.2	1.5	8.7	29.2	1.6
SO_x	0.01	0.05	0.003	0.02	0.06	0.003
PM_{10} (Exhaust)	0.2	1.2	0.04	0.2	1.2	0.04
Total PM_{10}	0.4	9.1	0.1	0.5	9.1	0.1
$PM_{2.5}$ (Exhaust)	0.2	1.1	0.04	0.2	1.1	0.04
Total $PM_{2.5}$	0.3	5.1	0.1	0.3	5.1	0.1

Source: CalEEMod Version 2022.1.1.45.

Note: Consistent with Bay Area Air District California Environmental Quality Act (CEQA) significance thresholds, exhaust PM_{10} and $PM_{2.5}$ emissions are presented separately because the applicable thresholds apply to exhaust particulate matter (PM) rather than total particulate matter (TPM) emissions. In addition, average daily emissions are presented because Bay Area Air District thresholds are based on average daily emissions rather than peak (maximum) daily emissions.

Table 2-2: Construction GHG Emissions Summary for Representative Facilities

GHG	Emissions ($MT CO_2e$)	
	Small Facilities	Medium Facilities
CO_2	256	271
CH_4	<1	<1
N_2O	<1	<1
R	<1	<1
Total CO_2e	257	272
Amortized CO_2e (30 Years)	9	9

Source: CalEEMod Version 2022.1.1.45.

Note: Construction-related GHG emissions were amortized over a 30-year operational life and incorporated into annual operational GHG emissions, consistent with applicable air district guidance (SCAQMD 2008a).

2.2 Operations

2.2.1 Overview

Operation of compost facilities would produce emissions of air pollutants from fuel combustion in stationary and mobile sources, decomposition of organic materials, and use of processing equipment. Emissions estimates were prepared for the mobile and stationary

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emission sources required to operate the six representative composting facility scenarios described in Section 1.3.2. Emissions estimates have been prepared for the following stationary source categories:

- Grinding and Screening Dust/Particulate Emissions;
- Material Handling Dust/Particulate Emissions;
- Wind Erosion Dust/Particulate Emissions;
- Feedstock Storage VOC Emissions;
- Composting VOC Emissions;
- Curing VOC Emissions;
- Finished Compost Storage VOC Emissions;
- Stationary diesel engine exhaust criteria pollutant emissions for grinders, screens, stackers, colorizers, and emergency engines;
- Feedstock storage, composting, curing, and finished compost storage organic TAC and ammonia (NH_3) emissions;
- Grinding, screening, material handling, and wind erosion Dust and Particulate TAC Emissions; and
- Stationary diesel engine exhaust DPM emissions.

And the following mobile source categories:

- Vehicle and Equipment Exhaust Emissions:
  - On-Road Vehicle Exhaust Emissions, and
  - Off-Road Equipment Exhaust Emissions;
- Fugitive Dust from Travel on Paved Roads;
- Fugitive Dust from Travel on Unpaved Roads;
- TAC Emissions:
  - Vehicle and Equipment Exhaust TAC Emissions:
    - Diesel Exhaust Emissions (i.e., DPM); and
    - Gasoline Exhaust Emissions;
  - Paved Road Dust TAC Emissions; and
  - Unpaved Road Dust TAC Emissions.

For each category of emissions, emission calculation worksheets for the proposed Project the calculation methodologies are explained and the data and assumptions used in the calculations are provided in Attachment 2.

Baseline operations for all scenarios assume that the feedstock would be sent to a landfill. Because the Statewide program does not identify specific facility locations, detailed comparisons to baseline operations must be largely undefined. The California Air

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Resources Board (CARB) and CalRecycle anticipate that emissions of VOCs, NO_x, PM_{10}, and $PM_{2.5}$ from processing compost feedstock would be lower at a composting facility relative to processing at a landfill. CARB and CalRecycle have produced general estimates for the level of GHG reductions that would be achieved through the redirection of 1 ton of organic material from a landfill to an anaerobic digester, composting facility, or other organic waste recovery facility. The Compost Emission Reduction Factor (CERF) model accounts for emissions increases associated with increased truck transport of organic wastes and energy requirements of facilities, as well as emissions reductions from the avoidance of methane (CH_4) emissions, decreased soil erosion and increased carbon sequestration potential, reduced synthetic fertilizer use, and reduced herbicide use (CalRecycle 2019: pg. 3.8-17).

For this analysis, it was assumed that criteria pollutant and TAC emissions at the compost facility would be new emissions, and landfill emissions of these pollutants are not estimated. As a practical matter, the criteria pollutant and TAC emissions have localized impacts, thus emissions of these pollutants from a remote landfill would not factor into the analyses of impacts at the composting sites.

For feedstock truck trips, there are three possibilities: 1) the distance to a new composting facility is shorter than the distance to a landfill; 2) the distance is the same as the distance to a landfill; and 3) the distance to a new composting facility is greater than the distance to a landfill. In the first two possibilities, emissions from truck travel would decrease or be unchanged. To ensure that project emissions are not underestimated, only the third possibility was included in emission calculations; feedstock truck trip distance to a landfill was subtracted from the truck trip distance to a composting facility. This difference from baseline is incorporated into the project emissions by using the difference in distance in the calculations; the baseline emissions from feedstock trucks are not presented separately.

It is likely that composting facilities will be located closer to feedstock sources than landfills because the largest feedstock sources (i.e., agriculture facilities) are also often the largest users of finished compost, which provides additional incentive to locate composting facilities close to the feedstock sources.

GHG emissions were assumed to decrease on a per-ton basis per CARB (CARB 2017). This document compares non-biogenic carbon dioxide (CO_2) emissions at landfills relative to composting facilities.

Projects in nonattainment areas subject to New Source Review (NSR) must have emissions offset. Projects with emissions that are greater than local air district offsets thresholds must purchase offsets to apply an emission reduction to the project such that the NSR emission increase in the air basin is zero. Offsets obtained for a project are accounted for as emissions reductions in this analysis. The offset thresholds for the Bay Area Air District, SJVAPCD, SCAQMD, and SDAPCD are summarized in Table 2-3.

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Table 2-3: Summary of Air District Offset Thresholds

Air District	NO_x (TPY)	VOC (TPY)	CO (TPY)	SO_x (TPY)	PM_{10} (TPY)	$PM_{2.5}$ (TPY)
Bay Area Air District[1]	10	10	N/A	100	100	100
SJVAPCD	10	10	100	27.3	14.6	70
SCAQMD[2]	4	4	29	4	4	10
SDAPCD	25	25	N/A	N/A	N/A	N/A

[1]Bay Area Air District NO_x and VOC offset purchases are not needed until the Potential to Emit (PTE) is greater than 35 TPY; however, offsets are still provided by the Bay Area Air District's Small Facility Bank for projects with PTE between 10-35 TPY.

[2]Windrows are not subject to permit requirements in the SCAQMD; thus, a project would not be subject to permitting or NSR requirements in the SCAQMD and would not be required to provide offsets.

2.2.2 Operational Emissions Summary

Tables 2-4 through 2-15 summarize the daily and annual operational criteria pollutant emissions associated with the six project scenarios. Table 2-16 summarizes the net GHG operational emissions associated with the six operating scenarios. Each table lists stationary source emissions, mobile source emissions, offset requirement (if any), baseline emissions, and net emission increase for each air district. Detailed project emission calculations, including TAC emissions, are presented in Attachment 2.

Table 2-4: Summary of Daily Project and Baseline Operational Criteria Pollutants Emissions for Scenario 1: Small Facility, Windrows

Pollutant	NO_x (lb/day)	VOC (lb/day)	CO (lb/day)	SO_x (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Stationary Source Emissions	4.84	111.10	13.66	0.02	0.87	0.43
Offsets – Bay Area Air District	0.00	-111.10	0.00	0.00	0.00	0.00
Offsets – SJVAPCD	0.00	-111.10	0.00	0.00	0.00	0.00
Offsets – SCAQMD	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SDAPCD	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Source Emissions	3.19	1.43	19.51	0.03	8.07	0.93
Baseline Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Net Increase – Bay Area Air District	8.03	1.43	33.17	0.05	8.95	1.35
Net Increase – SJVAPCD	8.03	1.43	33.17	0.05	8.95	1.35
Net Increase – SCAQMD	8.03	112.53	33.17	0.05	8.95	1.35
Net Increase – SDAPCD	8.03	112.53	33.17	0.05	8.95	1.35

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Table 2-5: Summary of Annual Project and Baseline Operational Criteria Pollutants Emissions for Scenario 1: Small Facility, Windrows

Pollutant	NO_x (TPY)	VOC (TPY)	CO (TPY)	SO_x (TPY)	PM_{10} (TPY)	$PM_{2.5}$ (TPY)
Stationary Source Emissions	0.31	20.07	1.67	0.00	0.12	0.05
Offsets – Bay Area Air District	0.00	-20.07	0.00	0.00	0.00	0.00
Offsets – SJVAPCD	0.00	-20.07	0.00	0.00	0.00	0.00
Offsets – SCAQMD	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SDAPCD	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Source Emissions	0.50	0.22	3.04	0.01	1.26	0.14
Baseline Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Net Increase – Bay Area Air District	0.81	0.22	4.71	0.01	1.38	0.19
Net Increase – SJVAPCD	0.81	0.22	4.71	0.01	1.38	0.19
Net Increase – SCAQMD	0.81	20.30	4.71	0.01	1.38	0.19
Net Increase – SDAPCD	0.81	20.30	4.71	0.01	1.38	0.19

Table 2-6: Summary of Daily Project and Baseline Operational Criteria Pollutants Emissions for Scenario 2: Small Facility, CASP

Pollutant	NO_x (lb/day)	VOC (lb/day)	CO (lb/day)	SO_x (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Stationary Source Emissions	4.84	32.64	13.66	0.02	0.87	0.43
Offsets – Bay Area Air District	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SJVAPCD	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SCAQMD	0.00	-32.64	0.00	0.00	0.00	0.00
Offsets – SDAPCD	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Source Emissions	2.91	1.30	17.10	0.03	7.43	0.86
Baseline Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Net Increase – Bay Area Air District	7.75	33.93	30.76	0.05	8.30	1.28
Net Increase – SJVAPCD	7.75	33.93	30.76	0.05	8.30	1.28
Net Increase – SCAQMD	7.75	1.30	30.76	0.05	8.30	1.28
Net Increase – SDAPCD	7.75	33.93	30.76	0.05	8.30	1.28

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Table 2-7: Summary of Annual Project and Baseline Operational Criteria Pollutants Emissions for Scenario 2: Small Facility, CASP

Pollutant	NO_x (TPY)	VOC (TPY)	CO (TPY)	SO_x (TPY)	PM_{10} (TPY)	$PM_{2.5}$ (TPY)
Stationary Source Emissions	0.31	5.75	1.67	0.00	0.12	0.05
Offsets – Bay Area Air District	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SJVAPCD	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SCAQMD	0.00	-5.75	0.00	0.00	0.00	0.00
Offsets – SDAPCD	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Source Emissions	0.45	0.20	2.67	0.00	1.16	0.13
Baseline Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Net Increase – Bay Area Air District	0.77	5.96	4.34	0.01	1.28	0.18
Net Increase – SJVAPCD	0.77	5.96	4.34	0.01	1.28	0.18
Net Increase – SCAQMD	0.77	0.20	4.34	0.01	1.28	0.18
Net Increase – SDAPCD	0.77	5.96	4.34	0.01	1.28	0.18

Table 2-8: Summary of Daily Project and Baseline Operational Criteria Pollutants Emissions for Scenario 3: Small Facility, Negative ASP with Filter

Pollutant	NO_x (lb/day)	VOC (lb/day)	CO (lb/day)	SO_x (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Stationary Source Emissions	4.84	22.83	13.66	0.02	0.87	0.43
Offsets – Bay Area Air District	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SJVAPCD	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SCAQMD	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SDAPCD	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Source Emissions	2.91	1.30	17.10	0.03	7.43	0.86
Baseline Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Net Increase – Bay Area Air District	7.75	24.12	30.76	0.05	8.30	1.28
Net Increase – SJVAPCD	7.75	24.12	30.76	0.05	8.30	1.28
Net Increase – SCAQMD	7.75	24.12	30.76	0.05	8.30	1.28
Net Increase – SDAPCD	7.75	24.12	30.76	0.05	8.30	1.28

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Table 2-9: Summary of Annual Project and Baseline Operational Criteria Pollutants Emissions for Scenario 3: Small Facility, Negative ASP with Filter

Pollutant	NO_x (TPY)	VOC (TPY)	CO (TPY)	SO_x (TPY)	PM_{10} (TPY)	$PM_{2.5}$ (TPY)
Stationary Source Emissions	0.31	3.96	1.67	0.00	0.12	0.05
Offsets – Bay Area Air District	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SJVAPCD	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SCAQMD	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SDAPCD	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Source Emissions	0.45	0.20	2.67	0.00	1.16	0.13
Baseline Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Net Increase – Bay Area Air District	0.77	4.17	4.34	0.01	1.28	0.18
Net Increase – SJVAPCD	0.77	4.17	4.34	0.01	1.28	0.18
Net Increase – SCAQMD	0.77	4.17	4.34	0.01	1.28	0.18
Net Increase – SDAPCD	0.77	4.17	4.34	0.01	1.28	0.18

Table 2-10: Summary of Daily Project and Baseline Operational Criteria Pollutants Emissions for Scenario 4: Medium Facility, Windrows

Pollutant	NO_x (lb/day)	VOC (lb/day)	CO (lb/day)	SO_x (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Stationary Source Emissions	6.36	275.62	35.35	0.05	1.77	0.71
Offsets – Bay Area Air District	0.00	-275.62	0.00	0.00	0.00	0.00
Offsets – SJVAPCD	0.00	-275.62	0.00	0.00	0.00	0.00
Offsets – SCAQMD	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SDAPCD	0.00	-275.62	0.00	0.00	0.00	0.00
Mobile Source Emissions	8.24	3.30	50.74	0.09	20.85	2.38
Baseline Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Net Increase – Bay Area Air District	14.60	3.30	86.09	0.14	22.62	3.09
Net Increase – SJVAPCD	14.60	3.30	86.09	0.14	22.62	3.09
Net Increase – SCAQMD	14.60	278.91	86.09	0.14	22.62	3.09
Net Increase – SDAPCD	14.60	3.30	86.09	0.14	22.62	3.09

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Table 2-11: Summary of Annual Project and Baseline Operational Criteria Pollutants Emissions for Scenario 4: Medium Facility, Windrows

Pollutant	NO_x (TPY)	VOC (TPY)	CO (TPY)	SO_x (TPY)	PM_{10} (TPY)	$PM_{2.5}$ (TPY)
Stationary Source Emissions	0.55	50.09	5.05	0.01	0.27	0.10
Offsets – Bay Area Air District	0.00	-50.09	0.00	0.00	0.00	0.00
Offsets – SJVAPCD	0.00	-50.09	0.00	0.00	0.00	0.00
Offsets – SCAQMD	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SDAPCD	0.00	-50.09	0.00	0.00	0.00	0.00
Mobile Source Emissions	1.28	0.51	7.92	0.01	3.25	0.37
Baseline Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Net Increase – Bay Area Air District	1.83	0.51	12.97	0.02	3.53	0.47
Net Increase – SJVAPCD	1.83	0.51	12.97	0.02	3.53	0.47
Net Increase – SCAQMD	1.83	50.60	12.97	0.02	3.53	0.47
Net Increase – SDAPCD	1.83	0.51	12.97	0.02	3.53	0.47

Table 2-12: Summary of Daily Project and Baseline Operational Criteria Pollutants Emissions for Scenario 5: Medium Facility, CASP

Pollutant	NO_x (lb/day)	VOC (lb/day)	CO (lb/day)	SO_x (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Stationary Source Emissions	6.36	79.45	35.35	0.05	1.77	0.71
Offsets – Bay Area Air District	0.00	-79.45	0.00	0.00	0.00	0.00
Offsets – SJVAPCD	0.00	-79.45	0.00	0.00	0.00	0.00
Offsets – SCAQMD	0.00	-79.45	0.00	0.00	0.00	0.00
Offsets – SDAPCD	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Source Emissions	7.54	2.97	44.72	0.08	19.23	2.20
Baseline Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Net Increase – Bay Area Air District	13.90	2.97	80.07	0.13	21.00	2.91
Net Increase – SJVAPCD	13.90	2.97	80.07	0.13	21.00	2.91
Net Increase – SCAQMD	13.90	2.97	80.07	0.13	21.00	2.91
Net Increase – SDAPCD	13.90	82.43	80.07	0.13	21.00	2.91

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Table 2-13: Summary of Annual Project and Baseline Operational Criteria Pollutants Emissions for Scenario 5: Medium Facility, CASP

Pollutant	NO_x (TPY)	VOC (TPY)	CO (TPY)	SO_x (TPY)	PM_{10} (TPY)	$PM_{2.5}$ (TPY)
Stationary Source Emissions	0.55	14.29	5.05	0.01	0.27	0.10
Offsets – Bay Area Air District	0.00	-14.29	0.00	0.00	0.00	0.00
Offsets – SJVAPCD	0.00	-14.29	0.00	0.00	0.00	0.00
Offsets – SCAQMD	0.00	-14.29	0.00	0.00	0.00	0.00
Offsets – SDAPCD	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Source Emissions	1.18	0.46	6.98	0.01	3.00	0.34
Baseline Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Net Increase – Bay Area Air District	1.73	0.46	12.03	0.02	3.27	0.44
Net Increase – SJVAPCD	1.73	0.46	12.03	0.02	3.27	0.44
Net Increase – SCAQMD	1.73	0.46	12.03	0.02	3.27	0.44
Net Increase – SDAPCD	1.73	14.75	12.03	0.02	3.27	0.44

Table 2-14: Summary of Daily Project and Baseline Operational Criteria Pollutants Emissions for Scenario 6: Medium Facility, Negative ASP with Filter

Pollutant	NO_x (lb/day)	VOC (lb/day)	CO (lb/day)	SO_x (lb/day)	PM_{10} (lb/day)	$PM_{2.5}$ (lb/day)
Stationary Source Emissions	6.36	54.93	35.35	0.05	1.77	0.71
Offsets – Bay Area Air District	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SJVAPCD	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SCAQMD	0.00	-54.93	0.00	0.00	0.00	0.00
Offsets – SDAPCD	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Source Emissions	7.54	2.97	44.72	0.08	19.23	2.20
Baseline Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Net Increase – Bay Area Air District	13.90	57.90	80.07	0.13	21.00	2.91
Net Increase – SJVAPCD	13.90	57.90	80.07	0.13	21.00	2.91
Net Increase – SCAQMD	13.90	2.97	80.07	0.13	21.00	2.91
Net Increase – SDAPCD	13.90	57.90	80.07	0.13	21.00	2.91

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Table 2-15: Summary of Annual Project and Baseline Operational Criteria Pollutants Emissions for Scenario 6: Medium Facility, Negative ASP with Filter

Pollutant	NO_x (TPY)	VOC (TPY)	CO (TPY)	SO_x (TPY)	PM_{10} (TPY)	$PM_{2.5}$ (TPY)
Stationary Source Emissions	0.55	9.82	5.05	0.01	0.27	0.10
Offsets – Bay Area Air District	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SJVAPCD	0.00	0.00	0.00	0.00	0.00	0.00
Offsets – SCAQMD	0.00	-9.82	0.00	0.00	0.00	0.00
Offsets – SDAPCD	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Source Emissions	1.18	0.46	6.98	0.01	3.00	0.34
Baseline Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Net Increase – Bay Area Air District	1.73	10.28	12.03	0.02	3.27	0.44
Net Increase – SJVAPCD	1.73	10.28	12.03	0.02	3.27	0.44
Net Increase – SCAQMD	1.73	0.46	12.03	0.02	3.27	0.44
Net Increase – SDAPCD	1.73	10.28	12.03	0.02	3.27	0.44

Table 2-16: Summary GHG Emissions Relative to Baseline for All Scenarios

Parameter	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Feedstock	Green Waste	Green Waste	Green Waste	Green Waste + Food Waste	Green Waste + Food Waste	Green Waste + Food Waste
GHG Reduction Relative to Sending to Landfill (CARB 2017) (MT CO_2e/Ton Feedstock)	-0.44	-0.44	-0.44	-0.56	-0.56	-0.56
Throughput (TPY)	10,000	10,000	10,000	25,000	25,000	25,000
Net Emission Change (MT CO_2e/Year)	-4,400	-4,400	-4,400	-14,000	-14,000	-14,000

3.0 IMPACT ANALYSES

3.1 Significance Thresholds

The air quality, odor, health risk assessment (HRA), and GHG analyses were conducted using significance thresholds adopted or recommended by the applicable air district. The applicable thresholds are described below and summarized in the following tables.

3.1.1 Bay Area Air District

The Bay Area Air District CEQA Air Quality Guidelines provide significance thresholds for criteria pollutants, health risk impacts, and GHGs. The thresholds used in this analysis for projects in the Bay Area Air District are summarized in Table 3-1.

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Table 3-1: Bay Area Air District CEQA Thresholds of Significance

Pollutant	Construction Related	Operational	
	Average Daily Emissions (lb/day)	Average Daily Emissions (lb/day)	Maximum Annual Emissions (TPY)
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
$PM_{10}/PM_{2.5}$ (Fugitive Dust)	Best Management Practices (BMPs)[1]	None	
Local CO	None	9.0 ppm (8-Hour Average), 20.0 ppm (1-Hour Average)	
Risks and Hazards for New Sources and Receptors (Cumulative Threshold)	Same as Operational Thresholds	Cancer Risk: > 100 In a Million (From All Local Sources) Non-Cancer: > 10.0 Hazard Index (Chronic, From all Local Sources) $PM_{2.5}$: > 0.8 µg/m^3 Annual Average (From All Local Sources)	OR Compliance with Qualified Community Risk Reduction Plan
Risks and Hazards for New Sources and Receptors (Individual Project)	Same as Operational Thresholds	Increased Cancer Risk >10.0 In a Million Increased Non-Cancer > 1.0 Hazard Index (Chronic or Acute) $PM_{2.5}$ Increase: > 0.3 µg/m^3 Annual Average	OR Compliance with Qualified Community Risk Reduction Plan
Accidental Release of Acutely Hazardous Air Pollutants	None	Storage or use of acutely hazardous materials located near receptors or new receptors located near stored or used acutely hazardous materials are considered significant.	
Odors	None	Five confirmed complaints per year, averaged over 3 years.	
GHGs	None	▪ Consistent with applicable Statewide GHG reduction plans, regulations, and targets. ▪ Implement project's "fair share" of GHG reductions necessary to achieve Statewide climate goals.[2]	

Source: Bay Area Air District 2022

Notes:

[1]$PM_{10}/PM_{2.5}$ (fugitive dust) is also recognized to impact local communities. The Bay Area Air District strongly recommends implementing all feasible fugitive dust management practices, especially when construction projects are located near sensitive communities, including schools, residential areas, or other sensitive land uses. These measures are detailed in Chapter 5, Section 5.2.2, Construction-Related Criteria Air Pollutant Emissions, of the Bay Area Air District 2022 CEQA Guidelines.

[2]The Bay Area Air District recommends a "fair share" approach for evaluating project GHG emissions. Under this approach, a project's GHG impact may be considered Less Than Significant if the project is consistent with applicable Statewide GHG reduction plans, regulations, and programs intended to achieve California's long-term climate goals. The Bay Area Air District also identifies a bright-line threshold of 10,000 MT CO_2e per year for stationary-source projects.

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3.1.2 SJVAPCD

SJVAPCD significance thresholds are provided in the District's Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI). The GAMAQI includes significance thresholds that are used to evaluate CEQA impacts for criteria air pollutants, health risk impacts, and GHGs. The significance thresholds used in this analysis for projects in the SJVAPCD are summarized in Table 3-2.

Table 3-2: SJVAPCD CEQA Thresholds of Significance

Pollutant	Construction Emissions (TPY)	Operations Emissions		Ambient Air Quality Project Risk (APR-2030) Threshold[1] (lbs/day)
		Permitted Equipment and Activities (TPY)	Non-Permitted Equipment and Activities (TPY)	
CO	100	100	100	100
NO_x	10	10	10	100
VOC	10	10	10	100
SO_x	27	27	27	100
PM_{10}	15	15	15	100
$PM_{2.5}$	15	15	15	100
TACs (Including Carcinogens and Non-Carcinogens)	Maximally Exposed Individual risk equals or exceeds 20 in one million.			
	Acute: Hazard Index equals or exceeds 1 for the Maximally Exposed Individual.			
	Chronic: Hazard Index equals or exceeds 1 for the Maximally Exposed Individual.			
Odors	▪ Project has the potential to expose sensitive receptors within 1 mile of an odor source and create a nuisance odor impact. ▪ The SJVAPCD defines a significant odor problem as more than one confirmed complaint per year or three unconfirmed complaints per year, averaged over a three-year period.			
GHGs	▪ Implement Best Performance Standards (BPS). ▪ Reduce Project GHG Emission by 29% over Business as Usual.[2]			

Source: SJVAPCD 2015a-c; SJVAPCD 2018; SJVAPCD 2009 a and b.

[1]Threshold for construction or operation.

[2]The SJVAPCD supports compliance with California's Assembly Bill (AB) 32 by implementing a Climate Change Action Plan focused on reducing GHG emissions through energy efficiency, renewable energy, sustainable land use, and Vehicle Miles Traveled (VMT) reduction strategies. The District has adopted BPS to help evaluate GHG impacts under CEQA, considering projects meeting these standards as less-than-significant. Additionally, the SJVAPCD engages communities through programs like AB 617 and clean vehicle initiatives to reduce emissions.

3.1.3 SCAQMD

The SCAQMD has established CEQA significance thresholds for criteria pollutants, health risk impacts, and GHGs. These thresholds are used to evaluate the significance of project-related emissions and exposure impacts within the South Coast Air Basin. The thresholds used in this analysis for projects in the SCAQMD are summarized in Table 3-3.

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Table 3-3: SCAQMD CEQA Thresholds of Significance

Pollutant	Construction Emissions (lbs/day)	Operations Emissions (lbs/day)
ROG (VOC)	75	55
NO_X	100	55
CO	550	550
SO_x	150	150
PM_{10}	150	150
$PM_{2.5}$	55	55
24-Hour $PM_{2.5}$ Increment	10.4 µg/m^3	2.5 µg/m^3
24-Hour PM_{10} Increment	10.4 µg/m^3	2.5 µg/m^3
Annual PM_{10} Increment	1.0 µg/m^3 Annual Average	
1-Hour NO_2 Increment	0.18 ppm (State)	
Annual NO_2 Increment	0.03 ppm (State) & 0.0534 ppm (Federal)	
1-Hour SO_2 Increment	0.25 ppm (State) & 0.075 ppm (Federal – 99th percentile)	
24-Hour SO_2 Increment	0.04 ppm (State)	
24-Hour Sulfate Increment	25 ug/m^3 (State)	
1-Hour CO Increment	20 ppm (State) & 35 ppm (Federal)	
8-Hour CO Increment	9.0 ppm (State/Federal)	
TACs (Including Carcinogens and Non-Carcinogens)	Maximum Incremental Cancer Risk ≥10 in 1 Million	
	Cancer Burden >0.5 Excess Cancer Cases (In Areas ≥1 in 1 Million)	
	Chronic and Acute Hazard Index ≥1.0 (Project Increment)	
Odors[1]	Project creates an odor nuisance pursuant to Rule 402.	
GHGs	10,000 MT/yr CO_2e for Industrial Facilities	

Source: SCAQMD 2023

[1]Note: The SCAQMD Rule 1133 Staff Report identifies a recommended setback distance of approximately a ¼-mile between composting operations and sensitive receptors (SCAQMD 2011). Although this recommendation is not a CEQA significance threshold, it was considered in the development of the odor impact analysis and BMP recommendations presented in Section 5.2.3.

3.1.4 SDAPCD

The SDAPCD has not adopted CEQA significance thresholds for evaluating air quality, GHG, or health risk impacts. Therefore, this analysis relies on Screening-Level Thresholds (SLTs) developed by San Diego County to assist lead agencies in evaluating air quality impacts under CEQA. The County's SLTs are based on SDAPCD Air Quality Impact Assessment (AQIA) screening criteria, United States Environmental Protection Agency (U.S. EPA) guidance, and significance thresholds adopted by other California air districts. The thresholds used in this analysis for projects in San Diego County are summarized in Table 3-4.

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Table 3-4: SDAPCD AQIA Screening Criteria

Air Contaminant	lbs/hr	lbs/day	TPY
PM_{10}	–	100	15
$PM_{2.5}$	–	55	10
NO_x	25	250	40
SO_x	25	250	40
CO	100	550	100
ROG	–	75	13.7
DPM	Excess Cancer Risk >1 in 1 million; Chronic or Acute Hazard Index >1.0		
Local CO	▪ Project would not place sensitive receptors within 500 feet of a signalized intersection operating at Level of Service (LOS) E or worse with more than 3,000 peak-hour trips; and ▪ Project would not cause an intersection with more than 3,000 peak-hour trips to operate at LOS E or worse.		
Odors	Project would generate objectionable odors resulting in a public nuisance pursuant to SDAPCD Rule 51.		
GHGs	Climate Action Plan Consistency		

Source: San Diego County 2007 and 2018.

3.2 Would the Project Conflict with or Obstruct the Implementation of the Applicable Air Quality Management Plan?

Organic waste management plays an important role in California's climate strategy. SB 1383 established Statewide targets to reduce the disposal of organic waste and recover edible food, thereby reducing CH_4 emissions associated with decomposition of landfilled organic materials. The Statewide composting program evaluated in this report is intended to support implementation of SB 1383 by facilitating the development of additional composting capacity throughout California.

The current Bay Area Air District Air Quality Management Plan (AQMP) was prepared in 2017. Objectives of the plan include composting organic waste and reducing CH_4 emissions from landfills. This Project will support these objectives. (BAAQMD 2017)

The SJVAPCD has plans for PM and O_3. The latest plans are the 2024 Plan for the 2012 Annual $PM_{2.5}$ Standard and the 2022 Plan for the 2015 8-Hour Ozone Standard. The 2024 plan for $PM_{2.5}$ states that composting is an alternative to open burning, which would reduce $PM_{2.5}$ from open burning. The 2022 plan for O_3 notes that SJVAPCD Rule 4566 regulates emissions from composting facilities. Projects in the SJVAPCD are expected to comply with this rule. Therefore, this Project does not interfere with the implementation of the current air quality plans from SJVAPCD (SJVAPCD 2024 and SJVAPCD 2022).

The current SCAQMD AQMP was prepared in 2022. This plan notes that composting activities are a source of VOCs and NH_3. The plan notes that composting facilities are regulated by Rules 1133, 1133.1, 1133.2, and 1133.3. Projects in the SCAQMD are expected to comply with these rules. Therefore, this Project does not interfere with the implementation of the current AQMP from SCAQMD (SCAQMD 2022 and SCAQMD 2011).

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The SDAPCD has plans for attaining O_3 standards in San Diego and a general regional air quality plan. The latest plans are the 2020 Plan for Attaining the National Ambient Air Quality Standards (NAAQS) for Ozone in San Diego County, and the 2022 Regional Air Quality Strategy (RAQS). Compost activities are not discussed in the 2020 plan for O_3 attainment. Diversion of organic waste from landfills is expected to reduce VOC emissions from landfills; reducing VOC emissions from landfills is a goal in the 2020 O_3 plan. The 2022 RAQS includes a goal to incentivize low-carbon farming techniques, such as composting. It also notes that rules may be required for composting activities, as such activities increase in the region. Projects in the SDAPCD are expected to comply with all relevant rules intended to reduce VOC emissions and O_3 levels. Therefore, this Project supports the objective of increasing composting in the 2022 RAQS and does not interfere with the implementation of SDAPCD air quality plans (SDAPCD 2020, and SDAPCD 2022).

IMPACT: Less Than Significant

3.3 Would the Project 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?

3.3.1 Construction

Construction-related criteria pollutant emissions were compared to the applicable significance thresholds for the Bay Area Air District, SJVAPCD, SCAQMD, and SDAPCD. Tables 3-5 through 3-10 compare the construction emissions for the representative small and medium composting facility scenarios to the applicable air district significance thresholds.

For the SCAQMD, localized air quality impacts were also evaluated. Because specific facility locations and nearby sensitive receptor locations have not been identified, project-specific Localized Significance Threshold (LST) analyses cannot be conducted at the program level. Therefore, the localized air quality analysis applied SCAQMD LSTs using a receptor distance of 50 meters, which is representative of the minimum distance likely to occur between future composting operations and nearest receptors. Two-acre LSTs were conservatively used for the small (5-acre) facility scenario to represent a reasonable upper-bound daily construction disturbance area for facilities of this size. Five-acre LSTs were used for the medium facility scenario because active construction disturbance is not expected to exceed 5 acres on any given day. Because SCAQMD LSTs increase as the distance to the nearest sensitive receptor increases, the use of a 50-meter receptor distance provides a conservative assessment of localized impacts. Facilities with receptors located farther than 50 meters from construction activities would be evaluated using less stringent LST thresholds and would generally be expected to result in lower localized impacts. Site-specific localized impact analyses may be warranted during subsequent project-level environmental review where receptors are located closer than assumed in this analysis or where project conditions differ substantially from the representative facility scenarios.

As shown in Tables 3-5 through 3-10, construction-related criteria pollutant emissions would not exceed the applicable significance thresholds for either the small or medium facility scenarios and impacts would be Less Than Significant; however, because future facility locations and receptor distances are unknown, localized construction air quality

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impacts for facilities in SCAQMD with receptors located closer than 50 meters from construction activities are conservatively considered Potentially Significant.

Table 3-5: Construction Emissions Summary and Significance Evaluation (Bay Area Air District)

Criteria Pollutants	Construction Emissions (lb/day)		Threshold (lb/day)	Significant?
	Small Facilities	Medium Facilities		
ROG (VOC)	4.9	4.9	54	No
NO_x	6.2	6.5	54	No
PM_{10} (Exhaust)	0.2	0.2	82	No
$PM_{2.5}$ (Exhaust)	0.2	0.2	54	No

Sources: Bay Area Air District 2022, CalEEMod Version 2022.1.1.45.

Note: lb/day are average daily emissions for planned land use.

Table 3-6: Construction Emissions Summary and Significance Evaluation (SJVAPCD)

Pollutant	Construction Emissions (lb/day)		Threshold (lb/day)	Construction Emissions (TPY)		Threshold (TPY)	Significant?
	Small	Medium		Small	Medium		
ROG	60.9	61.0	100	0.9	0.9	10	No
NO_x	28.0	28.0	100	1.1	1.2	10	No
CO	28.8	28.8	100	1.5	1.6	100	No
SO_x	0.05	0.06	100	0.003	0.003	27	No
Total PM_{10}	8.9	8.9	100	0.1	0.1	15	No
Total $PM_{2.5}$	5.0	5.0	100	0.1	0.1	15	No

Sources: SJVAPCD 2015b, CalEEMod Version 2022.1.1.45.

Table 3-7: Regional Construction Emissions Summary and Significance Evaluation (SCAQMD)

Pollutant	Construction Emissions (lb/day)		Threshold (lb/day)	Significant?
	Small Facilities	Medium Facilities		
ROG (VOC)	60.9	61.0	75	No
NO_x	28.1	28.1	100	No
CO	29.2	29.2	550	No
SO_x	0.05	0.06	150	No
Total PM_{10}	9.1	9.1	150	No
Total $PM_{2.5}$	5.1	5.1	55	No

Sources: SCAQMD 2023, CalEEMod Version 2022.1.1.45.

Note: lb/day are winter or summer maxima for planned land use.

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Table 3-8: Localized Construction Emissions Summary and Significance Evaluation for Small Facilities (SCAQMD)

Pollutant	Construction Emissions (lb/day)	Threshold[1] (lb/day)	Significant?[2]
NO_x	28.1	106	No
CO	29.2	1,368	No
Total PM_{10}	9.1	25	No
Total $PM_{2.5}$	5.1	7	No

Sources: SCAQMD 2023, CalEEMod Version 2022.1.1.45.

Notes:

[1]Source Receptor Area (SRA) 1, Receptor distance 50 meters from site boundary, 2-acre site.

[2]Localized emissions from construction from the representative small compost facilities, would below the LST at the nearest receptors of 50 meters, and impacts would be Less Than Significant. Site-specific localized impact analyses may be warranted during subsequent project-level environmental review where receptors are located closer than 50 meters from construction activities or where project conditions differ substantially from the representative facility scenarios. Therefore, for facilities with receptors located closer than 50 meters from construction activities, localized construction air quality impacts are conservatively assumed to be Potentially Significant.

Table 3-9: Localized Construction Emissions Summary and Significance Evaluation for Medium Facilities (SCAQMD)

Criteria Pollutants	Construction Emissions (lb/day)	Threshold[1] (lb/day)	Significant?[2]
NO_x	28.1	157	No
CO	29.2	2,331	No
Total PM_{10}	9.1	50	No
Total $PM_{2.5}$	5.1	11	No

Sources: SCAQMD 2008b, CalEEMod Version 2022.1.1.45.

Note:

[1]SRA 1, Receptor distance 50 meters from site boundary, 5-acre site.

[2]Localized emissions from construction from the representative medium compost facilities, would below the LST at the nearest receptors of 50 meters, and impacts would be Less Than Significant. Site-specific localized impact analyses may be warranted during subsequent project-level environmental review where receptors are located closer than 50 meters from construction activities or where project conditions differ substantially from the representative facility scenarios. Therefore, for facilities with receptors located closer than 50 meters from construction activities, localized construction air quality impacts are conservatively assumed to be Potentially Significant.

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Table 3-10: Construction Emissions Summary and Significance Evaluation (SDAPCD)

Criteria Pollutants	Construction Emissions (lb/day)		Threshold (lb/day)	Construction Emissions (TPY)		Threshold (TPY)	Significant?
	Small Facilities	Medium Facilities		Small Facilities	Medium Facilities		
ROG (VOC)	60.9	61.0	75	0.9	0.9	13.7	No
NO_x	28.0	28.0	250	1.1	1.2	40	No
CO	28.9	28.9	550	1.5	1.6	100	No
SO_x	0.05	0.06	250	0.003	0.003	40	No
Total PM_{10}	9.0	9.0	100	0.1	0.1	15	No
Total $PM_{2.5}$	5.1	5.1	55	0.1	0.1	10	No

Sources: San Diego County 2007, CalEEMod Version 2022.1.1.45.

IMPACT: Less Than Significant in the Bay Area Air District, SJVAPCD, and SDAPCD

IMPACT: Potentially Significant in SCAQMD

3.3.1.1 Mitigation Measures

For facilities in SCAQMD with receptors located closer than 50 meters from construction activities, a project-specific localized air quality analysis shall be conducted during subsequent project-level environmental review to demonstrate compliance with applicable localized significance thresholds. Any measures identified in the analysis and determined necessary to reduce impacts shall be incorporated into the project and implemented.

3.3.1.1 Significance After Mitigation

Because the applicability and effectiveness of mitigation measures identified through project-specific localized air quality analyses cannot be determined at the program level, impacts are conservatively identified as potentially significant for facilities with receptors located closer than 50 meters from construction activities.

IMPACT: Potentially Significant in SCAQMD

3.3.2 Operations

3.3.2.1 Project Design Features and Regulatory Requirements

The following project features and regulatory requirements are incorporated into the representative facility scenarios and were considered in the evaluation of operation-related air quality impacts:

- Project proponents would comply with the Clean Air Act (CAA) and Clean Air Act Amendment (CAAA) [e.g., NSR and Best Available Control Technology (BACT) criteria, if applicable]; and
- Project proponents would comply with local plans, policies, ordinances, rules, and regulations regarding air quality–related emissions and associated exposure (e.g., indirect source review, vehicle idling limitations, and payment into off-site mitigation funds).

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3.3.2.2 Impact Assessment

Air districts are generally responsible for establishing and enforcing local thresholds of significance for projects undergoing CEQA review. For those air districts with adopted, numerical thresholds of significance, these thresholds are developed in consideration of maintaining or achieving attainment under the NAAQS and California Ambient Air Quality Standards (CAAQS), which are concentrations of criteria air pollutants intended to reduce potential human health impacts related to exposure. Projects that demonstrate operational emissions below the appropriate air districts' thresholds of significance would not degrade regional air quality and would thus minimize potential human health impacts.

Operational impacts were evaluated based on the estimated emissions presented in this report and compared against quantitative criteria established by the Bay Area Air District, SJVAPCD, SCAQMD, and SDAPCD (see Tables 3-1 to 3-4). These criteria are relied upon to make significance determinations based on mass emissions of criteria pollutants.

For the SCAQMD, localized air quality impacts were also evaluated. Because specific facility locations and nearby sensitive receptor locations have not been identified, project-specific LST analyses cannot be conducted at the program level. Therefore, the localized air quality analysis applied SCAQMD LSTs using a receptor distance of 50 meters, which is representative of the minimum distance likely to occur between future composting operations and nearest receptors. Five-acre LSTs were used for all scenarios. Because SCAQMD LSTs become less stringent as receptor distance increases, this analysis is conservative for facilities located more than 50 meters from the nearest sensitive receptor. Site-specific localized analyses may be warranted during subsequent project-level environmental review.

Tables 3-11 to 3-16 provide a detailed evaluation of the significance determination for each of the six operating scenarios in each of the four air districts.

Table 3-11: Comparison of Daily Operational Emissions Increases to CEQA Significance Thresholds, Scenario 1

Category	Pollutant					
	NO_x	VOC	CO	SO_x	PM_{10}	$PM_{2.5}$
Net Increase – Bay Area Air District (lb/day)	8.03	1.43	N/A	N/A	0.40	0.34
Bay Area Air District Significance Thresholds (lb/day)[1]	54	54	N/A	N/A	82	54
Significant?	No	No	N/A	N/A	No	No
Net Increase – Bay Area Air District (TPY)	0.81	0.22	N/A	N/A	0.04	0.03
Bay Area Air District Significance Thresholds (TPY)[1]	10	10	N/A	N/A	15	10
Significant?	No	No	N/A	N/A	No	No
Net Increase – SJVAPCD Permitted Sources (TPY)	0.31	0.00	1.67	0.00	0.12	0.05
SJVAPCD Permitted Sources Significance Thresholds (TPY)	10	10	100	27	15	15
Significant?	No	No	No	No	No	No
Net Increase – SJVAPCD Non-Permitted Sources (TPY)	0.50	0.22	3.04	0.01	1.26	0.14

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Category	Pollutant					
	NO_x	VOC	CO	SO_x	PM_{10}	$PM_{2.5}$
SJVAPCD Non-Permitted Sources Significance Thresholds (TPY)	10	10	100	27	15	15
Significant?	No	No	No	No	No	No
Net Increase – SJVAPCD All Sources (lb/day)	8.03	1.43	33.17	0.05	8.95	1.35
SJVAPCD All Sources Significance Thresholds (lb/day)	100	100	100	100	100	100
Significant?	No	No	No	No	No	No
Net Increase – SCAQMD (lb/day)	8.03	112.53	33.17	0.05	8.95	1.35
SCAQMD Significance Thresholds (lb/day)	55	55	550	150	150	55
Significant?	No	Yes	No	No	No	No
Net Increase – SCAQMD (lb/day)	8.03	112.53	33.17	0.05	8.95	1.35
SCAQMD Localized Significance Thresholds (lb/day)[2]	157	N/A	2,331	N/A	12	3
Significant?	No	No	No	No	No	No
Net Increase – SDAPCD (lb/hr)[3]	8.03	N/A	33.17	0.05	N/A	N/A
SDAPCD Screening Threshold Levels (lb/hr)[4]	25	N/A	100	25	N/A	N/A
Significant?	No	No	No	No	No	No
Net Increase – SDAPCD (lb/day)	8.03	112.53	33.17	0.05	8.95	1.35
SDAPCD Screening Threshold Levels (lb/day)[4]	250	75	550	250	100	55
Significant?	No	Yes	No	No	No	No
Net Increase – SDAPCD (TPY)	0.81	20.30	4.71	0.01	1.38	0.19
SDAPCD Screening Threshold Levels (TPY)[4]	40	13.70	100	40	15	10
Significant?	No	Yes	No	No	No	No

[1]Only for PM_{10} and $PM_{2.5}$ from exhaust.

[2]SRA 1 (Central LA), 50-meter receptor distance, 5-acre facility.

[3]Conservatively showing that daily emissions are below hourly screening levels.

[4]Screening levels, not significance levels.

Table 3-12: Comparison of Daily Operational Emissions Increases to CEQA Significance Thresholds, Scenario 2

Category	Pollutant					
	NO_x	VOC	CO	SO_x	PM_{10}	$PM_{2.5}$
Net Increase – Bay Area Air District (lb/day)	7.75	33.93	N/A	N/A	0.39	0.33
Bay Area Air District Significance Thresholds (lb/day)[1]	54	54	N/A	N/A	82	54
Significant?	No	No	N/A	N/A	No	No
Net Increase – Bay Area Air District (TPY)	0.77	5.96	N/A	N/A	0.04	0.03
Bay Area Air District Significance Thresholds (TPY)[1]	10	10	N/A	N/A	15	10
Significant?	No	No	N/A	N/A	No	No
Net Increase – SJVAPCD Permitted Sources (TPY)	0.31	5.75	1.67	0.00	0.12	0.05
SJVAPCD Permitted Sources Significance Thresholds (TPY)	10	10	100	27	15	15

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Category	Pollutant					
	NO_x	VOC	CO	SO_x	PM_{10}	$PM_{2.5}$
Significant?	No	No	No	No	No	No
Net Increase – SJVAPCD Non-Permitted Sources (TPY)	0.45	0.20	2.67	0.00	1.16	0.13
SJVAPCD Non-Permitted Sources Significance Thresholds (TPY)	10	10	100	27	15	15
Significant?	No	No	No	No	No	No
Net Increase – SJVAPCD All Sources (lb/day)	7.75	33.93	30.76	0.05	8.30	1.28
SJVAPCD All Sources Significance Thresholds (lb/day)	100	100	100	100	100	100
Significant?	No	No	No	No	No	No
Net Increase – SCAQMD (lb/day)	7.75	1.30	30.76	0.05	8.30	1.28
SCAQMD Significance Thresholds (lb/day)	55	55	550	150	150	55
Significant?	No	No	No	No	No	No
Net Increase – SCAQMD (lb/day)	7.75	1.30	30.76	0.05	8.30	1.28
SCAQMD Localized Significance Thresholds (lb/day)[2]	157	N/A	2,331	N/A	12	3
Significant?	No	No	No	No	No	No
Net Increase – SDAPCD (lb/hr)[3]	7.75	N/A	30.76	0.05	N/A	N/A
SDAPCD Screening Threshold Levels (lb/hr)[4]	25	N/A	100	25	N/A	N/A
Significant?	No	No	No	No	No	No
Net Increase – SDAPCD (lb/day)	7.75	33.93	30.76	0.05	8.30	1.28
SDAPCD Screening Threshold Levels (lb/day)[4]	250	75	550	250	100	55
Significant?	No	No	No	No	No	No
Net Increase – SDAPCD (TPY)	0.77	5.96	4.34	0.01	1.28	0.18
SDAPCD Screening Threshold Levels (TPY)[4]	40	13.70	100	40	15	10
Significant?	No	No	No	No	No	No

[1]Only for PM_{10} and $PM_{2.5}$ from exhaust.

[2]SRA 1 (Central LA), 50-meter receptor distance, 5-acre facility.

[3]Conservatively showing that daily emissions are below hourly screening levels.

[4]Screening levels, not significance levels.

Table 3-13: Comparison of Daily Operational Emissions Increases to CEQA Significance Thresholds, Scenario 3

Category	Pollutant					
	NO_x	VOC	CO	SO_x	PM_{10}	$PM_{2.5}$
Net Increase – Bay Area Air District (lb/day)	7.75	24.12	N/A	N/A	0.39	0.33
Bay Area Air District Significance Thresholds (lb/day)[1]	54	54	N/A	N/A	82	54
Significant?	No	No	N/A	N/A	No	No
Net Increase – Bay Area Air District (TPY)	0.77	4.17	N/A	N/A	0.04	0.03
Bay Area Air District Significance Thresholds (TPY)[1]	10	10	N/A	N/A	15	10
Significant?	No	No	N/A	N/A	No	No
Net Increase – SJVAPCD Permitted Sources (TPY)	0.31	3.96	1.67	0.00	0.12	0.05

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Category	Pollutant					
	NO_x	VOC	CO	SO_x	PM_{10}	$PM_{2.5}$
SJVAPCD Permitted Sources Significance Thresholds (TPY)	10	10	100	27	15	15
Significant?	No	No	No	No	No	No
Net Increase – SJVAPCD Non-Permitted Sources (TPY)	0.45	0.20	2.67	0.00	1.16	0.13
SJVAPCD Non-Permitted Sources Significance Thresholds (TPY)	10	10	100	27	15	15
Significant?	No	No	No	No	No	No
Net Increase – SJVAPCD All Sources (lb/day)	7.75	24.12	30.76	0.05	8.30	1.28
SJVAPCD All Sources Significance Thresholds (lb/day)	100	100	100	100	100	100
Significant?	No	No	No	No	No	No
Net Increase – SCAQMD (lb/day)	7.75	24.12	30.76	0.05	8.30	1.28
SCAQMD Significance Thresholds (lb/day)	55	55	550	150	150	55
Significant?	No	No	No	No	No	No
Net Increase – SCAQMD (lb/day)	7.75	24.12	30.76	0.05	8.30	1.28
SCAQMD Localized Significance Thresholds (lb/day)[2]	157	N/A	2,331	N/A	12	3
Significant?	No	No	No	No	No	No
Net Increase – SDAPCD (lb/hr)[3]	7.75	N/A	30.76	0.05	N/A	N/A
SDAPCD Screening Threshold Levels (lb/hr)[4]	25	N/A	100	25	N/A	N/A
Significant?	No	No	No	No	No	No
Net Increase – SDAPCD (lb/day)	7.75	24.12	30.76	0.05	8.30	1.28
SDAPCD Screening Threshold Levels (lb/day)[4]	250	75	550	250	100	55
Significant?	No	No	No	No	No	No
Net Increase – SDAPCD (TPY)	0.77	4.17	4.34	0.01	1.28	0.18
SDAPCD Screening Threshold Levels (TPY)[4]	40	13.70	100	40	15	10
Significant?	No	No	No	No	No	No

[1]Only for PM_{10} and $PM_{2.5}$ from exhaust.

[2]SRA 1 (Central LA), 50-meter receptor distance, 5-acre facility.

[3]Conservatively showing that daily emissions are below hourly screening levels.

[4]Screening levels, not significance levels.

Table 3-14: Comparison of Daily Operational Emissions Increases to CEQA Significance Thresholds, Scenario 4

Category	Pollutant					
	NO_x	VOC	CO	SO_x	PM_{10}	$PM_{2.5}$
Net Increase – Bay Area Air District (lb/day)	14.60	3.30	N/A	N/A	0.67	0.55
Bay Area Air District Significance Thresholds (lb/day)[1]	54	54	N/A	N/A	82	54
Significant?	No	No	N/A	N/A	No	No
Net Increase – Bay Area Air District (TPY)	1.83	0.51	N/A	N/A	0.08	0.06
Bay Area Air District Significance Thresholds (TPY)[1]	10	10	N/A	N/A	15	10

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Category	Pollutant					
	NO_x	VOC	CO	SO_x	PM_{10}	$PM_{2.5}$
Significant?	No	No	N/A	N/A	No	No
Net Increase – SJVAPCD Permitted Sources (TPY)	0.55	0.00	5.05	0.01	0.27	0.10
SJVAPCD Permitted Sources Significance Thresholds (TPY)	10	10	100	27	15	15
Significant?	No	No	No	No	No	No
Net Increase – SJVAPCD Non-Permitted Sources (TPY)	1.28	0.51	7.92	0.01	3.25	0.37
SJVAPCD Non-Permitted Sources Significance Thresholds (TPY)	10	10	100	27	15	15
Significant?	No	No	No	No	No	No
Net Increase – SJVAPCD All Sources (lb/day)	14.60	3.30	86.09	0.14	22.62	3.09
SJVAPCD All Sources Significance Thresholds (lb/day)	100	100	100	100	100	100
Significant?	No	No	No	No	No	No
Net Increase – SCAQMD (lb/day)	14.60	278.91	86.09	0.14	22.62	3.09
SCAQMD Significance Thresholds (lb/day)	55	55	550	150	150	55
Significant?	No	Yes	No	No	No	No
Net Increase – SCAQMD (lb/day)	14.60	278.91	86.09	0.14	22.62	3.09
SCAQMD Localized Significance Thresholds (lb/day)[2]	157	N/A	2,331	N/A	12	3
Significant?	No	No	No	No	Yes	Yes
Net Increase – SDAPCD (lb/hr)[3]	14.60	N/A	86.09	0.14	N/A	N/A
SDAPCD Screening Threshold Levels (lb/hr)[4]	25	N/A	100	25	N/A	N/A
Significant?	No	No	No	No	No	No
Net Increase – SDAPCD (lb/day)	14.60	3.30	86.09	0.14	22.62	3.09
SDAPCD Screening Threshold Levels (lb/day)[4]	250	75	550	250	100	55
Significant?	No	No	No	No	No	No
Net Increase – SDAPCD (TPY)	1.83	0.51	12.97	0.02	3.53	0.47
SDAPCD Screening Threshold Levels (TPY)[4]	40	13.70	100	40	15	10
Significant?	No	No	No	No	No	No

[1]Only for PM_{10} and $PM_{2.5}$ from exhaust.

[2]SRA 1 (Central LA), 50-meter receptor distance, 5-acre facility.

[3]Conservatively showing that daily emissions are below hourly screening levels.

[4]Screening levels, not significance levels.

Table 3-15: Comparison of Daily Operational Emissions Increases to CEQA Significance Thresholds, Scenario 5

Category	Pollutant					
	NO_x	VOC	CO	SO_x	PM_{10}	$PM_{2.5}$
Net Increase – Bay Area Air District (lb/day)	13.90	2.97	N/A	N/A	0.65	0.53

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Category	Pollutant					
	NO_x	VOC	CO	SO_x	PM_{10}	$PM_{2.5}$
Bay Area Air District Significance Thresholds (lb/day)[1]	54	54	N/A	N/A	82	54
Significant?	No	No	N/A	N/A	No	No
Net Increase – Bay Area Air District (TPY)	1.73	0.46	N/A	N/A	0.08	0.06
Bay Area Air District Significance Thresholds (TPY)[1]	10	10	N/A	N/A	15	10
Significant?	No	No	N/A	N/A	No	No
Net Increase – SJVAPCD Permitted Sources (TPY)	0.55	0.00	5.05	0.01	0.27	0.10
SJVAPCD Permitted Sources Significance Thresholds (TPY)	10	10	100	27	15	15
Significant?	No	No	No	No	No	No
Net Increase – SJVAPCD Non-Permitted Sources (TPY)	1.18	0.46	6.98	0.01	3.00	0.34
SJVAPCD Non-Permitted Sources Significance Thresholds (TPY)	10	10	100	27	15	15
Significant?	No	No	No	No	No	No
Net Increase – SJVAPCD All Sources (lb/day)	13.90	2.97	80.07	0.13	21.00	2.91
SJVAPCD All Sources Significance Thresholds (lb/day)	100	100	100	100	100	100
Significant?	No	No	No	No	No	No
Net Increase – SCAQMD (lb/day)	13.90	2.97	80.07	0.13	21.00	2.91
SCAQMD Significance Thresholds (lb/day)	55	55	550	150	150	55
Significant?	No	No	No	No	No	No
Net Increase – SCAQMD (lb/day)	13.90	2.97	80.07	0.13	21.00	2.91
SCAQMD Localized Significance Thresholds (lb/day)[2]	157	N/A	2,331	N/A	12	3
Significant?	No	No	No	No	Yes	No
Net Increase – SDAPCD (lb/hr)[3]	13.90	N/A	80.07	0.13	N/A	N/A
SDAPCD Screening Threshold Levels (lb/hr)[4]	25	N/A	100	25	N/A	N/A
Significant?	No	No	No	No	No	No
Net Increase – SDAPCD (lb/day)	13.90	82.43	80.07	0.13	21.00	2.91
SDAPCD Screening Threshold Levels (lb/day)[4]	250	75	550	250	100	55
Significant?	No	Yes	No	No	No	No
Net Increase – SDAPCD (TPY)	1.73	14.75	12.03	0.02	3.27	0.44
SDAPCD Screening Threshold Levels (TPY)[4]	40	13.70	100	40	15	10
Significant?	No	Yes	No	No	No	No

[1]Only for PM_{10} and $PM_{2.5}$ from exhaust.

[2]SRA 1 (Central LA), 50-meter receptor distance, 5-acre facility.

[3]Conservatively showing that daily emissions are below hourly screening levels.

[4]Screening levels, not significance levels.

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Table 3-16: Comparison of Daily Operational Emissions Increases to CEQA Significance Thresholds, Scenario 6

Category	Pollutant					
	NO_x	VOC	CO	SO_x	PM_{10}	$PM_{2.5}$
Net Increase – Bay Area Air District (lb/day)	13.90	57.90	N/A	N/A	0.65	0.53
Bay Area Air District Significance Thresholds (lb/day)[1]	54	54	N/A	N/A	82	54
Significant?	No	Yes	N/A	N/A	No	No
Net Increase – Bay Area Air District (TPY)	1.73	10.28	N/A	N/A	0.08	0.06
Bay Area Air District Significance Thresholds (TPY)[1]	10	10	N/A	N/A	15	10
Significant?	No	Yes	N/A	N/A	No	No
Net Increase – SJVAPCD Permitted Sources (TPY)	0.55	9.82	5.05	0.01	0.27	0.10
SJVAPCD Permitted Sources Significance Thresholds (TPY)	10	10	100	27	15	15
Significant?	No	No	No	No	No	No
Net Increase – SJVAPCD Non-Permitted Sources (TPY)	1.18	0.46	6.98	0.01	3.00	0.34
SJVAPCD Non-Permitted Sources Significance Thresholds (TPY)	10	10	100	27	15	15
Significant?	No	No	No	No	No	No
Net Increase – SJVAPCD All Sources (lb/day)	13.90	57.90	80.07	0.13	21.00	2.91
SJVAPCD All Sources Significance Thresholds (lb/day)	100	100	100	100	100	100
Significant?	No	No	No	No	No	No
Net Increase – SCAQMD (lb/day)	13.90	2.97	80.07	0.13	21.00	2.91
SCAQMD Significance Thresholds (lb/day)	55	55	550	150	150	55
Significant?	No	No	No	No	No	No
Net Increase – SCAQMD (lb/day)	13.90	2.97	80.07	0.13	21.00	2.91
SCAQMD Localized Significance Thresholds (lb/day)[2]	157	N/A	2,331	N/A	12	3
Significant?	No	No	No	No	Yes	No
Net Increase – SDAPCD (lb/hr)[3]	13.90	N/A	80.07	0.13	N/A	N/A
SDAPCD Screening Threshold Levels (lb/hr)[4]	25	N/A	100	25	N/A	N/A
Significant?	No	No	No	No	No	No
Net Increase – SDAPCD (lb/day)	13.90	57.90	80.07	0.13	21.00	2.91
SDAPCD Screening Threshold Levels (lb/day)[4]	250	75	550	250	100	55
Significant?	No	No	No	No	No	No
Net Increase – SDAPCD (TPY)	1.73	10.28	12.03	0.02	3.27	0.44
SDAPCD Screening Threshold Levels (TPY)[4]	40	13.70	100	40	15	10
Significant?	No	No	No	No	No	No

[1]Only for PM_{10} and $PM_{2.5}$ from exhaust.

[2]SRA 1 (Central LA), 50-meter receptor distance, 5-acre facility.

[3]Conservatively showing that daily emissions are below hourly screening levels.

[4]Screening levels, not significance levels.

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Although there would be substantial reductions in air emissions from landfills due to the diversion of organic waste to composting, because emissions of air pollutants from the operation of new organic waste recovery facilities exceed the screening thresholds of significance in the Bay Area Air District, SCAQMD, and SDAPCD, operational-related air quality impacts would be potentially significant in these air districts for several of the operating scenarios. Table 3-17 summarizes the significance determinations for the six operating scenarios and four air districts.

Table 3-17: Summary of Significance Determination for Six Scenarios in Four Air Districts

Air District	Small Facilities			Medium Facilities		
	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
	Windrows	Positive CASP	Negative ASP with Filter	Windrows	Positive CASP	Negative ASP with Filter
Bay Area Air District	LTS	LTS	LTS	LTS	LTS	PS
SJVAPCD	LTS	LTS	LTS	LTS	LTS	LTS
SCAQMD	PS	LTS	LTS	PS	PS	PS
SDAPCD	PS	LTS	LTS	LTS	PS	LTS

IMPACT: Less Than Significant in SJVAPCD

IMPACT: Potentially Significant in the Bay Area Air District, SCAQMD and SDAPCD

VOC significance threshold exceedances were identified for Small Windrow facilities in the SCAQMD and SDAPCD, Medium Windrow facilities in the SCAQMD, Medium Positive CASP facilities in the SDAPCD, and Medium Negative ASP with Filter facilities in the Bay Area Air District. LST screening level exceedances were also identified in the SCAQMD for Medium Windrow, Positive CASP, and Negative ASP with Filter facilities.

3.3.2.3 Mitigation Measures

For representative facility scenarios that exceed applicable VOC significance thresholds and/or LST screening levels, the following project-level measures shall be required during subsequent environmental review to reduce emissions and demonstrate compliance with applicable air quality significance thresholds:

- Future projects exceeding applicable VOC significance thresholds shall implement feasible VOC reduction measures identified in consultation with the applicable air district or Lead Agency. Such measures may include participation in voluntary air district emission reduction programs, implementation of additional emission controls (e.g., upgrading from a windrow design to an ASP design), acquisition of additional emission reduction credits (over and above what is required by regulation), or other air-district-approved measures sufficient to reduce VOC emissions; and

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- For facilities in SCAQMD with the potential to exceed applicable LST screening levels or for new composting facilities with receptors located within 50 meters of operational emission sources, project-specific air quality analyses, including refined dispersion modeling as appropriate, shall be conducted during subsequent project-level environmental review to demonstrate compliance with applicable air quality significance thresholds.

Any measures identified through the analysis and determined necessary to reduce impacts shall be incorporated into the project and implemented.

3.3.2.4 Significance After Mitigation

Because the effectiveness and applicability of project-specific analyses and VOC mitigation measures cannot be determined at the program level, impacts are conservatively identified as Potentially Significant for the representative scenarios exceeding applicable thresholds.

IMPACT: Potentially Significant in the Bay Area Air District, SCAQMD, and SDAPCD

3.3.3 Transportation/CO "Hot Spots"

Local mobile-source carbon monoxide (CO) emissions near roadway intersections are a direct function of traffic volume, speed, and delay. As a pollutant that disperses rapidly under normal meteorological conditions, CO emissions produce localized impacts. However, under certain meteorological conditions, CO concentrations near roadways and/or intersections may increase to unhealthy levels at nearby sensitive land uses, such as residential units, hospitals, schools, and childcare facilities. As a result, air districts typically recommend that CO be analyzed at the local level rather than the regional level.

The proposed projects could result in an increase in vehicle travel related to the movement of organics to organic waste recovery facilities; however, vehicle travel would be distributed Statewide. It is also anticipated that vehicle travel to local landfills would decline as a result of the Project. Due to the small size of these facilities, which require relatively few truck trips for feedstock and compost delivery and limited employment, the additional vehicle trips per hour on local roads are not expected to result in a substantial increase in CO concentrations resulting in adverse impacts compared to existing baseline conditions.

Additionally, the efficacy of catalytic converters in internal combustion engines has substantially reduced emissions of CO, as compared to previous internal combustion engines. Other technological improvements, including the use of on-board computers, as well as inspection requirements, have further reduced CO emissions. CO emissions will continue to decline as Statewide programs transition the transportation sector to electric vehicles that do not emit CO. (CalRecycle 2019: pg. 3.3-32)

IMPACT: Less Than Significant

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3.4 Would the Project Expose Sensitive Receptors to Substantial Pollutant Concentrations?

3.4.1 Construction

Construction of the representative facility scenarios is expected to occur over a period of less than 1 year. Construction-related emissions would be short-term and temporary and would not result in long-term exposure. Construction-related TAC impacts would be Less Than Significant.

IMPACT: Less Than Significant

3.4.2 Operations

3.4.2.1 Impact Analysis

To assess the potential health risks from a project to sensitive receptors, the TAC emissions from the project are assessed in accordance with CARB HRA guidelines. This analysis is based on the Office of Environmental Health Hazard Assessment (OEHHA) "Hot Spot" guidance document (OEHHA 2015) and the California Air Pollution Control Officers Association (CAPCOA) "Air Toxics 'Hot Spots' Program Facility Prioritization Guidelines" (CAPCOA 2016).

The CAPCOA prioritization guidelines outline a technique for calculating a Prioritization Score that helps districts identify priority facilities for risk assessment, which involves consideration of TAC potency, toxicity, quantity of emissions, and proximity to sensitive receptors, such as hospitals, schools, daycare centers, worksites, and residences.

Prioritization Scores were calculated using the Emissions and Potency Procedure in the CAPCOA's guidelines. Emission data are combined with applicable OEHHA health values and receptor distance adjustment factors to calculate separate Prioritization Scores for residential cancer, worker cancer, chronic non-cancer, and acute non-cancer risk. The worker cancer Prioritization Score was calculated using the SDAPCD method of applying a 0.3 factor to the residential cancer Prioritization Score.

- Residential Cancer Risk: Evaluates health risk from lifetime exposure to emissions at residential and sensitive receptor locations. Sensitive receptors include hospitals, K-12 schools, daycare centers, and elder care facilities. Residential cancer risk is typically assessed using a 30-year exposure duration.
- Worker Cancer Risk: Evaluates health risk from long-term exposure to individuals at long-term business locations. Worker cancer risk is typically assessed using a 25-year exposure duration.
- Chronic Risk: Evaluates health risk from long-term (1-year) exposure to emissions. Chronic receptors include locations where an individual could reasonably be expected to spend time over the better part of the year.
- Acute Risk: Evaluates health risk from short-term (1-hour) exposure to emissions. Acute receptors include any location where an individual could reasonably be present for at least 1 hour during a day.

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TAC emissions were calculated using the methodology outlined in Section 2, with detailed calculations provided in Attachment 2. TAC emission sources include the DPM emissions from the diesel engines used to screen and grind waste materials and compost, on-road haul trucks, and off-road mobile equipment (e.g., loaders), and NH_3 and organic TACs from composting activities, and toxic components of dust from material handling activities.

To assess the potential health risk from the six operating scenarios, Prioritization Scores were calculated at various receptor distances using the TAC emissions estimated for that scenario. Additionally, receptor distances were back-calculated for each scenario to determine the minimum distances at which the facility would be classified as high, intermediate, or low priority based on the applicable Prioritization Score thresholds. Results by scenario and distance are presented in Attachment 3 with detailed calculations.

Each air district sets their Prioritization Score thresholds and these should be used for Project-specific evaluation. Table 3-18 summarizes the thresholds for the four districts reviewed.

Table 3-18: Prioritization Score Thresholds

Air District	Prioritization Score Threshold Category	Prioritization Score Cancer Risk Thresholds	Prioritization Score Chronic/Acute Risk Threshold	Significance Threshold Category
Bay Area Air District, SJVAPCD, and SCAQMD	High	≥10	≥10	PS
	Intermediate	≥1 and <10	≥1 and <10	PS
	Low	<1	<1	LTS
SDAPCD	High	≥100	≥10	PS
	Intermediate	≥1 and <100	≥1 and <10	PS
	Low	<1	<1	LTS

The significance of the thresholds are described below:

- High Score: Projects having a high Prioritization Score may have high risk. A refined HRA is recommended to determine if a Project's TAC emissions would have significant health risk impacts. Thus, this score is considered to have a Potentially Significant human health impact and would necessitate a more detailed analysis for a project-level CEQ review.
- Intermediate Score: Projects with an intermediate prioritization score, may require further analysis to determine if the Project's TAC emissions would have significant health risk impacts. Many air districts consider projects with an intermediate Prioritization Score to be unlikely to have an adverse health risk, although some districts may require additional analysis. Consultation with the local air district or lead agency would be required to determine if the Project's TAC emissions have a less than significant human health impact. Therefore, this score is considered to have a Potentially Significant impact on human health and would necessitate a more detailed analysis for a project-level CEQ review.

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- Low Score: Projects with a low prioritization score are unlikely to have an adverse health risk, thus are considered to have a Less Than Significant human health impact.

In cases where the TAC emission thresholds are exceeded, Project proponents should conduct HRA modeling pursuant to the most recent guidance published by OEHHA. The HRA should incorporate TAC emissions from the proposed TAC sources, including mobile and stationary sources. The HRA modeling estimates the Project-related residential and worker cancer risk, and chronic and acute non-cancer risks. These risks should be compared to the applicable HRA thresholds, such as those outlined in Tables 3-1 through 3-4.

Table 3-19 summarizes the minimum distances to residential and worker receptors required to achieve a Less Than Significant impact for each scenario. These distances were determined using the Prioritization Score calculation methodology and the low priority score threshold of Less Than Significant, which is the same across all air districts evaluated (the Bay Area Air District, SJVAPCD, SCAQMD, and SDAPCD), as well as most other districts.

For example, under Scenario 1, if there are no residential receptors within 666 meters, or worker receptors within 365 meters of the facility, the Project would be considered to have a Less Than Significant impact. If there are residential receptors within 666 meters, or worker receptors within 365 meters, the Project would be considered to have a Potentially Significant impact. The same interpretation applies to the remaining scenarios using the corresponding distances shown in the table. A more comprehensive analysis for each scenario is provided in Attachment 3.

Table 3-19: Minimum Distances to Residential and Worker Receptors for Less Than Significant Impact by Scenario for Four Air Districts

Scenario	Minimum Distance to Residential Receptors for Less Than Significant Impact (meters)	Minimum Distance to Worker Receptors for Less Than Significant Impact (meters)
1	666	365
2	581	318
3	571	313
4	996	546
5	851	466
6	835	457

Note: Residential and worker receptor distances correspond to the residential cancer risk and worker cancer risk thresholds, respectively. For all scenarios, the calculated acute and chronic non-cancer risk distances were less than the corresponding cancer risk distances; therefore, cancer risk is the limiting criterion. Compliance with the cancer risk distance also ensures compliance with the acute and chronic non-cancer risk distance thresholds.

IMPACT: Potentially Significant

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3.4.2.2 Mitigation Measures

Any project that does not have the set-back distance to a sensitive receptor shown in Table 3-19 would require a Project-specific HRA to determine impacts. If the HRA modeling determines a Project has a Potentially Significant impact, mitigation measures could be implemented to avoid or minimize impacts from operation-related TAC emissions. The following are operation-related mitigation measures that are typically applied to projects on-site to reduce TAC emissions (CalRecycle 2019: pg. 3.3-27):

- Project proponents shall install diesel particulate filters or implement other CARB-verified diesel emission control strategies for heavy-duty equipment;
- Project proponents shall apply U.S. EPA Tier 3 or 4 emissions standards to off-road heavy-duty equipment;
- Project proponents shall use haul trucks with on-road engines instead of off-road engines for on-site hauling;
- Project proponents shall establish an electricity supply and use electric-powered equipment instead of diesel-powered equipment, if feasible;
- Project proponents shall apply on-road diesel PM mitigation measures consistent with CARB's Diesel Certification Program; and
- Project proponents shall utilize renewable natural gas to power on-road vehicles accessing future Project sites.

3.4.2.3 Significance After Mitigation

It is reasonable to expect that impacts would be reduced to a Less-Than-Significant level by land use and/or permitting agency conditions of approval; the degree to which another agency would require mitigation is uncertain. Although, for CEQA-compliance purposes, if the HRA modeling is above the thresholds, the Project-related TAC emissions could be Potentially Significant.

IMPACT: Potentially Significant

3.5 Would the Project Result in Other Emissions (Such as Those Leading to Odors Adversely Affecting a Substantial Number of People)?

3.5.1 Construction

Construction activities are not a substantial source of objectionable odors. Temporary exhaust emissions from construction equipment may be noticeable in the immediate vicinity of active construction areas, but such emissions would be localized and short-term in duration. Accordingly, construction-related odor impacts would be Less Than Significant.

IMPACT: Less Than Significant

3.5.2 Operations

Composting facilities have the potential to generate objectionable odors associated with feedstock handling, active composting, curing, screening, product storage, and other operational activities. The magnitude of potential odor impacts depends on facility size,

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composting technology, operating practices, meteorological conditions, and the proximity of sensitive receptors. Best Management Practices (BMPs) for composting operations would help to minimize odor impacts. These measures may be incorporated into permit conditions by the air districts for permitted facilities, into the Odor Impact Minimization Plan (OIMP), implemented voluntarily by a facility as a BMP to minimize odor impacts, or required as CEQA mitigation. BMPs include the following:

- Site selection: Odor impacts can be minimized by ensuring that the site selected for a new compost facility is sufficiently distant from potential receptors. The SJVAPCD GAMAQI recommends a setback distance of 1 mile for a compost facility from potential receptors (SJVAPCD 2015a), which may be unreasonable for many potential compost sites. The GAMAQI has applied that setback distance for several decades, beginning when windrow technology dominated the composting industry, pre-dating modern ASP composting techniques. A modern ASP compost facility will typically have 80% lower emission levels than a comparably sized windrow facility. Accordingly, a 1-mile setback distance may be appropriate for a windrow facility, but is likely unnecessary for an ASP facility. In its Rule 1133 staff report, the SCAQMD recommends a 1/4-mile setback distance (SCAQMD 2011), which would be more appropriate for an ASP facility.
- Feedstock storage limitation: Although feedstock composition can determine odor to a large extent, management practices can also have a large impact, and in some cases mitigate odor production.
  - Offensive odors from manure, food, and liquid waste can be minimized by incorporating the waste into a compost pile on the same day they are received.
  - Limiting feedstock storage of greenwaste and biosolids prior to introducing the material into the compost pile will reduce the occurrence of decomposition, reducing emissions and odors. The BACT standard in air districts that impose permit requirements on feedstock storage is two days.
- Develop a compost blend to optimize conditions:
  - Balancing the carbon and nitrogen of the initial feedstock, and mixing different types of organic material in quantities to achieve a carbon to nitrogen ratio at a range between 20:1 to 40:1;
  - Ensuring particle size is large enough to allow airflow. This can be accomplished by blending woodchips into dense feedstocks.
  - Add water to the feedstock, as needed, to maintain a moisture content between 40% to 60%.
- Well-constructed, properly aerated static compost piles produce fewer odors.
  - Forcing air through the piles, using either a positive aeration system (pushing air up through the pile) or negative aeration system (pulling air down through the pile) maintains aerobic conditions within the piles.

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- Turning or aerating a windrow at a frequency to maintain a center pile temperature between 110°F to 140°F or an oxygen content greater than 5% will minimize odor emissions.

- Covering piles using breathable fabrics (e.g., the Gore® system) or a finished compost biofilter layer reduces odors as well as VOCs and NH_3 emissions from the piles. The finished compost biofilter layer on compost piles for a positively aerated CASP, or a fixed bed biofilter (mulch, engineered fill, or other binding material) for negatively aerated ASP, further reduces emissions.
- Ensure that the biofilter layer (positive aeration) or the fixed bed biofilter (negative aeration) is properly wetted at all times using a sprinkler system.
- Aerate water retention basins to reduce the occurrence of strong odors. (CIWMB 2007, pgs. 27-38)

Future facilities would be subject to applicable local plans, policies, regulations, and development standards, including any applicable setbacks or buffer zones for potentially odorous operations, as part of project approval and environmental review processes.

While proper site selection, implementation of the required OIMP, and adoption of the appropriate BMPs (either required by permit conditions or adopted voluntarily), odor impacts would generally be expected to reduce odor impacts to a less-than-significant level, future facility locations, operational characteristics, proximity to sensitive receptors, and the need for and effectiveness of site-specific odor control measures cannot be determined at the program level. Therefore, the potential for significant odor impacts cannot be ruled out for all future facilities, and odor impacts are conservatively considered potentially significant.

IMPACT: Potentially Significant

4.0 GREENHOUSE GASES

4.1 Significance Thresholds

Project GHG emissions would be evaluated against the thresholds shown in Table 4-1.

Table 4-1: GHG Significance Thresholds

Air District	Significance Threshold
Bay Area Air District	▪ Consistent with applicable Statewide GHG reduction plans, regulations, and targets; and ▪ Implement project's "fair share" of GHG reductions necessary to achieve Statewide climate goals
SJVAPCD	▪ Implement BPS; and ▪ Reduce Project GHG Emission by 29% over Business as Usual
SCAQMD	▪ 10,000 MT/yr CO_2e for industrial facilities
SDAPCD	▪ Climate Action Plan consistency

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4.2 Would the Project Generate GHG Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment?

4.2.1 Construction GHGs

Construction-related GHG emissions, summarized in Section 2.1 (Table 2-2), do not represent a long-term source of emissions because they occur over a finite construction period. When amortized over the expected life of the facilities, construction-related GHG emissions would represent a relatively small contribution to total Project emissions and impacts would be less than significant.

4.2.2 Operations GHGs

GHGs are emitted from mobile sources, such as on-road vehicles and off-road equipment, burning fuels, such as gasoline, diesel, biodiesel, propane, or natural gas (compressed or liquefied). Indirect GHG emissions result from electric power generated elsewhere (i.e., power plants) used to operate process equipment, lighting, and utilities at a facility. Also included in a GHG evaluation is electric power used to pump the water supply (e.g., aqueducts, wells, and pipelines) and disposal and decomposition of waste in landfills. Operational GHG emissions may occur due to the fuel combustion in off-road equipment (e.g., front-end loaders and forklifts) used to manage wastes on-site, fuel combustion in haul trucks used to deliver organic feedstock to the facility and delivery compost to the customer, and fuel use to haul wastes or byproducts (e.g., mulch) to recycling, recovery, or disposal facilities.

However, diversion of organic waste from landfills to composting facilities will result in a net decrease in GHG emissions. Organic wastes decompose in landfills to form CH_4, a potent GHG. Although most landfills have landfill gas collection systems which collect and combust CH_4, a portion of the CH_4 (as much as 25% of the CH_4 produced) is emitted from landfills as fugitive emissions. By diverting organic waste from landfill to composting, those fugitive CH_4 emissions are avoided. The net GHG emission reductions are summarized in Table 2-16.

Implementing the proposed Projects would also displace some amount of petroleum-based fertilizers as compost materials become increasingly available. Over the past decade, the average annual amount of petroleum-derived nitrogen fertilizer purchased for use in California was approximately 600,000 tons. The application of these fertilizers is a notable contributor to global emissions of nitrogen dioxide (NO_2), which, according to the Intergovernmental Panel on Climate Change's (IPCC's) most recent estimates, has a Global Warming Potential (GWP) of 265 over a 100-year time horizon. Moreover, the production of nitrogen-rich fertilizers requires the combustion of natural gas. To produce, transport, and apply 1 ton of nitrogen fertilizer requires an amount of energy equal to almost 2 tons of gasoline. Compost materials generated under the proposed Project would reduce overall reliance on petroleum-based fertilizers.

The proposed Project facilitates GHG emission reductions by facilitating landfill diversion, providing an alternative to petroleum-based fertilizers, and sequestering carbon in the soil. Because there will be a net reduction in GHG with the Project compared to baseline, business-as-usual disposal practices for the organic waste, the Project will have a Less-Than Significant impact for this criteria (CalRecycle 2019: pg. 3.8-11).

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IMPACT: Less Than Significant

4.3 Would the Project Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of GHGs?

One of the primary objectives of the Project is to reduce the disposal of organic waste in landfills. Construction and operation of new or expanded organic waste recovery facilities is identified and evaluated in the California Short-Lived Climate Pollutant (SLCP) Reduction Strategy in addition to other CH_4-reducing measures. Organic waste recovery facilities (e.g., composting) would reduce fugitive CH_4 emissions, as well as emissions of VOCs that would otherwise be emitted from a landfill.

Diversion of organic waste from landfills to composting facilities will result in a net decrease in GHG emissions, as shown in Table 2-16. Improved soil health and carbon sequestration potential would also be achieved from the use of compost product. The compost materials generated from composting activities would contain the necessary soil amendments to enhance the efficiency of the carbon cycle, which would allow for the sequestering of carbon from the atmosphere in soil. Compost materials would be applied throughout the natural and working lands sector and consistent with the *Draft 2030 Natural and Working Lands Climate Change Implementation Plan* and *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) and help the State meet its long-term GHG emission reduction targets.

The actions included in these projects are consistent with the direction provided in the SLCP Reduction Strategy. The compost projects would not interfere with the goals of the plan. The proposed Project does not impede the implementation of any applicable GHG reduction measures and, in fact, facilitates GHG reduction measures by helping to divert waste from landfills. In addition, the Project is consistent with the GHG reduction strategies outlined in CARB's 2022 Scoping Plan.

The net GHG emissions are summarized in Table 2-16. Diversion of organic waste from landfills to composting facilities will result in a net decrease in GHG emissions. The proposed Project does not impede the implementation of any applicable GHG reduction measures and, in fact, facilitates GHG reduction measures by helping to divert waste from landfills. In addition, the Project is consistent with the GHG reduction strategies outlined in CARB's 2022 Scoping Plan.

Proposed projects will be compliant with applicable Best Performance Standards (BPSs), implement additional feasible reduction strategies, be consistent with adopted GHG reduction plans, and implement operational efficiencies. Proposed projects support the goals of applicable GHG reduction plans and policies, such as the CARB 2022 Scoping Plan, by incorporating energy-efficient equipment, diverting waste from landfills, minimizing vehicle trips through routing strategies, and not impeding implementation of any GHG reduction measures (CalRecycle 2019: pgs. 3.8-10,11 and 3.8-15,16,17,18).

IMPACT: Less Than Significant

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ATTACHMENT 1 – CALEEMOD CONSTRUCTION EMISSIONS

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CalRecycle Composting Small Facilities- Bay Area Air District Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	CalRecycle Composting Small Facilities- Bay Area Air District
Construction Start Date	1/4/2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00000
Precipitation (days)	25.8000
Location	1601 Dixon Landing Rd, Milpitas, CA 95035, USA
County	Santa Clara
City	San Jose
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1796
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.45

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	163.190	1000sqft	3.74633	160.000	0.00000	—	—	Composting Area with one 8x20 Maintenance Building
General Office Building	0.16000	1000sqft	0.00367	160.000	0.00000	—	—	Administrative Building
Other Asphalt Surfaces	54.4500	1000sqft	1.25000	0.00000	0.00000	—	—	Parking and other paved surfaces

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.03025	9.39283	12.9430	0.02341	0.33659	0.00135	0.33794	0.30967	0.00033	0.31000	—	2,399.42	2,399.42	0.09733	0.01969	0.00628	2,407.72
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Unmit.	60.8525	28.0156	28.8114	0.04891	1.17173	7.81090	8.98263	1.07799	3.97386	5.05186	—	5,431.65	5,431.65	0.21799	0.04865	0.01439	5,451.61
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.85485	6.20275	8.41696	0.01485	0.22681	0.18800	0.41482	0.20867	0.08737	0.29604	—	1,539.94	1,539.94	0.06222	0.01302	0.02009	1,545.40
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.88601	1.13200	1.53609	0.00271	0.04139	0.03431	0.07570	0.03808	0.01594	0.05403	—	254.954	254.954	0.01030	0.00216	0.00333	255.858

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.03025	9.39283	12.9430	0.02341	0.33659	0.00135	0.33794	0.30967	0.00033	0.31000	—	2,399.42	2,399.42	0.09733	0.01969	0.00628	2,407.72
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	60.8525	28.0156	28.8114	0.04891	1.17173	7.81090	8.98263	1.07799	3.97386	5.05186	—	5,431.65	5,431.65	0.21799	0.04865	0.01439	5,451.61
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.85485	6.20275	8.41696	0.01485	0.22681	0.18800	0.41482	0.20867	0.08737	0.29604	—	1,539.94	1,539.94	0.06222	0.01302	0.02009	1,545.40

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.88601	1.13200	1.53609	0.00271	0.04139	0.03431	0.07570	0.03808	0.01594	0.05403	—	254.954	254.954	0.01030	0.00216	0.00333	255.858

2.2.2. Onsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.02988	9.39093	12.9379	0.02340	0.33657	0.00000	0.33657	0.30965	0.00000	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	0.00000	2,405.30
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	60.8525	27.9724	28.2794	0.04891	1.17173	7.66623	8.83797	1.07799	3.93995	5.01795	—	5,297.82	5,297.82	0.21490	0.04298	0.00000	5,316.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.85055	6.19789	8.36768	0.01485	0.22680	0.17462	0.40143	0.20866	0.08423	0.29288	—	1,526.66	1,526.66	0.06193	0.01239	0.00000	1,531.90
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.88523	1.13112	1.52710	0.00271	0.04139	0.03187	0.07326	0.03808	0.01537	0.05345	—	252.756	252.756	0.01025	0.00205	0.00000	253.623

2.2.3. Offsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00037	0.00190	0.00504	0.00001	0.00002	0.00135	0.00137	0.00002	0.00033	0.00035	—	2.33945	2.33945	0.00009	0.00024	0.00628	2.41981
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.05366	0.04934	0.60808	0.00001	0.00002	0.16533	0.16533	0.00002	0.03875	0.03875	—	152.948	152.948	0.00353	0.00648	0.01439	154.982
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00430	0.00486	0.04927	0.00001	0.00001	0.01338	0.01339	0.00001	0.00314	0.00315	—	13.2813	13.2813	0.00029	0.00064	0.02009	13.4986
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00078	0.00089	0.00899	< 0.000005	< 0.000005	0.00244	0.00244	< 0.000005	0.00057	0.00058	—	2.19888	2.19888	0.00005	0.00011	0.00333	2.23484

3. Construction Emissions Details

3.1. Site Preparation (2027)

3.1.1. Onsite - Unmitigated

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

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.05170	27.9724	28.2794	0.04891	1.17173	—	1.17173	1.07799	—	1.07799	—	5,297.82	5,297.82	0.21490	0.04298	—	5,316.00
Dust From Material Movement	—	—	—	—	—	7.66623	7.66623	—	3.93995	3.93995	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04180	0.38318	0.38739	0.00067	0.01605	—	0.01605	0.01477	—	0.01477	—	72.5729	72.5729	0.00294	0.00059	—	72.8219
Dust From Material Movement	—	—	—	—	—	0.10502	0.10502	—	0.05397	0.05397	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00763	0.06993	0.07070	0.00012	0.00293	—	0.00293	0.00269	—	0.00269	—	12.0153	12.0153	0.00049	0.00010	—	12.0565

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Dust From Material Movement	—	—	—	—	—	0.01917	0.01917	—	0.00985	0.00985	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04695	0.04317	0.53207	0.00000	0.00000	0.14466	0.14466	0.00000	0.03391	0.03391	—	133.829	133.829	0.00309	0.00567	0.01259	135.609
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00063	0.00058	0.00722	0.00000	0.00000	0.00195	0.00195	0.00000	0.00046	0.00046	—	1.85340	1.85340	0.00004	0.00008	0.00286	1.88034
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00012	0.00011	0.00132	0.00000	0.00000	0.00036	0.00036	0.00000	0.00008	0.00008	—	0.30685	0.30685	0.00001	0.00001	0.00047	0.31131

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2. Grading (2027)

3.2.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.58640	14.2321	17.2743	0.02733	0.59767	—	0.59767	0.54986	—	0.54986	—	2,960.07	2,960.07	0.12007	0.02401	—	2,970.23
Dust From Material Movement	—	—	—	—	—	3.17580	3.17580	—	1.38031	1.38031	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03477	0.31194	0.37862	0.00060	0.01310	—	0.01310	0.01205	—	0.01205	—	64.8783	64.8783	0.00263	0.00053	—	65.1009

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Dust From Material Movement	—	—	—	—	—	0.06961	0.06961	—	0.03025	0.03025	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00635	0.05693	0.06910	0.00011	0.00239	—	0.00239	0.00220	—	0.00220	—	10.7413	10.7413	0.00044	0.00009	—	10.7782
Dust From Material Movement	—	—	—	—	—	0.01270	0.01270	—	0.00552	0.00552	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04025	0.03700	0.45606	0.00000	0.00000	0.12400	0.12400	0.00000	0.02906	0.02906	—	114.711	114.711	0.00265	0.00486	0.01079	116.236
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00087	0.00080	0.00990	0.00000	0.00000	0.00267	0.00267	0.00000	0.00063	0.00063	—	2.54181	2.54181	0.00005	0.00011	0.00393	2.57876
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00016	0.00015	0.00181	0.00000	0.00000	0.00049	0.00049	0.00000	0.00011	0.00011	—	0.42083	0.42083	0.00001	0.00002	0.00065	0.42694
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3. Building Construction (2027)

3.3.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56432	5.14572	7.08929	0.01282	0.18442	—	0.18442	0.16967	—	0.16967	—	1,313.47	1,313.47	0.05328	0.01066	—	1,317.97
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10299	0.93909	1.29379	0.00234	0.03366	—	0.03366	0.03096	—	0.03096	—	217.459	217.459	0.00882	0.00176	—	218.206
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00033	0.00025	0.00422	0.00000	0.00000	0.00098	0.00098	0.00000	0.00023	0.00023	—	0.97733	0.97733	0.00002	0.00004	0.00328	0.99243

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Vendor	0.00004	0.00165	0.00081	0.00001	0.00002	0.00037	0.00039	0.00002	0.00010	0.00012	—	1.36213	1.36213	0.00008	0.00020	0.00300	1.42738
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00032	0.00029	0.00360	0.00000	0.00000	0.00098	0.00098	0.00000	0.00023	0.00023	—	0.90545	0.90545	0.00002	0.00004	0.00009	0.91749
Vendor	0.00004	0.00173	0.00084	0.00001	0.00002	0.00037	0.00039	0.00002	0.00010	0.00012	—	1.36306	1.36306	0.00008	0.00020	0.00008	1.42570
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00017	0.00016	0.00195	0.00000	0.00000	0.00053	0.00053	0.00000	0.00012	0.00012	—	0.50158	0.50158	0.00001	0.00002	0.00078	0.50887
Vendor	0.00002	0.00093	0.00045	0.00001	0.00001	0.00020	0.00021	0.00001	0.00006	0.00007	—	0.74659	0.74659	0.00004	0.00011	0.00071	0.78159
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00003	0.00003	0.00036	0.00000	0.00000	0.00010	0.00010	0.00000	0.00002	0.00002	—	0.08304	0.08304	< 0.000005	< 0.000005	0.00013	0.08425
Vendor	< 0.000005	0.00017	0.00008	< 0.000005	< 0.000005	0.00004	0.00004	< 0.000005	0.00001	0.00001	—	0.12361	0.12361	0.00001	0.00002	0.00012	0.12940
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4. Paving (2027)

3.4.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66333	6.08588	8.82716	0.01296	0.24176	—	0.24176	0.22242	—	0.22242	—	1,350.39	1,350.39	0.05478	0.01096	—	1,355.03
Paving	0.18194	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03271	0.30013	0.43531	0.00064	0.01192	—	0.01192	0.01097	—	0.01097	—	66.5947	66.5947	0.00270	0.00054	—	66.8232
Paving	0.00897	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00597	0.05477	0.07944	0.00012	0.00218	—	0.00218	0.00200	—	0.00200	—	11.0255	11.0255	0.00045	0.00009	—	11.0633
Paving	0.00164	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05366	0.04934	0.60808	0.00000	0.00000	0.16533	0.16533	0.00000	0.03875	0.03875	—	152.948	152.948	0.00353	0.00648	0.01439	154.982
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00260	0.00239	0.02970	0.00000	0.00000	0.00802	0.00802	0.00000	0.00188	0.00188	—	7.62542	7.62542	0.00015	0.00032	0.01179	7.73627
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00048	0.00044	0.00542	0.00000	0.00000	0.00146	0.00146	0.00000	0.00034	0.00034	—	1.26248	1.26248	0.00003	0.00005	0.00195	1.28083
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5. Architectural Coating (2027)

3.5.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11335	0.83116	1.12539	0.00173	0.01905	—	0.01905	0.01752	—	0.01752	—	133.513	133.513	0.00542	0.00108	—	133.971
Architectural Coatings	60.7391	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00776	0.05693	0.07708	0.00012	0.00130	—	0.00130	0.00120	—	0.00120	—	9.14471	9.14471	0.00037	0.00007	—	9.17609
Architectural Coatings	4.16021	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00142	0.01039	0.01407	0.00002	0.00024	—	0.00024	0.00022	—	0.00022	—	1.51401	1.51401	0.00006	0.00001	—	1.51921
Architectural Coatings	0.75924	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00006	0.00006	0.00072	0.00000	0.00000	0.00020	0.00020	0.00000	0.00005	0.00005	—	0.18109	0.18109	< 0.000005	0.00001	0.00002	0.18350
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.000005	< 0.000005	0.00005	0.00000	0.00000	0.00001	0.00001	0.00000	< 0.000005	< 0.000005	—	0.01254	0.01254	< 0.000005	< 0.000005	0.00002	0.01272
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.000005	< 0.000005	0.00001	0.00000	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	—	0.00208	0.00208	< 0.000005	< 0.000005	< 0.000005	0.00211
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

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	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Site Preparation	Site Preparation	1/4/2027	1/8/2027	5.00000	5.00000	—
Grading	Grading	1/11/2027	1/20/2027	5.00000	8.00000	—
Building Construction	Building Construction	1/21/2027	10/27/2027	5.00000	200.000	—
Paving	Paving	10/28/2027	11/22/2027	5.00000	18.0000	—
Architectural Coating	Architectural Coating	11/23/2027	12/27/2027	5.00000	25.0000	—

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
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00000	8.00000	367.000	0.40000
Site Preparation	Tractors/Loaders/ Backhoes	Diesel	Average	4.00000	8.00000	84.0000	0.37000
Grading	Excavators	Diesel	Average	1.000000	8.00000	36.0000	0.38000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Tractors/Loaders/ Backhoes	Diesel	Average	3.00000	8.00000	84.0000	0.37000
Building Construction	Cranes	Diesel	Average	1.000000	7.00000	367.000	0.29000
Building Construction	Forklifts	Diesel	Average	3.00000	8.00000	82.0000	0.20000

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000
Building Construction	Tractors/Loaders/ Backhoes	Diesel	Average	3.00000	7.00000	84.0000	0.37000
Building Construction	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Paving	Cement and Mortar Mixers	Diesel	Average	2.00000	6.00000	10.00000	0.56000
Paving	Pavers	Diesel	Average	1.000000	8.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	2.00000	6.00000	89.0000	0.36000
Paving	Rollers	Diesel	Average	2.00000	6.00000	36.0000	0.38000
Paving	Tractors/Loaders/ Backhoes	Diesel	Average	1.000000	8.00000	84.0000	0.37000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	6.00000	37.0000	0.48000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	Worker	17.5000	11.7000	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40000	HHDT,MHDT
Site Preparation	Hauling	0.00000	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	15.0000	11.7000	LDA,LDT1,LDT2
Grading	Vendor	—	8.40000	HHDT,MHDT

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Grading	Hauling	0.00000	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	0.11840	11.7000	LDA,LDT1,LDT2
Building Construction	Vendor	0.05245	8.40000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	20.0000	11.7000	LDA,LDT1,LDT2
Paving	Vendor	—	8.40000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	0.02368	11.7000	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	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%

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
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	0.00000	0.00000	245,025	81,675.0	817.000

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	7.50000	0.00000	0.00000
Grading	—	—	8.00000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	1.25000

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	General Heavy Industry	0.00000	0%

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	General Office Building	0.00000	0%
Paving	Other Asphalt Surfaces	1.25000	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	0.00000	203.983	0.03300	0.00400

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	14.7300	annual days of extreme heat
Extreme Precipitation	3.65000	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	14.8900	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	3	0	0	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

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

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	15.0467
AQ-PM	19.4275
AQ-DPM	28.9981
Drinking Water	39.0408
Lead Risk Housing	50.5860
Pesticides	0.00000

Indicator	Result for Project Census Tract
Toxic Releases	30.3201
Traffic	94.1250
Effect Indicators	—
CleanUp Sites	99.3841
Groundwater	94.1723
Haz Waste Facilities/Generators	93.2098
Impaired Water Bodies	91.8732
Solid Waste	99.9542
Sensitive Population	—
Asthma	37.9611
Cardio-vascular	40.0050
Low Birth Weights	98.8453
Socioeconomic Factor Indicators	—
Education	73.4244
Housing	23.8023
Linguistic	—
Poverty	27.8518
Unemployment	36.4394

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	65.64865905
Employed	58.03926601
Median HI	67.43231105
Education	—
Bachelor's or higher	46.42627999
High school enrollment	100
Preschool enrollment	71.06377518
Transportation	—
Auto Access	50.77633774
Active commuting	35.32657513
Social	—
2-parent households	66.12344412
Voting	58.42422687
Neighborhood	—
Alcohol availability	48.03028359
Park access	58.14192224
Retail density	62.49197998
Supermarket access	14.28204799
Tree canopy	39.85628128
Housing	—

Indicator	Result for Project Census Tract
Homeownership	46.75991274
Housing habitability	62.22250738
Low-inc homeowner severe housing cost burden	75.25984858
Low-inc renter severe housing cost burden	47.02938535
Uncrowded housing	42.73065572
Health Outcomes	—
Insured adults	53.9715129
Arthritis	0.0
Asthma ER Admissions	20.1
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	80.1
Cognitively Disabled	95.5
Physically Disabled	78.7
Heart Attack ER Admissions	65.7
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0

Indicator	Result for Project Census Tract
Obesity	0.0
Pedestrian Injuries	96.4
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	3.9
Children	55.0
Elderly	87.4
English Speaking	31.8
Foreign-born	65.1
Outdoor Workers	23.6
Climate Change Adaptive Capacity	—
Impervious Surface Cover	21.5
Traffic Density	88.2
Traffic Access	46.8
Other Indices	—

Indicator	Result for Project Census Tract
Hardship	40.7
Other Decision Support	—
2016 Voting	69.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	67.0000
Healthy Places Index Score for Project Location (b)	64.0000
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

8.1. Justifications

Screen	Justification
Land Use	Small facilities ~ 5 acres
Construction: Construction Phases	No demolition
Construction: Architectural Coatings	Parking areas ~ 25% of all paved areas.

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Building Area	sq. ft	163,190	160.000
Landscape Area	sq. ft	—	0.00000

8.4. Construction

8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Site Preparation	Site Preparation	Start Date	2/2/2027	1/4/2027
Site Preparation	Site Preparation	End Date	2/9/2027	1/8/2027
Grading	Grading	Start Date	2/10/2027	1/11/2027
Grading	Grading	End Date	2/21/2027	1/20/2027
Building Construction	Building Construction	Start Date	2/22/2027	1/21/2027

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Building Construction	Building Construction	End Date	1/10/2028	10/27/2027
Building Construction	Building Construction	Work Days per Phase	230.000	200.000
Paving	Paving	Start Date	1/11/2028	10/28/2027
Paving	Paving	End Date	2/5/2028	11/22/2027
Architectural Coating	Architectural Coating	Start Date	2/6/2028	11/23/2027
Architectural Coating	Architectural Coating	End Date	3/2/2028	12/27/2027
Architectural Coating	Architectural Coating	Work Days per Phase	18.0000	25.0000

8.4.8. Architectural Coatings

Phase Name	Model Parameter	Units	Default Value	New Value
Architectural Coating	Residential Interior VOC	g/L	100.0000	50.0000
Architectural Coating	Residential Exterior VOC	g/L	150.000	50.0000
Architectural Coating	Non-Residential Exterior VOC	g/L	150.000	100.0000
Architectural Coating	Non-Residential Interior Area	sq ft	480.000	245,025
Architectural Coating	Non-Residential Exterior Area	sq ft	160.000	81,675.0
Architectural Coating	Parking Area	sq ft	3,267.00	817.000

CalRecycle Composting Small Facilities- SJVAPCD Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	CalRecycle Composting Small Facilities- SJVAPCD
Construction Start Date	1/4/2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.90000
Precipitation (days)	24.4000
Location	24487 Rd 140, Tulare, CA 93274, USA
County	Tulare
City	Unincorporated
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2747
EDFZ	9
Electric Utility	Eastside Power Authority
Gas Utility	Southern California Gas
App Version	2022.1.1.45

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	163.190	1000sqft	3.74633	160.000	0.00000	—	—	Composting Area with one 8x20 Maintenance Building
General Office Building	0.16000	1000sqft	0.00367	160.000	0.00000	—	—	Administrative Building
Other Asphalt Surfaces	54.4500	1000sqft	1.25000	0.00000	0.00000	—	—	Parking and other paved surfaces

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.03046	9.39268	12.9433	0.02340	0.33659	0.00094	0.33753	0.30966	0.00023	0.30990	—	2,398.85	2,398.85	0.09730	0.01964	0.00467	2,407.14
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Unmit.	60.8526	28.0261	28.8326	0.04891	1.17173	7.76144	8.93317	1.07799	3.96227	5.04026	—	5,387.45	5,387.45	0.21915	0.04749	0.00990	5,407.09
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.85710	6.20331	8.42103	0.01485	0.22681	0.18347	0.41028	0.20867	0.08630	0.29497	—	1,535.86	1,535.86	0.06254	0.01290	0.01391	1,541.28
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.88642	1.13210	1.53684	0.00271	0.04139	0.03348	0.07488	0.03808	0.01575	0.05383	—	254.280	254.280	0.01035	0.00213	0.00230	255.177

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.03046	9.39268	12.9433	0.02340	0.33659	0.00094	0.33753	0.30966	0.00023	0.30990	—	2,398.85	2,398.85	0.09730	0.01964	0.00467	2,407.14
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	60.8526	28.0261	28.8326	0.04891	1.17173	7.76144	8.93317	1.07799	3.96227	5.04026	—	5,387.45	5,387.45	0.21915	0.04749	0.00990	5,407.09
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.85710	6.20331	8.42103	0.01485	0.22681	0.18347	0.41028	0.20867	0.08630	0.29497	—	1,535.86	1,535.86	0.06254	0.01290	0.01391	1,541.28

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.88642	1.13210	1.53684	0.00271	0.04139	0.03348	0.07488	0.03808	0.01575	0.05383	—	254.280	254.280	0.01035	0.00213	0.00230	255.177

2.2.2. Onsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.02988	9.39093	12.9379	0.02340	0.33657	0.00000	0.33657	0.30965	0.00000	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	0.00000	2,405.30
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	60.8525	27.9724	28.2794	0.04891	1.17173	7.66623	8.83797	1.07799	3.93995	5.01795	—	5,297.82	5,297.82	0.21490	0.04298	0.00000	5,316.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.85055	6.19789	8.36768	0.01485	0.22680	0.17462	0.40143	0.20866	0.08423	0.29288	—	1,526.66	1,526.66	0.06193	0.01239	0.00000	1,531.90
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.88523	1.13112	1.52710	0.00271	0.04139	0.03187	0.07326	0.03808	0.01537	0.05345	—	252.756	252.756	0.01025	0.00205	0.00000	253.623

2.2.3. Offsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00058	0.00174	0.00532	0.00001	0.00002	0.00094	0.00096	0.00002	0.00023	0.00025	—	1.76815	1.76815	0.00006	0.00020	0.00467	1.83316
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.07910	0.06133	0.63233	0.00001	0.00002	0.10881	0.10881	0.00002	0.02550	0.02550	—	102.438	102.438	0.00485	0.00516	0.00990	104.106
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00654	0.00542	0.05335	< 0.000005	0.00001	0.00884	0.00885	0.00001	0.00208	0.00209	—	9.20558	9.20558	0.00061	0.00051	0.01391	9.38654
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00119	0.00099	0.00974	< 0.000005	< 0.000005	0.00161	0.00162	< 0.000005	0.00038	0.00038	—	1.52409	1.52409	0.00010	0.00008	0.00230	1.55405

3. Construction Emissions Details

3.1. Site Preparation (2027)

3.1.1. Onsite - Unmitigated

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

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.05170	27.9724	28.2794	0.04891	1.17173	—	1.17173	1.07799	—	1.07799	—	5,297.82	5,297.82	0.21490	0.04298	—	5,316.00
Dust From Material Movement	—	—	—	—	—	7.66623	7.66623	—	3.93995	3.93995	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04180	0.38318	0.38739	0.00067	0.01605	—	0.01605	0.01477	—	0.01477	—	72.5729	72.5729	0.00294	0.00059	—	72.8219
Dust From Material Movement	—	—	—	—	—	0.10502	0.10502	—	0.05397	0.05397	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00763	0.06993	0.07070	0.00012	0.00293	—	0.00293	0.00269	—	0.00269	—	12.0153	12.0153	0.00049	0.00010	—	12.0565

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Dust From Material Movement	—	—	—	—	—	0.01917	0.01917	—	0.00985	0.00985	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06921	0.05367	0.55329	0.00000	0.00000	0.09521	0.09521	0.00000	0.02232	0.02232	—	89.6332	89.6332	0.00424	0.00451	0.00867	91.0931
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00096	0.00068	0.00784	0.00000	0.00000	0.00128	0.00128	0.00000	0.00030	0.00030	—	1.27335	1.27335	0.00009	0.00006	0.00197	1.29595
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00018	0.00012	0.00143	0.00000	0.00000	0.00023	0.00023	0.00000	0.00005	0.00005	—	0.21082	0.21082	0.00001	0.00001	0.00033	0.21456

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2. Grading (2027)

3.2.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.58640	14.2321	17.2743	0.02733	0.59767	—	0.59767	0.54986	—	0.54986	—	2,960.07	2,960.07	0.12007	0.02401	—	2,970.23
Dust From Material Movement	—	—	—	—	—	3.17580	3.17580	—	1.38031	1.38031	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03477	0.31194	0.37862	0.00060	0.01310	—	0.01310	0.01205	—	0.01205	—	64.8783	64.8783	0.00263	0.00053	—	65.1009

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Dust From Material Movement	—	—	—	—	—	0.06961	0.06961	—	0.03025	0.03025	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00635	0.05693	0.06910	0.00011	0.00239	—	0.00239	0.00220	—	0.00220	—	10.7413	10.7413	0.00044	0.00009	—	10.7782
Dust From Material Movement	—	—	—	—	—	0.01270	0.01270	—	0.00552	0.00552	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05933	0.04600	0.47425	0.00000	0.00000	0.08161	0.08161	0.00000	0.01913	0.01913	—	76.8285	76.8285	0.00364	0.00387	0.00743	78.0798
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00132	0.00093	0.01076	0.00000	0.00000	0.00176	0.00176	0.00000	0.00041	0.00041	—	1.74630	1.74630	0.00012	0.00008	0.00271	1.77731
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00024	0.00017	0.00196	0.00000	0.00000	0.00032	0.00032	0.00000	0.00008	0.00008	—	0.28912	0.28912	0.00002	0.00001	0.00045	0.29425
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3. Building Construction (2027)

3.3.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56432	5.14572	7.08929	0.01282	0.18442	—	0.18442	0.16967	—	0.16967	—	1,313.47	1,313.47	0.05328	0.01066	—	1,317.97
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10299	0.93909	1.29379	0.00234	0.03366	—	0.03366	0.03096	—	0.03096	—	217.459	217.459	0.00882	0.00176	—	218.206
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00054	0.00029	0.00478	0.00000	0.00000	0.00064	0.00064	0.00000	0.00015	0.00015	—	0.68497	0.68497	0.00004	0.00003	0.00226	0.69736

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Vendor	0.00004	0.00145	0.00054	0.00001	0.00002	0.00030	0.00031	0.00002	0.00008	0.00010	—	1.08317	1.08317	0.00002	0.00017	0.00242	1.13580
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00047	0.00036	0.00374	0.00000	0.00000	0.00064	0.00064	0.00000	0.00015	0.00015	—	0.60643	0.60643	0.00003	0.00003	0.00006	0.61631
Vendor	0.00004	0.00155	0.00056	0.00001	0.00002	0.00030	0.00031	0.00002	0.00008	0.00010	—	1.08440	1.08440	0.00002	0.00017	0.00006	1.13465
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00026	0.00018	0.00212	0.00000	0.00000	0.00035	0.00035	0.00000	0.00008	0.00008	—	0.34460	0.34460	0.00002	0.00002	0.00053	0.35072
Vendor	0.00002	0.00083	0.00030	< 0.000005	0.00001	0.00016	0.00017	0.00001	0.00004	0.00005	—	0.59380	0.59380	0.00001	0.00009	0.00057	0.62187
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00005	0.00003	0.00039	0.00000	0.00000	0.00006	0.00006	0.00000	0.00001	0.00001	—	0.05705	0.05705	< 0.000005	< 0.000005	0.00009	0.05807
Vendor	< 0.000005	0.00015	0.00005	< 0.000005	< 0.000005	0.00003	0.00003	< 0.000005	0.00001	0.00001	—	0.09831	0.09831	< 0.000005	0.00002	0.00009	0.10296
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4. Paving (2027)

3.4.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66333	6.08588	8.82716	0.01296	0.24176	—	0.24176	0.22242	—	0.22242	—	1,350.39	1,350.39	0.05478	0.01096	—	1,355.03
Paving	0.18194	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03271	0.30013	0.43531	0.00064	0.01192	—	0.01192	0.01097	—	0.01097	—	66.5947	66.5947	0.00270	0.00054	—	66.8232
Paving	0.00897	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00597	0.05477	0.07944	0.00012	0.00218	—	0.00218	0.00200	—	0.00200	—	11.0255	11.0255	0.00045	0.00009	—	11.0633
Paving	0.00164	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07910	0.06133	0.63233	0.00000	0.00000	0.10881	0.10881	0.00000	0.02550	0.02550	—	102.438	102.438	0.00485	0.00516	0.00990	104.106
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00397	0.00279	0.03227	0.00000	0.00000	0.00528	0.00528	0.00000	0.00124	0.00124	—	5.23891	5.23891	0.00036	0.00025	0.00812	5.33192
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00072	0.00051	0.00589	0.00000	0.00000	0.00096	0.00096	0.00000	0.00023	0.00023	—	0.86736	0.86736	0.00006	0.00004	0.00134	0.88276
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5. Architectural Coating (2027)

3.5.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11335	0.83116	1.12539	0.00173	0.01905	—	0.01905	0.01752	—	0.01752	—	133.513	133.513	0.00542	0.00108	—	133.971
Architectural Coatings	60.7391	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00776	0.05693	0.07708	0.00012	0.00130	—	0.00130	0.00120	—	0.00120	—	9.14471	9.14471	0.00037	0.00007	—	9.17609
Architectural Coatings	4.16021	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00142	0.01039	0.01407	0.00002	0.00024	—	0.00024	0.00022	—	0.00022	—	1.51401	1.51401	0.00006	0.00001	—	1.51921
Architectural Coatings	0.75924	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00009	0.00007	0.00075	0.00000	0.00000	0.00013	0.00013	0.00000	0.00003	0.00003	—	0.12129	0.12129	0.00001	0.00001	0.00001	0.12326
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00001	< 0.000005	0.00005	0.00000	0.00000	0.00001	0.00001	0.00000	< 0.000005	< 0.000005	—	0.00862	0.00862	< 0.000005	< 0.000005	0.00001	0.00877
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.000005	< 0.000005	0.00001	0.00000	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	—	0.00143	0.00143	< 0.000005	< 0.000005	< 0.000005	0.00145
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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
Site Preparation	Site Preparation	1/4/2027	1/8/2027	5.00000	5.00000	—
Grading	Grading	1/11/2027	1/20/2027	5.00000	8.00000	—
Building Construction	Building Construction	1/21/2027	10/27/2027	5.00000	200.000	—
Paving	Paving	10/28/2027	11/22/2027	5.00000	18.0000	—
Architectural Coating	Architectural Coating	11/23/2027	12/27/2027	5.00000	25.0000	—

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
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00000	8.00000	367.000	0.40000
Site Preparation	Tractors/Loaders/ Backhoes	Diesel	Average	4.00000	8.00000	84.0000	0.37000
Grading	Excavators	Diesel	Average	1.000000	8.00000	36.0000	0.38000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Tractors/Loaders/ Backhoes	Diesel	Average	3.00000	8.00000	84.0000	0.37000
Building Construction	Cranes	Diesel	Average	1.000000	7.00000	367.000	0.29000
Building Construction	Forklifts	Diesel	Average	3.00000	8.00000	82.0000	0.20000
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000
Building Construction	Tractors/Loaders/ Backhoes	Diesel	Average	3.00000	7.00000	84.0000	0.37000

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Paving	Cement and Mortar Mixers	Diesel	Average	2.00000	6.00000	10.00000	0.56000
Paving	Pavers	Diesel	Average	1.000000	8.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	2.00000	6.00000	89.0000	0.36000
Paving	Rollers	Diesel	Average	2.00000	6.00000	36.0000	0.38000
Paving	Tractors/Loaders/ Backhoes	Diesel	Average	1.000000	8.00000	84.0000	0.37000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	6.00000	37.0000	0.48000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	Worker	17.5000	7.70000	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.80000	HHDT,MHDT
Site Preparation	Hauling	0.00000	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	15.0000	7.70000	LDA,LDT1,LDT2
Grading	Vendor	—	6.80000	HHDT,MHDT
Grading	Hauling	0.00000	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	Worker	0.11840	7.70000	LDA,LDT1,LDT2
Building Construction	Vendor	0.05245	6.80000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	20.0000	7.70000	LDA,LDT1,LDT2
Paving	Vendor	—	6.80000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	0.02368	7.70000	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.80000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	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	0.00000	0.00000	245,025	81,675.0	817.000

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	7.50000	0.00000	0.00000
Grading	—	—	8.00000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	1.25000

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	General Heavy Industry	0.00000	0%
Paving	General Office Building	0.00000	0%
Paving	Other Asphalt Surfaces	1.25000	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	0.00000	453.209	0.03300	0.00400

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	34.8500	annual days of extreme heat
Extreme Precipitation	1.000000	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00000	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	1	0	0	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	0	0	0	N/A

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
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	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction

measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	84.5800
AQ-PM	96.7517
AQ-DPM	33.6279
Drinking Water	99.6128
Lead Risk Housing	15.2615
Pesticides	88.2414
Toxic Releases	43.6234
Traffic	19.7875
Effect Indicators	—
CleanUp Sites	46.3419
Groundwater	99.3691
Haz Waste Facilities/Generators	74.9040

Indicator	Result for Project Census Tract
Impaired Water Bodies	43.7841
Solid Waste	96.4490
Sensitive Population	—
Asthma	76.7572
Cardio-vascular	89.0578
Low Birth Weights	38.1832
Socioeconomic Factor Indicators	—
Education	62.6803
Housing	4.03042
Linguistic	40.8986
Poverty	45.7412
Unemployment	32.2749

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	55.58834852
Employed	72.42397023
Median HI	63.26190171
Education	—

Indicator	Result for Project Census Tract
Bachelor's or higher	38.31643783
High school enrollment	26.43397921
Preschool enrollment	45.68202233
Transportation	—
Auto Access	66.18760426
Active commuting	33.33761068
Social	—
2-parent households	75.4908251
Voting	60.23354292
Neighborhood	—
Alcohol availability	80.88027717
Park access	8.37931477
Retail density	8.186834339
Supermarket access	23.54677274
Tree canopy	22.77685102
Housing	—
Homeownership	68.42037726
Housing habitability	85.29449506
Low-inc homeowner severe housing cost burden	79.4174259
Low-inc renter severe housing cost burden	89.285256
Uncrowded housing	43.11561658

Indicator	Result for Project Census Tract
Health Outcomes	—
Insured adults	53.31707943
Arthritis	0.0
Asthma ER Admissions	18.9
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	57.4
Cognitively Disabled	50.3
Physically Disabled	30.9
Heart Attack ER Admissions	16.9
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	39.5
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—

Indicator	Result for Project Census Tract
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	23.1
Elderly	75.9
English Speaking	45.2
Foreign-born	27.4
Outdoor Workers	17.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	83.1
Traffic Density	26.6
Traffic Access	0.0
Other Indices	—
Hardship	47.2
Other Decision Support	—
2016 Voting	64.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	79.0000
Healthy Places Index Score for Project Location (b)	55.0000
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	Small facilities ~ 5 acres
Construction: Construction Phases	No demolition

Screen	Justification
Construction: Architectural Coatings	Parking areas ~ 25% of all paved areas.

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Building Area	sq. ft	163,190	160.000
Landscape Area	sq. ft	—	0.00000

8.4. Construction

8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Site Preparation	Site Preparation	Start Date	2/2/2027	1/4/2027
Site Preparation	Site Preparation	End Date	2/9/2027	1/8/2027
Grading	Grading	Start Date	2/10/2027	1/11/2027
Grading	Grading	End Date	2/21/2027	1/20/2027
Building Construction	Building Construction	Start Date	2/22/2027	1/21/2027
Building Construction	Building Construction	End Date	1/10/2028	10/27/2027
Building Construction	Building Construction	Work Days per Phase	230.000	200.000
Paving	Paving	Start Date	1/11/2028	10/28/2027
Paving	Paving	End Date	2/5/2028	11/22/2027
Architectural Coating	Architectural Coating	Start Date	2/6/2028	11/23/2027

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Architectural Coating	Architectural Coating	End Date	3/2/2028	12/27/2027
Architectural Coating	Architectural Coating	Work Days per Phase	18.0000	25.0000

8.4.8. Architectural Coatings

Phase Name	Model Parameter	Units	Default Value	New Value
Architectural Coating	Non-Residential Interior VOC	g/L	50.0000	100.0000
Architectural Coating	Non-Residential Exterior VOC	g/L	50.0000	100.0000
Architectural Coating	Non-Residential Interior Area	sq ft	480.000	245,025
Architectural Coating	Non-Residential Exterior Area	sq ft	160.000	81,675.0
Architectural Coating	Parking Area	sq ft	3,267.00	817.000

CalRecycle Composting Small Facilities- SCAQMD Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	CalRecycle Composting Small Facilities- SCAQMD
Construction Start Date	1/4/2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	0.50000
Precipitation (days)	18.4000
Location	2550 E 27th St, Vernon, CA 90058, USA
County	Los Angeles-South Coast
City	Vernon
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4117
EDFZ	7
Electric Utility	City of Vernon Municipal Light Department
Gas Utility	City of Vernon Gas System
App Version	2022.1.1.45

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	163.190	1000sqft	3.74633	160.000	0.00000	—	—	Composting Area with one 8x20 Maintenance Building
General Office Building	0.16000	1000sqft	0.00367	160.000	0.00000	—	—	Administrative Building
Other Asphalt Surfaces	54.4500	1000sqft	1.25000	0.00000	0.00000	—	—	Parking and other paved surfaces

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.03035	9.39307	12.9459	0.02341	0.33659	0.00200	0.33858	0.30966	0.00049	0.31015	—	2,400.25	2,400.25	0.09737	0.01972	0.00909	2,408.58
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Unmit.	60.8526	28.0478	29.1700	0.04891	1.17173	7.89497	9.06671	1.07799	3.99357	5.07157	—	5,518.30	5,518.30	0.21799	0.05128	0.02146	5,539.05
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.85623	6.20587	8.45485	0.01485	0.22681	0.19581	0.42262	0.20866	0.08920	0.29786	—	1,548.26	1,548.26	0.06225	0.01328	0.02992	1,553.81
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.88626	1.13257	1.54301	0.00271	0.04139	0.03574	0.07713	0.03808	0.01628	0.05436	—	256.333	256.333	0.01031	0.00220	0.00495	257.250

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.03035	9.39307	12.9459	0.02341	0.33659	0.00200	0.33858	0.30966	0.00049	0.31015	—	2,400.25	2,400.25	0.09737	0.01972	0.00909	2,408.58
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	60.8526	28.0478	29.1700	0.04891	1.17173	7.89497	9.06671	1.07799	3.99357	5.07157	—	5,518.30	5,518.30	0.21799	0.05128	0.02146	5,539.05
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.85623	6.20587	8.45485	0.01485	0.22681	0.19581	0.42262	0.20866	0.08920	0.29786	—	1,548.26	1,548.26	0.06225	0.01328	0.02992	1,553.81

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.88626	1.13257	1.54301	0.00271	0.04139	0.03574	0.07713	0.03808	0.01628	0.05436	—	256.333	256.333	0.01031	0.00220	0.00495	257.250

2.2.2. Onsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.02988	9.39093	12.9379	0.02340	0.33657	0.00000	0.33657	0.30965	0.00000	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	0.00000	2,405.30
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	60.8525	27.9724	28.2794	0.04891	1.17173	7.66623	8.83797	1.07799	3.93995	5.01795	—	5,297.82	5,297.82	0.21490	0.04298	0.00000	5,316.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.85055	6.19789	8.36768	0.01485	0.22680	0.17462	0.40143	0.20866	0.08423	0.29288	—	1,526.66	1,526.66	0.06193	0.01239	0.00000	1,531.90
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.88523	1.13112	1.52710	0.00271	0.04139	0.03187	0.07326	0.03808	0.01537	0.05345	—	252.756	252.756	0.01025	0.00205	0.00000	253.623

2.2.3. Offsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00047	0.00213	0.00793	0.00001	0.00001	0.00200	0.00201	0.00001	0.00049	0.00050	—	3.17699	3.17699	0.00013	0.00028	0.00909	3.27218
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.06967	0.08620	1.01787	0.00001	0.00001	0.26142	0.26142	0.00001	0.06128	0.06128	—	251.980	251.980	0.00353	0.00948	0.02146	254.915
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00567	0.00798	0.08717	0.00001	0.00001	0.02118	0.02119	0.00001	0.00497	0.00498	—	21.6069	21.6069	0.00032	0.00089	0.02992	21.9101
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00104	0.00146	0.01591	< 0.000005	< 0.000005	0.00387	0.00387	< 0.000005	0.00091	0.00091	—	3.57727	3.57727	0.00005	0.00015	0.00495	3.62747

3. Construction Emissions Details

3.1. Site Preparation (2027)

3.1.1. Onsite - Unmitigated

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

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.05170	27.9724	28.2794	0.04891	1.17173	—	1.17173	1.07799	—	1.07799	—	5,297.82	5,297.82	0.21490	0.04298	—	5,316.00
Dust From Material Movement	—	—	—	—	—	7.66623	7.66623	—	3.93995	3.93995	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04180	0.38318	0.38739	0.00067	0.01605	—	0.01605	0.01477	—	0.01477	—	72.5729	72.5729	0.00294	0.00059	—	72.8219
Dust From Material Movement	—	—	—	—	—	0.10502	0.10502	—	0.05397	0.05397	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00763	0.06993	0.07070	0.00012	0.00293	—	0.00293	0.00269	—	0.00269	—	12.0153	12.0153	0.00049	0.00010	—	12.0565

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Dust From Material Movement	—	—	—	—	—	0.01917	0.01917	—	0.00985	0.00985	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06096	0.07543	0.89064	0.00000	0.00000	0.22874	0.22874	0.00000	0.05362	0.05362	—	220.483	220.483	0.00309	0.00829	0.01878	223.051
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00084	0.00103	0.01282	0.00000	0.00000	0.00310	0.00310	0.00000	0.00073	0.00073	—	3.06487	3.06487	0.00004	0.00011	0.00428	3.10407
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00015	0.00019	0.00234	0.00000	0.00000	0.00057	0.00057	0.00000	0.00013	0.00013	—	0.50742	0.50742	0.00001	0.00002	0.00071	0.51391

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2. Grading (2027)

3.2.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.58640	14.2321	17.2743	0.02733	0.59767	—	0.59767	0.54986	—	0.54986	—	2,960.07	2,960.07	0.12007	0.02401	—	2,970.23
Dust From Material Movement	—	—	—	—	—	3.17580	3.17580	—	1.38031	1.38031	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03477	0.31194	0.37862	0.00060	0.01310	—	0.01310	0.01205	—	0.01205	—	64.8783	64.8783	0.00263	0.00053	—	65.1009

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Dust From Material Movement	—	—	—	—	—	0.06961	0.06961	—	0.03025	0.03025	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00635	0.05693	0.06910	0.00011	0.00239	—	0.00239	0.00220	—	0.00220	—	10.7413	10.7413	0.00044	0.00009	—	10.7782
Dust From Material Movement	—	—	—	—	—	0.01270	0.01270	—	0.00552	0.00552	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05225	0.06465	0.76341	0.00000	0.00000	0.19606	0.19606	0.00000	0.04596	0.04596	—	188.985	188.985	0.00265	0.00711	0.01610	191.186
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00115	0.00142	0.01758	0.00000	0.00000	0.00425	0.00425	0.00000	0.00099	0.00099	—	4.20326	4.20326	0.00006	0.00016	0.00587	4.25701
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00021	0.00026	0.00321	0.00000	0.00000	0.00077	0.00077	0.00000	0.00018	0.00018	—	0.69590	0.69590	0.00001	0.00003	0.00097	0.70480
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3. Building Construction (2027)

3.3.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56432	5.14572	7.08929	0.01282	0.18442	—	0.18442	0.16967	—	0.16967	—	1,313.47	1,313.47	0.05328	0.01066	—	1,317.97
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10299	0.93909	1.29379	0.00234	0.03366	—	0.03366	0.03096	—	0.03096	—	217.459	217.459	0.00882	0.00176	—	218.206
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00042	0.00041	0.00711	0.00000	0.00000	0.00155	0.00155	0.00000	0.00036	0.00036	—	1.57346	1.57346	0.00007	0.00006	0.00490	1.59675

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Vendor	0.00005	0.00173	0.00082	0.00001	0.00001	0.00045	0.00046	0.00001	0.00012	0.00014	—	1.60353	1.60353	0.00007	0.00022	0.00418	1.67543
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00041	0.00051	0.00603	0.00000	0.00000	0.00155	0.00155	0.00000	0.00036	0.00036	—	1.49172	1.49172	0.00002	0.00006	0.00013	1.50910
Vendor	0.00005	0.00180	0.00084	0.00001	0.00001	0.00045	0.00046	0.00001	0.00012	0.00014	—	1.60441	1.60441	0.00007	0.00022	0.00011	1.67224
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00023	0.00028	0.00347	0.00000	0.00000	0.00084	0.00084	0.00000	0.00020	0.00020	—	0.82944	0.82944	0.00001	0.00003	0.00116	0.84005
Vendor	0.00003	0.00099	0.00046	0.00001	0.00001	0.00024	0.00025	0.00001	0.00007	0.00007	—	0.87885	0.87885	0.00004	0.00012	0.00099	0.91694
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00004	0.00005	0.00063	0.00000	0.00000	0.00015	0.00015	0.00000	0.00004	0.00004	—	0.13732	0.13732	< 0.000005	0.00001	0.00019	0.13908
Vendor	< 0.000005	0.00018	0.00008	< 0.000005	< 0.000005	0.00004	0.00005	< 0.000005	0.00001	0.00001	—	0.14550	0.14550	0.00001	0.00002	0.00016	0.15181
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4. Paving (2027)

3.4.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66333	6.08588	8.82716	0.01296	0.24176	—	0.24176	0.22242	—	0.22242	—	1,350.39	1,350.39	0.05478	0.01096	—	1,355.03
Paving	0.18194	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03271	0.30013	0.43531	0.00064	0.01192	—	0.01192	0.01097	—	0.01097	—	66.5947	66.5947	0.00270	0.00054	—	66.8232
Paving	0.00897	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00597	0.05477	0.07944	0.00012	0.00218	—	0.00218	0.00200	—	0.00200	—	11.0255	11.0255	0.00045	0.00009	—	11.0633
Paving	0.00164	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06967	0.08620	1.01787	0.00000	0.00000	0.26142	0.26142	0.00000	0.06128	0.06128	—	251.980	251.980	0.00353	0.00948	0.02146	254.915
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00344	0.00425	0.05275	0.00000	0.00000	0.01274	0.01274	0.00000	0.00298	0.00298	—	12.6098	12.6098	0.00017	0.00047	0.01760	12.7710
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00063	0.00078	0.00963	0.00000	0.00000	0.00232	0.00232	0.00000	0.00054	0.00054	—	2.08769	2.08769	0.00003	0.00008	0.00291	2.11439
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5. Architectural Coating (2027)

3.5.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11335	0.83116	1.12539	0.00173	0.01905	—	0.01905	0.01752	—	0.01752	—	133.513	133.513	0.00542	0.00108	—	133.971
Architectural Coatings	60.7391	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00776	0.05693	0.07708	0.00012	0.00130	—	0.00130	0.00120	—	0.00120	—	9.14471	9.14471	0.00037	0.00007	—	9.17609
Architectural Coatings	4.16021	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00142	0.01039	0.01407	0.00002	0.00024	—	0.00024	0.00022	—	0.00022	—	1.51401	1.51401	0.00006	0.00001	—	1.51921
Architectural Coatings	0.75924	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00008	0.00010	0.00121	0.00000	0.00000	0.00031	0.00031	0.00000	0.00007	0.00007	—	0.29834	0.29834	< 0.000005	0.00001	0.00003	0.30182
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00001	0.00001	0.00009	0.00000	0.00000	0.00002	0.00002	0.00000	< 0.000005	< 0.000005	—	0.02074	0.02074	< 0.000005	< 0.000005	0.00003	0.02100
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.000005	< 0.000005	0.00002	0.00000	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	—	0.00343	0.00343	< 0.000005	< 0.000005	< 0.000005	0.00348
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

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	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Site Preparation	Site Preparation	1/4/2027	1/8/2027	5.00000	5.00000	—
Grading	Grading	1/11/2027	1/20/2027	5.00000	8.00000	—
Building Construction	Building Construction	1/21/2027	10/27/2027	5.00000	200.000	—
Paving	Paving	10/28/2027	11/22/2027	5.00000	18.0000	—
Architectural Coating	Architectural Coating	11/23/2027	12/27/2027	5.00000	25.0000	—

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
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00000	8.00000	367.000	0.40000
Site Preparation	Tractors/Loaders/ Backhoes	Diesel	Average	4.00000	8.00000	84.0000	0.37000
Grading	Excavators	Diesel	Average	1.000000	8.00000	36.0000	0.38000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Tractors/Loaders/ Backhoes	Diesel	Average	3.00000	8.00000	84.0000	0.37000
Building Construction	Cranes	Diesel	Average	1.000000	7.00000	367.000	0.29000
Building Construction	Forklifts	Diesel	Average	3.00000	8.00000	82.0000	0.20000

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000
Building Construction	Tractors/Loaders/ Backhoes	Diesel	Average	3.00000	7.00000	84.0000	0.37000
Building Construction	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Paving	Cement and Mortar Mixers	Diesel	Average	2.00000	6.00000	10.00000	0.56000
Paving	Pavers	Diesel	Average	1.000000	8.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	2.00000	6.00000	89.0000	0.36000
Paving	Rollers	Diesel	Average	2.00000	6.00000	36.0000	0.38000
Paving	Tractors/Loaders/ Backhoes	Diesel	Average	1.000000	8.00000	84.0000	0.37000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	6.00000	37.0000	0.48000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	Worker	17.5000	18.5000	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2000	HHDT,MHDT
Site Preparation	Hauling	0.00000	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	15.0000	18.5000	LDA,LDT1,LDT2
Grading	Vendor	—	10.2000	HHDT,MHDT

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Grading	Hauling	0.00000	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	0.11840	18.5000	LDA,LDT1,LDT2
Building Construction	Vendor	0.05245	10.2000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	20.0000	18.5000	LDA,LDT1,LDT2
Paving	Vendor	—	10.2000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	0.02368	18.5000	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	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%

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
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	0.00000	0.00000	245,025	81,675.0	817.000

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	7.50000	0.00000	0.00000
Grading	—	—	8.00000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	1.25000

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	General Heavy Industry	0.00000	0%

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	General Office Building	0.00000	0%
Paving	Other Asphalt Surfaces	1.25000	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	0.00000	704.704	0.03300	0.00400

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	9.52000	annual days of extreme heat
Extreme Precipitation	6.15000	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00000	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	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

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

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	47.3802
AQ-PM	87.8780
AQ-DPM	87.9029
Drinking Water	48.3077
Lead Risk Housing	—
Pesticides	0.00000

Indicator	Result for Project Census Tract
Toxic Releases	89.4849
Traffic	56.2500
Effect Indicators	—
CleanUp Sites	98.7122
Groundwater	81.4710
Haz Waste Facilities/Generators	99.3647
Impaired Water Bodies	66.7367
Solid Waste	88.9805
Sensitive Population	—
Asthma	94.9277
Cardio-vascular	87.8490
Low Birth Weights	—
Socioeconomic Factor Indicators	—
Education	—
Housing	—
Linguistic	—
Poverty	1.05528
Unemployment	—

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	—

Indicator	Result for Project Census Tract
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	8.8
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	99.8
Physically Disabled	10.4
Heart Attack ER Admissions	15.9
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0

Indicator	Result for Project Census Tract
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	0.0
SLR Inundation Area	0.0
Children	99.4
Elderly	14.8
English Speaking	0.0
Foreign-born	0.0
Outdoor Workers	98.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	0.3
Traffic Density	0.0
Traffic Access	58.9
Other Indices	—

Indicator	Result for Project Census Tract
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)	—
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

8.1. Justifications

Screen	Justification
Land Use	Small facilities ~ 5 acres
Construction: Construction Phases	No demolition
Construction: Architectural Coatings	Parking areas ~ 25% of all paved areas.

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Building Area	sq. ft	163,190	160.000
Landscape Area	sq. ft	—	0.00000

8.4. Construction

8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Site Preparation	Site Preparation	Start Date	2/2/2027	1/4/2027
Site Preparation	Site Preparation	End Date	2/9/2027	1/8/2027
Grading	Grading	Start Date	2/10/2027	1/11/2027
Grading	Grading	End Date	2/21/2027	1/20/2027
Building Construction	Building Construction	Start Date	2/22/2027	1/21/2027

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Building Construction	Building Construction	End Date	1/10/2028	10/27/2027
Building Construction	Building Construction	Work Days per Phase	230.000	200.000
Paving	Paving	Start Date	1/11/2028	10/28/2027
Paving	Paving	End Date	2/5/2028	11/22/2027
Architectural Coating	Architectural Coating	Start Date	2/6/2028	11/23/2027
Architectural Coating	Architectural Coating	End Date	3/2/2028	12/27/2027
Architectural Coating	Architectural Coating	Work Days per Phase	18.0000	25.0000

8.4.8. Architectural Coatings

Phase Name	Model Parameter	Units	Default Value	New Value
Architectural Coating	Non-Residential Interior Area	sq ft	480.000	245,025
Architectural Coating	Non-Residential Exterior Area	sq ft	160.000	81,675.0
Architectural Coating	Parking Area	sq ft	3,267.00	817.000

CalRecycle Composting Small Facilities- SDAPCD Detailed Report

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6.4. Climate Risk Reduction Measures
7. Health and Equity Details
7.1. CalEnviroScreen 4.0 Scores
7.2. Healthy Places Index Scores
7.3. Overall Health & Equity Scores
7.4. Health & Equity Measures

7.5. Evaluation Scorecard
7.6. Health & Equity Custom Measures
8. User Changes to Default Data
8.1. Justifications
8.3. Land Use
8.4. Construction
8.4.1. Construction Phases
8.4.8. Architectural Coatings

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	CalRecycle Composting Small Facilities- SDAPCD
Construction Start Date	1/4/2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.60000
Precipitation (days)	9.80000
Location	5180 Convoy St, San Diego, CA 92111, USA
County	San Diego
City	San Diego
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6303
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.45

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	163.190	1000sqft	3.74633	160.000	0.00000	—	—	Composting Area with one 8x20 Maintenance Building
General Office Building	0.16000	1000sqft	0.00367	160.000	0.00000	—	—	Administrative Building
Other Asphalt Surfaces	54.4500	1000sqft	1.25000	0.00000	0.00000	—	—	Parking and other paved surfaces

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.03034	9.39282	12.9436	0.02341	0.33659	0.00134	0.33793	0.30967	0.00033	0.30999	—	2,399.42	2,399.42	0.09733	0.01966	0.00632	2,407.72
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Unmit.	60.8526	28.0263	28.9094	0.04891	1.17173	7.81424	8.98597	1.07799	3.97465	5.05264	—	5,448.84	5,448.84	0.22299	0.04914	0.01532	5,469.08
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.85611	6.20375	8.42718	0.01485	0.22681	0.18843	0.41524	0.20867	0.08747	0.29614	—	1,541.47	1,541.47	0.06267	0.01302	0.02141	1,546.93
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.88624	1.13218	1.53796	0.00271	0.04139	0.03439	0.07578	0.03808	0.01596	0.05404	—	255.207	255.207	0.01038	0.00216	0.00354	256.112

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.03034	9.39282	12.9436	0.02341	0.33659	0.00134	0.33793	0.30967	0.00033	0.30999	—	2,399.42	2,399.42	0.09733	0.01966	0.00632	2,407.72
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	60.8526	28.0263	28.9094	0.04891	1.17173	7.81424	8.98597	1.07799	3.97465	5.05264	—	5,448.84	5,448.84	0.22299	0.04914	0.01532	5,469.08
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.85611	6.20375	8.42718	0.01485	0.22681	0.18843	0.41524	0.20867	0.08747	0.29614	—	1,541.47	1,541.47	0.06267	0.01302	0.02141	1,546.93

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.88624	1.13218	1.53796	0.00271	0.04139	0.03439	0.07578	0.03808	0.01596	0.05404	—	255.207	255.207	0.01038	0.00216	0.00354	256.112

2.2.2. Onsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.02988	9.39093	12.9379	0.02340	0.33657	0.00000	0.33657	0.30965	0.00000	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	0.00000	2,405.30
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	60.8525	27.9724	28.2794	0.04891	1.17173	7.66623	8.83797	1.07799	3.93995	5.01795	—	5,297.82	5,297.82	0.21490	0.04298	0.00000	5,316.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.85055	6.19789	8.36768	0.01485	0.22680	0.17462	0.40143	0.20866	0.08423	0.29288	—	1,526.66	1,526.66	0.06193	0.01239	0.00000	1,531.90
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.88523	1.13112	1.52710	0.00271	0.04139	0.03187	0.07326	0.03808	0.01537	0.05345	—	252.756	252.756	0.01025	0.00205	0.00000	253.623

2.2.3. Offsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00046	0.00188	0.00560	0.00001	0.00002	0.00134	0.00135	0.00002	0.00033	0.00035	—	2.34289	2.34289	0.00010	0.00022	0.00632	2.41600
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.06876	0.06161	0.72000	0.00001	0.00002	0.16915	0.16915	0.00002	0.03965	0.03965	—	172.600	172.600	0.00925	0.00704	0.01532	174.945
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00556	0.00586	0.05949	< 0.000005	0.00001	0.01381	0.01382	0.00001	0.00324	0.00325	—	14.8081	14.8081	0.00074	0.00063	0.02141	15.0364
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00101	0.00107	0.01086	< 0.000005	< 0.000005	0.00252	0.00252	< 0.000005	0.00059	0.00059	—	2.45165	2.45165	0.00012	0.00010	0.00354	2.48944

3. Construction Emissions Details

3.1. Site Preparation (2027)

3.1.1. Onsite - Unmitigated

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

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.05170	27.9724	28.2794	0.04891	1.17173	—	1.17173	1.07799	—	1.07799	—	5,297.82	5,297.82	0.21490	0.04298	—	5,316.00
Dust From Material Movement	—	—	—	—	—	7.66623	7.66623	—	3.93995	3.93995	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04180	0.38318	0.38739	0.00067	0.01605	—	0.01605	0.01477	—	0.01477	—	72.5729	72.5729	0.00294	0.00059	—	72.8219
Dust From Material Movement	—	—	—	—	—	0.10502	0.10502	—	0.05397	0.05397	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00763	0.06993	0.07070	0.00012	0.00293	—	0.00293	0.00269	—	0.00269	—	12.0153	12.0153	0.00049	0.00010	—	12.0565

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Dust From Material Movement	—	—	—	—	—	0.01917	0.01917	—	0.00985	0.00985	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06016	0.05391	0.63000	0.00000	0.00000	0.14800	0.14800	0.00000	0.03469	0.03469	—	151.025	151.025	0.00809	0.00616	0.01341	153.077
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00082	0.00073	0.00874	0.00000	0.00000	0.00201	0.00201	0.00000	0.00047	0.00047	—	2.08735	2.08735	0.00011	0.00008	0.00307	2.11663
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00015	0.00013	0.00159	0.00000	0.00000	0.00037	0.00037	0.00000	0.00009	0.00009	—	0.34558	0.34558	0.00002	0.00001	0.00051	0.35043

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2. Grading (2027)

3.2.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.58640	14.2321	17.2743	0.02733	0.59767	—	0.59767	0.54986	—	0.54986	—	2,960.07	2,960.07	0.12007	0.02401	—	2,970.23
Dust From Material Movement	—	—	—	—	—	3.17580	3.17580	—	1.38031	1.38031	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03477	0.31194	0.37862	0.00060	0.01310	—	0.01310	0.01205	—	0.01205	—	64.8783	64.8783	0.00263	0.00053	—	65.1009

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Dust From Material Movement	—	—	—	—	—	0.06961	0.06961	—	0.03025	0.03025	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00635	0.05693	0.06910	0.00011	0.00239	—	0.00239	0.00220	—	0.00220	—	10.7413	10.7413	0.00044	0.00009	—	10.7782
Dust From Material Movement	—	—	—	—	—	0.01270	0.01270	—	0.00552	0.00552	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05157	0.04621	0.54000	0.00000	0.00000	0.12686	0.12686	0.00000	0.02974	0.02974	—	129.450	129.450	0.00693	0.00528	0.01149	131.209
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00112	0.00101	0.01198	0.00000	0.00000	0.00276	0.00276	0.00000	0.00065	0.00065	—	2.86265	2.86265	0.00014	0.00011	0.00421	2.90281
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00020	0.00018	0.00219	0.00000	0.00000	0.00050	0.00050	0.00000	0.00012	0.00012	—	0.47394	0.47394	0.00002	0.00002	0.00070	0.48059
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3. Building Construction (2027)

3.3.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56432	5.14572	7.08929	0.01282	0.18442	—	0.18442	0.16967	—	0.16967	—	1,313.47	1,313.47	0.05328	0.01066	—	1,317.97
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10299	0.93909	1.29379	0.00234	0.03366	—	0.03366	0.03096	—	0.03096	—	217.459	217.459	0.00882	0.00176	—	218.206
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00042	0.00029	0.00485	0.00000	0.00000	0.00100	0.00100	0.00000	0.00023	0.00023	—	1.08191	1.08191	0.00005	0.00004	0.00351	1.09830

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Vendor	0.00004	0.00159	0.00075	0.00001	0.00002	0.00034	0.00035	0.00002	0.00009	0.00011	—	1.26098	1.26098	0.00005	0.00018	0.00281	1.31770
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00041	0.00036	0.00426	0.00000	0.00000	0.00100	0.00100	0.00000	0.00023	0.00023	—	1.02179	1.02179	0.00005	0.00004	0.00009	1.03567
Vendor	0.00004	0.00165	0.00076	0.00001	0.00002	0.00034	0.00035	0.00002	0.00009	0.00011	—	1.26182	1.26182	0.00005	0.00018	0.00007	1.31583
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00022	0.00020	0.00236	0.00000	0.00000	0.00055	0.00055	0.00000	0.00013	0.00013	—	0.56490	0.56490	0.00003	0.00002	0.00083	0.57282
Vendor	0.00002	0.00090	0.00042	< 0.000005	0.00001	0.00018	0.00019	0.00001	0.00005	0.00006	—	0.69114	0.69114	0.00003	0.00010	0.00067	0.72136
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00004	0.00004	0.00043	0.00000	0.00000	0.00010	0.00010	0.00000	0.00002	0.00002	—	0.09352	0.09352	< 0.000005	< 0.000005	0.00014	0.09484
Vendor	< 0.000005	0.00016	0.00008	< 0.000005	< 0.000005	0.00003	0.00004	< 0.000005	0.00001	0.00001	—	0.11443	0.11443	< 0.000005	0.00002	0.00011	0.11943
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4. Paving (2027)

3.4.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66333	6.08588	8.82716	0.01296	0.24176	—	0.24176	0.22242	—	0.22242	—	1,350.39	1,350.39	0.05478	0.01096	—	1,355.03
Paving	0.18194	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03271	0.30013	0.43531	0.00064	0.01192	—	0.01192	0.01097	—	0.01097	—	66.5947	66.5947	0.00270	0.00054	—	66.8232
Paving	0.00897	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00597	0.05477	0.07944	0.00012	0.00218	—	0.00218	0.00200	—	0.00200	—	11.0255	11.0255	0.00045	0.00009	—	11.0633
Paving	0.00164	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06876	0.06161	0.72000	0.00000	0.00000	0.16915	0.16915	0.00000	0.03965	0.03965	—	172.600	172.600	0.00925	0.00704	0.01532	174.945
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00337	0.00302	0.03594	0.00000	0.00000	0.00829	0.00829	0.00000	0.00194	0.00194	—	8.58794	8.58794	0.00043	0.00033	0.01262	8.70842
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00061	0.00055	0.00656	0.00000	0.00000	0.00151	0.00151	0.00000	0.00035	0.00035	—	1.42183	1.42183	0.00007	0.00005	0.00209	1.44178
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5. Architectural Coating (2027)

3.5.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11335	0.83116	1.12539	0.00173	0.01905	—	0.01905	0.01752	—	0.01752	—	133.513	133.513	0.00542	0.00108	—	133.971
Architectural Coatings	60.7391	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00776	0.05693	0.07708	0.00012	0.00130	—	0.00130	0.00120	—	0.00120	—	9.14471	9.14471	0.00037	0.00007	—	9.17609
Architectural Coatings	4.16021	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00142	0.01039	0.01407	0.00002	0.00024	—	0.00024	0.00022	—	0.00022	—	1.51401	1.51401	0.00006	0.00001	—	1.51921
Architectural Coatings	0.75924	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00008	0.00007	0.00085	0.00000	0.00000	0.00020	0.00020	0.00000	0.00005	0.00005	—	0.20436	0.20436	0.00001	0.00001	0.00002	0.20713
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00001	< 0.000005	0.00006	0.00000	0.00000	0.00001	0.00001	0.00000	< 0.000005	< 0.000005	—	0.01412	0.01412	< 0.000005	< 0.000005	0.00002	0.01432
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.000005	< 0.000005	0.00001	0.00000	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	—	0.00234	0.00234	< 0.000005	< 0.000005	< 0.000005	0.00237
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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
Site Preparation	Site Preparation	1/4/2027	1/8/2027	5.00000	5.00000	—
Grading	Grading	1/11/2027	1/20/2027	5.00000	8.00000	—
Building Construction	Building Construction	1/21/2027	10/27/2027	5.00000	200.000	—
Paving	Paving	10/28/2027	11/22/2027	5.00000	18.0000	—
Architectural Coating	Architectural Coating	11/23/2027	12/27/2027	5.00000	25.0000	—

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
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00000	8.00000	367.000	0.40000
Site Preparation	Tractors/Loaders/ Backhoes	Diesel	Average	4.00000	8.00000	84.0000	0.37000
Grading	Excavators	Diesel	Average	1.000000	8.00000	36.0000	0.38000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Tractors/Loaders/ Backhoes	Diesel	Average	3.00000	8.00000	84.0000	0.37000
Building Construction	Cranes	Diesel	Average	1.000000	7.00000	367.000	0.29000
Building Construction	Forklifts	Diesel	Average	3.00000	8.00000	82.0000	0.20000
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000
Building Construction	Tractors/Loaders/ Backhoes	Diesel	Average	3.00000	7.00000	84.0000	0.37000

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Paving	Cement and Mortar Mixers	Diesel	Average	2.00000	6.00000	10.00000	0.56000
Paving	Pavers	Diesel	Average	1.000000	8.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	2.00000	6.00000	89.0000	0.36000
Paving	Rollers	Diesel	Average	2.00000	6.00000	36.0000	0.38000
Paving	Tractors/Loaders/ Backhoes	Diesel	Average	1.000000	8.00000	84.0000	0.37000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	6.00000	37.0000	0.48000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	Worker	17.5000	11.9700	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.63000	HHDT,MHDT
Site Preparation	Hauling	0.00000	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	15.0000	11.9700	LDA,LDT1,LDT2
Grading	Vendor	—	7.63000	HHDT,MHDT
Grading	Hauling	0.00000	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	Worker	0.11840	11.9700	LDA,LDT1,LDT2
Building Construction	Vendor	0.05245	7.63000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	20.0000	11.9700	LDA,LDT1,LDT2
Paving	Vendor	—	7.63000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	0.02368	11.9700	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.63000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	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	0.00000	0.00000	245,025	81,675.0	817.000

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	7.50000	0.00000	0.00000
Grading	—	—	8.00000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	1.25000

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	General Heavy Industry	0.00000	0%
Paving	General Office Building	0.00000	0%
Paving	Other Asphalt Surfaces	1.25000	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	0.00000	588.983	0.03300	0.00400

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	8.91000	annual days of extreme heat
Extreme Precipitation	2.80000	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	8.11000	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	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction

measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	47.1437
AQ-PM	33.0305
AQ-DPM	20.1493
Drinking Water	28.9871
Lead Risk Housing	46.4650
Pesticides	59.6552
Toxic Releases	26.1815
Traffic	90.7750
Effect Indicators	—
CleanUp Sites	64.2217
Groundwater	76.1747
Haz Waste Facilities/Generators	95.4864

Indicator	Result for Project Census Tract
Impaired Water Bodies	33.1583
Solid Waste	54.8454
Sensitive Population	—
Asthma	1.19641
Cardio-vascular	7.68943
Low Birth Weights	19.1686
Socioeconomic Factor Indicators	—
Education	4.66970
Housing	99.8352
Linguistic	—
Poverty	86.8593
Unemployment	98.7897

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	—

Indicator	Result for Project Census Tract
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	—

Indicator	Result for Project Census Tract
Health Outcomes	—
Insured adults	—
Arthritis	99.7
Asthma ER Admissions	98.9
High Blood Pressure	99.8
Cancer (excluding skin)	99.7
Asthma	69.3
Coronary Heart Disease	99.8
Chronic Obstructive Pulmonary Disease	99.2
Diagnosed Diabetes	99.8
Life Expectancy at Birth	0.0
Cognitively Disabled	44.8
Physically Disabled	99.8
Heart Attack ER Admissions	93.1
Mental Health Not Good	45.5
Chronic Kidney Disease	99.7
Obesity	92.0
Pedestrian Injuries	0.0
Physical Health Not Good	99.3
Stroke	99.7
Health Risk Behaviors	—

Indicator	Result for Project Census Tract
Binge Drinking	0.1
Current Smoker	28.8
No Leisure Time for Physical Activity	86.6
Climate Change Exposures	—
Wildfire Risk	0.4
SLR Inundation Area	0.0
Children	29.7
Elderly	99.8
English Speaking	0.0
Foreign-born	0.0
Outdoor Workers	58.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	12.2
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)	52.0000
Healthy Places Index Score for Project Location (b)	—
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	Small facilities ~ 5 acres
Construction: Construction Phases	No demolition

Screen	Justification
Construction: Architectural Coatings	Parking areas ~ 25% of all paved areas.

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Building Area	sq. ft	163,190	160.000
Landscape Area	sq. ft	—	0.00000

8.4. Construction

8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Site Preparation	Site Preparation	Start Date	2/2/2027	1/4/2027
Site Preparation	Site Preparation	End Date	2/9/2027	1/8/2027
Grading	Grading	Start Date	2/10/2027	1/11/2027
Grading	Grading	End Date	2/21/2027	1/20/2027
Building Construction	Building Construction	Start Date	2/22/2027	1/21/2027
Building Construction	Building Construction	End Date	1/10/2028	10/27/2027
Building Construction	Building Construction	Work Days per Phase	230.000	200.000
Paving	Paving	Start Date	1/11/2028	10/28/2027
Paving	Paving	End Date	2/5/2028	11/22/2027
Architectural Coating	Architectural Coating	Start Date	2/6/2028	11/23/2027

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Architectural Coating	Architectural Coating	End Date	3/2/2028	12/27/2027
Architectural Coating	Architectural Coating	Work Days per Phase	18.0000	25.0000

8.4.8. Architectural Coatings

Phase Name	Model Parameter	Units	Default Value	New Value
Architectural Coating	Non-Residential Interior VOC	g/L	50.0000	100.0000
Architectural Coating	Non-Residential Exterior VOC	g/L	50.0000	100.0000
Architectural Coating	Non-Residential Interior Area	sq ft	480.000	245,025
Architectural Coating	Non-Residential Exterior Area	sq ft	160.000	81,675.0
Architectural Coating	Parking Area	sq ft	3,267.00	817.000

CalRecycle Composting Medium Facilities- Bay Area Air District Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	CalRecycle Composting Medium Facilities- Bay Area Air District
Construction Start Date	1/4/2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00000
Precipitation (days)	25.8000
Location	1601 Dixon Landing Rd, Milpitas, CA 95035, USA
County	Santa Clara
City	San Jose
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1796
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.45

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	359.210	1000sqft	8.24633	160.000	0.00000	—	—	Composting Area with one 8x20 Maintenance Building
General Office Building	0.16000	1000sqft	0.00367	160.000	0.00000	—	—	Administrative Building
Other Asphalt Surfaces	119.790	1000sqft	2.75000	0.00000	0.00000	—	—	Parking and other paved surfaces

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.03025	9.39283	12.9430	0.02341	0.33659	0.00135	0.33794	0.30967	0.00033	0.31000	—	2,399.42	2,399.42	0.09733	0.01969	0.00628	2,407.72
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Unmit.	61.0343	28.0156	28.8114	0.06093	1.17173	7.81090	8.98263	1.07799	3.97386	5.05186	—	6,751.03	6,751.03	0.27117	0.06001	0.01439	6,775.70
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.91115	6.49348	8.68770	0.01564	0.23935	0.25035	0.48970	0.22021	0.09396	0.31416	—	1,626.54	1,626.54	0.06576	0.01369	0.01845	1,632.28
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.89628	1.18506	1.58550	0.00285	0.04368	0.04569	0.08937	0.04019	0.01715	0.05734	—	269.293	269.293	0.01089	0.00227	0.00305	270.243

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.03025	9.39283	12.9430	0.02341	0.33659	0.00135	0.33794	0.30967	0.00033	0.31000	—	2,399.42	2,399.42	0.09733	0.01969	0.00628	2,407.72
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	61.0343	28.0156	28.8114	0.06093	1.17173	7.81090	8.98263	1.07799	3.97386	5.05186	—	6,751.03	6,751.03	0.27117	0.06001	0.01439	6,775.70
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.91115	6.49348	8.68770	0.01564	0.23935	0.25035	0.48970	0.22021	0.09396	0.31416	—	1,626.54	1,626.54	0.06576	0.01369	0.01845	1,632.28

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.89628	1.18506	1.58550	0.00285	0.04368	0.04569	0.08937	0.04019	0.01715	0.05734	—	269.293	269.293	0.01089	0.00227	0.00305	270.243

2.2.2. Onsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.02988	9.39093	12.9379	0.02340	0.33657	0.00000	0.33657	0.30965	0.00000	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	0.00000	2,405.30
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	61.0342	27.9724	28.2794	0.06093	1.17173	7.66623	8.83797	1.07799	3.93995	5.01795	—	6,598.08	6,598.08	0.26765	0.05353	0.00000	6,620.72
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.90721	6.48895	8.64255	0.01563	0.23934	0.23808	0.47742	0.22020	0.09108	0.31127	—	1,614.32	1,614.32	0.06548	0.01310	0.00000	1,619.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.89557	1.18423	1.57727	0.00285	0.04368	0.04345	0.08713	0.04019	0.01662	0.05681	—	267.269	267.269	0.01084	0.00217	0.00000	268.186

2.2.3. Offsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00037	0.00190	0.00504	0.00001	0.00002	0.00135	0.00137	0.00002	0.00033	0.00035	—	2.33945	2.33945	0.00009	0.00024	0.00628	2.41981
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.05366	0.04934	0.60808	0.00001	0.00002	0.16533	0.16533	0.00002	0.03875	0.03875	—	152.948	152.948	0.00353	0.00648	0.01439	154.982
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00394	0.00453	0.04515	0.00001	0.00001	0.01227	0.01228	0.00001	0.00288	0.00289	—	12.2223	12.2223	0.00027	0.00059	0.01845	12.4241
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00072	0.00083	0.00824	< 0.000005	< 0.000005	0.00224	0.00224	< 0.000005	0.00053	0.00053	—	2.02353	2.02353	0.00004	0.00010	0.00305	2.05695

3. Construction Emissions Details

3.1. Site Preparation (2027)

3.1.1. Onsite - Unmitigated

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

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.05170	27.9724	28.2794	0.04891	1.17173	—	1.17173	1.07799	—	1.07799	—	5,297.82	5,297.82	0.21490	0.04298	—	5,316.00
Dust From Material Movement	—	—	—	—	—	7.66623	7.66623	—	3.93995	3.93995	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04180	0.38318	0.38739	0.00067	0.01605	—	0.01605	0.01477	—	0.01477	—	72.5729	72.5729	0.00294	0.00059	—	72.8219
Dust From Material Movement	—	—	—	—	—	0.10502	0.10502	—	0.05397	0.05397	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00763	0.06993	0.07070	0.00012	0.00293	—	0.00293	0.00269	—	0.00269	—	12.0153	12.0153	0.00049	0.00010	—	12.0565

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Dust From Material Movement	—	—	—	—	—	0.01917	0.01917	—	0.00985	0.00985	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04695	0.04317	0.53207	0.00000	0.00000	0.14466	0.14466	0.00000	0.03391	0.03391	—	133.829	133.829	0.00309	0.00567	0.01259	135.609
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00063	0.00058	0.00722	0.00000	0.00000	0.00195	0.00195	0.00000	0.00046	0.00046	—	1.85340	1.85340	0.00004	0.00008	0.00286	1.88034
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00012	0.00011	0.00132	0.00000	0.00000	0.00036	0.00036	0.00000	0.00008	0.00008	—	0.30685	0.30685	0.00001	0.00001	0.00047	0.31131

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2. Grading (2027)

3.2.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.94546	25.5801	27.2816	0.06093	1.04307	—	1.04307	0.95962	—	0.95962	—	6,598.08	6,598.08	0.26765	0.05353	—	6,620.72
Dust From Material Movement	—	—	—	—	—	6.07097	6.07097	—	1.69292	1.69292	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06456	0.56066	0.59795	0.00134	0.02286	—	0.02286	0.02103	—	0.02103	—	144.615	144.615	0.00587	0.00117	—	145.112

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Dust From Material Movement	—	—	—	—	—	0.13306	0.13306	—	0.03711	0.03711	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01178	0.10232	0.10913	0.00024	0.00417	—	0.00417	0.00384	—	0.00384	—	23.9427	23.9427	0.00097	0.00019	—	24.0249
Dust From Material Movement	—	—	—	—	—	0.02428	0.02428	—	0.00677	0.00677	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05366	0.04934	0.60808	0.00000	0.00000	0.16533	0.16533	0.00000	0.03875	0.03875	—	152.948	152.948	0.00353	0.00648	0.01439	154.982
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00116	0.00106	0.01320	0.00000	0.00000	0.00356	0.00356	0.00000	0.00083	0.00083	—	3.38908	3.38908	0.00007	0.00014	0.00524	3.43834
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00021	0.00019	0.00241	0.00000	0.00000	0.00065	0.00065	0.00000	0.00015	0.00015	—	0.56110	0.56110	0.00001	0.00002	0.00087	0.56926
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3. Building Construction (2027)

3.3.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56432	5.14572	7.08929	0.01282	0.18442	—	0.18442	0.16967	—	0.16967	—	1,313.47	1,313.47	0.05328	0.01066	—	1,317.97
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10299	0.93909	1.29379	0.00234	0.03366	—	0.03366	0.03096	—	0.03096	—	217.459	217.459	0.00882	0.00176	—	218.206
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00033	0.00025	0.00422	0.00000	0.00000	0.00098	0.00098	0.00000	0.00023	0.00023	—	0.97733	0.97733	0.00002	0.00004	0.00328	0.99243

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Vendor	0.00004	0.00165	0.00081	0.00001	0.00002	0.00037	0.00039	0.00002	0.00010	0.00012	—	1.36213	1.36213	0.00008	0.00020	0.00300	1.42738
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00032	0.00029	0.00360	0.00000	0.00000	0.00098	0.00098	0.00000	0.00023	0.00023	—	0.90545	0.90545	0.00002	0.00004	0.00009	0.91749
Vendor	0.00004	0.00173	0.00084	0.00001	0.00002	0.00037	0.00039	0.00002	0.00010	0.00012	—	1.36306	1.36306	0.00008	0.00020	0.00008	1.42570
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00017	0.00016	0.00195	0.00000	0.00000	0.00053	0.00053	0.00000	0.00012	0.00012	—	0.50158	0.50158	0.00001	0.00002	0.00078	0.50887
Vendor	0.00002	0.00093	0.00045	0.00001	0.00001	0.00020	0.00021	0.00001	0.00006	0.00007	—	0.74659	0.74659	0.00004	0.00011	0.00071	0.78159
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00003	0.00003	0.00036	0.00000	0.00000	0.00010	0.00010	0.00000	0.00002	0.00002	—	0.08304	0.08304	< 0.000005	< 0.000005	0.00013	0.08425
Vendor	< 0.000005	0.00017	0.00008	< 0.000005	< 0.000005	0.00004	0.00004	< 0.000005	0.00001	0.00001	—	0.12361	0.12361	0.00001	0.00002	0.00012	0.12940
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4. Paving (2027)

3.4.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.73744	6.94439	9.95313	0.01395	0.29813	—	0.29813	0.27428	—	0.27428	—	1,511.11	1,511.11	0.06130	0.01226	—	1,516.29
Paving	0.40028	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03637	0.34246	0.49084	0.00069	0.01470	—	0.01470	0.01353	—	0.01353	—	74.5203	74.5203	0.00302	0.00060	—	74.7761
Paving	0.01974	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00664	0.06250	0.08958	0.00013	0.00268	—	0.00268	0.00247	—	0.00247	—	12.3377	12.3377	0.00050	0.00010	—	12.3800
Paving	0.00360	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04025	0.03700	0.45606	0.00000	0.00000	0.12400	0.12400	0.00000	0.02906	0.02906	—	114.711	114.711	0.00265	0.00486	0.01079	116.236
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00195	0.00179	0.02228	0.00000	0.00000	0.00601	0.00601	0.00000	0.00141	0.00141	—	5.71907	5.71907	0.00011	0.00024	0.00884	5.80220
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00036	0.00033	0.00407	0.00000	0.00000	0.00110	0.00110	0.00000	0.00026	0.00026	—	0.94686	0.94686	0.00002	0.00004	0.00146	0.96062
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5. Architectural Coating (2027)

3.5.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11335	0.83116	1.12539	0.00173	0.01905	—	0.01905	0.01752	—	0.01752	—	133.513	133.513	0.00542	0.00108	—	133.971
Architectural Coatings	60.9209	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00776	0.05693	0.07708	0.00012	0.00130	—	0.00130	0.00120	—	0.00120	—	9.14471	9.14471	0.00037	0.00007	—	9.17609
Architectural Coatings	4.17266	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00142	0.01039	0.01407	0.00002	0.00024	—	0.00024	0.00022	—	0.00022	—	1.51401	1.51401	0.00006	0.00001	—	1.51921
Architectural Coatings	0.76151	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00006	0.00006	0.00072	0.00000	0.00000	0.00020	0.00020	0.00000	0.00005	0.00005	—	0.18109	0.18109	< 0.000005	0.00001	0.00002	0.18350
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.000005	< 0.000005	0.00005	0.00000	0.00000	0.00001	0.00001	0.00000	< 0.000005	< 0.000005	—	0.01254	0.01254	< 0.000005	< 0.000005	0.00002	0.01272
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.000005	< 0.000005	0.00001	0.00000	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	—	0.00208	0.00208	< 0.000005	< 0.000005	< 0.000005	0.00211
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

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	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Site Preparation	Site Preparation	1/4/2027	1/8/2027	5.00000	5.00000	—
Grading	Grading	1/11/2027	1/20/2027	5.00000	8.00000	—
Building Construction	Building Construction	1/21/2027	10/27/2027	5.00000	200.000	—
Paving	Paving	10/28/2027	11/22/2027	5.00000	18.0000	—
Architectural Coating	Architectural Coating	11/23/2027	12/27/2027	5.00000	25.0000	—

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
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00000	8.00000	367.000	0.40000
Site Preparation	Tractors/Loaders/ Backhoes	Diesel	Average	4.00000	8.00000	84.0000	0.37000
Grading	Excavators	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Tractors/Loaders/ Backhoes	Diesel	Average	2.00000	8.00000	84.0000	0.37000
Grading	Scrapers	Diesel	Average	2.00000	8.00000	423.000	0.48000
Building Construction	Cranes	Diesel	Average	1.000000	7.00000	367.000	0.29000

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Forklifts	Diesel	Average	3.00000	8.00000	82.0000	0.20000
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000
Building Construction	Tractors/Loaders/ Backhoes	Diesel	Average	3.00000	7.00000	84.0000	0.37000
Building Construction	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Paving	Pavers	Diesel	Average	2.00000	8.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	2.00000	8.00000	89.0000	0.36000
Paving	Rollers	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	6.00000	37.0000	0.48000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	Worker	17.5000	11.7000	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40000	HHDT,MHDT
Site Preparation	Hauling	0.00000	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	20.0000	11.7000	LDA,LDT1,LDT2
Grading	Vendor	—	8.40000	HHDT,MHDT
Grading	Hauling	0.00000	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	Worker	0.11840	11.7000	LDA,LDT1,LDT2
Building Construction	Vendor	0.05245	8.40000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15.0000	11.7000	LDA,LDT1,LDT2
Paving	Vendor	—	8.40000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	0.02368	11.7000	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	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	0.00000	0.00000	245,025	81,675.0	1,797.00

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	7.50000	0.00000	0.00000
Grading	—	—	24.0000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	2.75000

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	General Heavy Industry	0.00000	0%
Paving	General Office Building	0.00000	0%
Paving	Other Asphalt Surfaces	2.75000	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	0.00000	203.983	0.03300	0.00400

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	14.7300	annual days of extreme heat
Extreme Precipitation	3.65000	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	14.8900	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	3	0	0	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction

measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	15.0467
AQ-PM	19.4275
AQ-DPM	28.9981
Drinking Water	39.0408
Lead Risk Housing	50.5860
Pesticides	0.00000
Toxic Releases	30.3201
Traffic	94.1250
Effect Indicators	—
CleanUp Sites	99.3841
Groundwater	94.1723
Haz Waste Facilities/Generators	93.2098

Indicator	Result for Project Census Tract
Impaired Water Bodies	91.8732
Solid Waste	99.9542
Sensitive Population	—
Asthma	37.9611
Cardio-vascular	40.0050
Low Birth Weights	98.8453
Socioeconomic Factor Indicators	—
Education	73.4244
Housing	23.8023
Linguistic	—
Poverty	27.8518
Unemployment	36.4394

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	65.64865905
Employed	58.03926601
Median HI	67.43231105
Education	—

Indicator	Result for Project Census Tract
Bachelor's or higher	46.42627999
High school enrollment	100
Preschool enrollment	71.06377518
Transportation	—
Auto Access	50.77633774
Active commuting	35.32657513
Social	—
2-parent households	66.12344412
Voting	58.42422687
Neighborhood	—
Alcohol availability	48.03028359
Park access	58.14192224
Retail density	62.49197998
Supermarket access	14.28204799
Tree canopy	39.85628128
Housing	—
Homeownership	46.75991274
Housing habitability	62.22250738
Low-inc homeowner severe housing cost burden	75.25984858
Low-inc renter severe housing cost burden	47.02938535
Uncrowded housing	42.73065572

Indicator	Result for Project Census Tract
Health Outcomes	—
Insured adults	53.9715129
Arthritis	0.0
Asthma ER Admissions	20.1
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	80.1
Cognitively Disabled	95.5
Physically Disabled	78.7
Heart Attack ER Admissions	65.7
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	96.4
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—

Indicator	Result for Project Census Tract
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	3.9
Children	55.0
Elderly	87.4
English Speaking	31.8
Foreign-born	65.1
Outdoor Workers	23.6
Climate Change Adaptive Capacity	—
Impervious Surface Cover	21.5
Traffic Density	88.2
Traffic Access	46.8
Other Indices	—
Hardship	40.7
Other Decision Support	—
2016 Voting	69.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	67.0000
Healthy Places Index Score for Project Location (b)	64.0000
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

8.1. Justifications

Screen	Justification
Land Use	Medium facilities ~ 11acres
Construction: Construction Phases	No demolition

Screen	Justification
Construction: Architectural Coatings	Parking areas ~ 25% of all paved areas.

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Building Area	sq. ft	359,210	160.000
Landscape Area	sq. ft	—	0.00000

8.4. Construction

8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Site Preparation	Site Preparation	Start Date	2/2/2027	1/4/2027
Site Preparation	Site Preparation	End Date	2/16/2027	1/8/2027
Site Preparation	Site Preparation	Work Days per Phase	10.00000	5.00000
Grading	Grading	Start Date	2/17/2027	1/11/2027
Grading	Grading	End Date	3/31/2027	1/20/2027
Grading	Grading	Work Days per Phase	30.0000	8.00000
Building Construction	Building Construction	Start Date	4/1/2027	1/21/2027
Building Construction	Building Construction	End Date	5/25/2028	10/27/2027
Building Construction	Building Construction	Work Days per Phase	300.000	200.000
Paving	Paving	Start Date	5/26/2028	10/28/2027

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Paving	Paving	End Date	6/23/2028	11/22/2027
Paving	Paving	Work Days per Phase	20.0000	18.0000
Architectural Coating	Architectural Coating	Start Date	6/24/2028	11/23/2027
Architectural Coating	Architectural Coating	End Date	7/22/2028	12/27/2027
Architectural Coating	Architectural Coating	Work Days per Phase	20.0000	25.0000

8.4.8. Architectural Coatings

Phase Name	Model Parameter	Units	Default Value	New Value
Architectural Coating	Residential Interior VOC	g/L	100.0000	50.0000
Architectural Coating	Residential Exterior VOC	g/L	150.000	50.0000
Architectural Coating	Non-Residential Exterior VOC	g/L	150.000	100.0000
Architectural Coating	Non-Residential Interior Area	sq ft	480.000	245,025
Architectural Coating	Non-Residential Exterior Area	sq ft	160.000	81,675.0
Architectural Coating	Parking Area	sq ft	7,187.40	1,797.00

CalRecycle Composting Medium Facilities- SJVAPCD Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	CalRecycle Composting Medium Facilities- SJVAPCD
Construction Start Date	1/4/2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.90000
Precipitation (days)	24.4000
Location	24487 Rd 140, Tulare, CA 93274, USA
County	Tulare
City	Unincorporated
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2747
EDFZ	9
Electric Utility	Eastside Power Authority
Gas Utility	Southern California Gas
App Version	2022.1.1.45

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	359.210	1000sqft	8.24633	160.000	0.00000	—	—	Composting Area with one 8x20 Maintenance Building
General Office Building	0.16000	1000sqft	0.00367	160.000	0.00000	—	—	Administrative Building
Other Asphalt Surfaces	119.790	1000sqft	2.75000	0.00000	0.00000	—	—	Parking and other paved surfaces

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.03046	9.39268	12.9433	0.02340	0.33659	0.00094	0.33753	0.30966	0.00023	0.30990	—	2,398.85	2,398.85	0.09730	0.01964	0.00467	2,407.14
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Unmit.	61.0343	28.0261	28.8326	0.06093	1.17173	7.76144	8.93317	1.07799	3.96227	5.04026	—	6,700.52	6,700.52	0.27250	0.05869	0.00990	6,724.83
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.91320	6.49399	8.69141	0.01564	0.23935	0.24619	0.48554	0.22021	0.09298	0.31319	—	1,622.80	1,622.80	0.06604	0.01357	0.01279	1,628.51
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.89666	1.18515	1.58618	0.00285	0.04368	0.04493	0.08861	0.04019	0.01697	0.05716	—	268.673	268.673	0.01093	0.00225	0.00212	269.618

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.03046	9.39268	12.9433	0.02340	0.33659	0.00094	0.33753	0.30966	0.00023	0.30990	—	2,398.85	2,398.85	0.09730	0.01964	0.00467	2,407.14
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	61.0343	28.0261	28.8326	0.06093	1.17173	7.76144	8.93317	1.07799	3.96227	5.04026	—	6,700.52	6,700.52	0.27250	0.05869	0.00990	6,724.83
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.91320	6.49399	8.69141	0.01564	0.23935	0.24619	0.48554	0.22021	0.09298	0.31319	—	1,622.80	1,622.80	0.06604	0.01357	0.01279	1,628.51

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.89666	1.18515	1.58618	0.00285	0.04368	0.04493	0.08861	0.04019	0.01697	0.05716	—	268.673	268.673	0.01093	0.00225	0.00212	269.618

2.2.2. Onsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.02988	9.39093	12.9379	0.02340	0.33657	0.00000	0.33657	0.30965	0.00000	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	0.00000	2,405.30
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	61.0342	27.9724	28.2794	0.06093	1.17173	7.66623	8.83797	1.07799	3.93995	5.01795	—	6,598.08	6,598.08	0.26765	0.05353	0.00000	6,620.72
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.90721	6.48895	8.64255	0.01563	0.23934	0.23808	0.47742	0.22020	0.09108	0.31127	—	1,614.32	1,614.32	0.06548	0.01310	0.00000	1,619.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.89557	1.18423	1.57727	0.00285	0.04368	0.04345	0.08713	0.04019	0.01662	0.05681	—	267.269	267.269	0.01084	0.00217	0.00000	268.186

2.2.3. Offsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00058	0.00174	0.00532	0.00001	0.00002	0.00094	0.00096	0.00002	0.00023	0.00025	—	1.76815	1.76815	0.00006	0.00020	0.00467	1.83316
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.07910	0.06133	0.63233	0.00001	0.00002	0.10881	0.10881	0.00002	0.02550	0.02550	—	102.438	102.438	0.00485	0.00516	0.00990	104.106
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00599	0.00503	0.04886	< 0.000005	0.00001	0.00811	0.00812	0.00001	0.00191	0.00191	—	8.47795	8.47795	0.00056	0.00047	0.01279	8.64599
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00109	0.00092	0.00892	< 0.000005	< 0.000005	0.00148	0.00148	< 0.000005	0.00035	0.00035	—	1.40362	1.40362	0.00009	0.00008	0.00212	1.43144

3. Construction Emissions Details

3.1. Site Preparation (2027)

3.1.1. Onsite - Unmitigated

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

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.05170	27.9724	28.2794	0.04891	1.17173	—	1.17173	1.07799	—	1.07799	—	5,297.82	5,297.82	0.21490	0.04298	—	5,316.00
Dust From Material Movement	—	—	—	—	—	7.66623	7.66623	—	3.93995	3.93995	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04180	0.38318	0.38739	0.00067	0.01605	—	0.01605	0.01477	—	0.01477	—	72.5729	72.5729	0.00294	0.00059	—	72.8219
Dust From Material Movement	—	—	—	—	—	0.10502	0.10502	—	0.05397	0.05397	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00763	0.06993	0.07070	0.00012	0.00293	—	0.00293	0.00269	—	0.00269	—	12.0153	12.0153	0.00049	0.00010	—	12.0565

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Dust From Material Movement	—	—	—	—	—	0.01917	0.01917	—	0.00985	0.00985	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06921	0.05367	0.55329	0.00000	0.00000	0.09521	0.09521	0.00000	0.02232	0.02232	—	89.6332	89.6332	0.00424	0.00451	0.00867	91.0931
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00096	0.00068	0.00784	0.00000	0.00000	0.00128	0.00128	0.00000	0.00030	0.00030	—	1.27335	1.27335	0.00009	0.00006	0.00197	1.29595
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00018	0.00012	0.00143	0.00000	0.00000	0.00023	0.00023	0.00000	0.00005	0.00005	—	0.21082	0.21082	0.00001	0.00001	0.00033	0.21456

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2. Grading (2027)

3.2.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.94546	25.5801	27.2816	0.06093	1.04307	—	1.04307	0.95962	—	0.95962	—	6,598.08	6,598.08	0.26765	0.05353	—	6,620.72
Dust From Material Movement	—	—	—	—	—	6.07097	6.07097	—	1.69292	1.69292	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06456	0.56066	0.59795	0.00134	0.02286	—	0.02286	0.02103	—	0.02103	—	144.615	144.615	0.00587	0.00117	—	145.112

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Dust From Material Movement	—	—	—	—	—	0.13306	0.13306	—	0.03711	0.03711	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01178	0.10232	0.10913	0.00024	0.00417	—	0.00417	0.00384	—	0.00384	—	23.9427	23.9427	0.00097	0.00019	—	24.0249
Dust From Material Movement	—	—	—	—	—	0.02428	0.02428	—	0.00677	0.00677	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07910	0.06133	0.63233	0.00000	0.00000	0.10881	0.10881	0.00000	0.02550	0.02550	—	102.438	102.438	0.00485	0.00516	0.00990	104.106
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00176	0.00124	0.01434	0.00000	0.00000	0.00235	0.00235	0.00000	0.00055	0.00055	—	2.32841	2.32841	0.00016	0.00011	0.00361	2.36974
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00032	0.00023	0.00262	0.00000	0.00000	0.00043	0.00043	0.00000	0.00010	0.00010	—	0.38549	0.38549	0.00003	0.00002	0.00060	0.39234
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3. Building Construction (2027)

3.3.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56432	5.14572	7.08929	0.01282	0.18442	—	0.18442	0.16967	—	0.16967	—	1,313.47	1,313.47	0.05328	0.01066	—	1,317.97
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10299	0.93909	1.29379	0.00234	0.03366	—	0.03366	0.03096	—	0.03096	—	217.459	217.459	0.00882	0.00176	—	218.206
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00054	0.00029	0.00478	0.00000	0.00000	0.00064	0.00064	0.00000	0.00015	0.00015	—	0.68497	0.68497	0.00004	0.00003	0.00226	0.69736

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Vendor	0.00004	0.00145	0.00054	0.00001	0.00002	0.00030	0.00031	0.00002	0.00008	0.00010	—	1.08317	1.08317	0.00002	0.00017	0.00242	1.13580
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00047	0.00036	0.00374	0.00000	0.00000	0.00064	0.00064	0.00000	0.00015	0.00015	—	0.60643	0.60643	0.00003	0.00003	0.00006	0.61631
Vendor	0.00004	0.00155	0.00056	0.00001	0.00002	0.00030	0.00031	0.00002	0.00008	0.00010	—	1.08440	1.08440	0.00002	0.00017	0.00006	1.13465
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00026	0.00018	0.00212	0.00000	0.00000	0.00035	0.00035	0.00000	0.00008	0.00008	—	0.34460	0.34460	0.00002	0.00002	0.00053	0.35072
Vendor	0.00002	0.00083	0.00030	< 0.000005	0.00001	0.00016	0.00017	0.00001	0.00004	0.00005	—	0.59380	0.59380	0.00001	0.00009	0.00057	0.62187
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00005	0.00003	0.00039	0.00000	0.00000	0.00006	0.00006	0.00000	0.00001	0.00001	—	0.05705	0.05705	< 0.000005	< 0.000005	0.00009	0.05807
Vendor	< 0.000005	0.00015	0.00005	< 0.000005	< 0.000005	0.00003	0.00003	< 0.000005	0.00001	0.00001	—	0.09831	0.09831	< 0.000005	0.00002	0.00009	0.10296
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4. Paving (2027)

3.4.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.73744	6.94439	9.95313	0.01395	0.29813	—	0.29813	0.27428	—	0.27428	—	1,511.11	1,511.11	0.06130	0.01226	—	1,516.29
Paving	0.40028	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03637	0.34246	0.49084	0.00069	0.01470	—	0.01470	0.01353	—	0.01353	—	74.5203	74.5203	0.00302	0.00060	—	74.7761
Paving	0.01974	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00664	0.06250	0.08958	0.00013	0.00268	—	0.00268	0.00247	—	0.00247	—	12.3377	12.3377	0.00050	0.00010	—	12.3800
Paving	0.00360	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05933	0.04600	0.47425	0.00000	0.00000	0.08161	0.08161	0.00000	0.01913	0.01913	—	76.8285	76.8285	0.00364	0.00387	0.00743	78.0798
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00297	0.00209	0.02420	0.00000	0.00000	0.00396	0.00396	0.00000	0.00093	0.00093	—	3.92918	3.92918	0.00027	0.00019	0.00609	3.99894
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00054	0.00038	0.00442	0.00000	0.00000	0.00072	0.00072	0.00000	0.00017	0.00017	—	0.65052	0.65052	0.00005	0.00003	0.00101	0.66207
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5. Architectural Coating (2027)

3.5.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11335	0.83116	1.12539	0.00173	0.01905	—	0.01905	0.01752	—	0.01752	—	133.513	133.513	0.00542	0.00108	—	133.971
Architectural Coatings	60.9209	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00776	0.05693	0.07708	0.00012	0.00130	—	0.00130	0.00120	—	0.00120	—	9.14471	9.14471	0.00037	0.00007	—	9.17609
Architectural Coatings	4.17266	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00142	0.01039	0.01407	0.00002	0.00024	—	0.00024	0.00022	—	0.00022	—	1.51401	1.51401	0.00006	0.00001	—	1.51921
Architectural Coatings	0.76151	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00009	0.00007	0.00075	0.00000	0.00000	0.00013	0.00013	0.00000	0.00003	0.00003	—	0.12129	0.12129	0.00001	0.00001	0.00001	0.12326
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00001	< 0.000005	0.00005	0.00000	0.00000	0.00001	0.00001	0.00000	< 0.000005	< 0.000005	—	0.00862	0.00862	< 0.000005	< 0.000005	0.00001	0.00877
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.000005	< 0.000005	0.00001	0.00000	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	—	0.00143	0.00143	< 0.000005	< 0.000005	< 0.000005	0.00145
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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
Site Preparation	Site Preparation	1/4/2027	1/8/2027	5.00000	5.00000	—
Grading	Grading	1/11/2027	1/20/2027	5.00000	8.00000	—
Building Construction	Building Construction	1/21/2027	10/27/2027	5.00000	200.000	—
Paving	Paving	10/28/2027	11/22/2027	5.00000	18.0000	—
Architectural Coating	Architectural Coating	11/23/2027	12/27/2027	5.00000	25.0000	—

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
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00000	8.00000	367.000	0.40000
Site Preparation	Tractors/Loaders/ Backhoes	Diesel	Average	4.00000	8.00000	84.0000	0.37000
Grading	Excavators	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Tractors/Loaders/ Backhoes	Diesel	Average	2.00000	8.00000	84.0000	0.37000
Grading	Scrapers	Diesel	Average	2.00000	8.00000	423.000	0.48000
Building Construction	Cranes	Diesel	Average	1.000000	7.00000	367.000	0.29000
Building Construction	Forklifts	Diesel	Average	3.00000	8.00000	82.0000	0.20000
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Tractors/Loaders/ Backhoes	Diesel	Average	3.00000	7.00000	84.0000	0.37000
Building Construction	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Paving	Pavers	Diesel	Average	2.00000	8.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	2.00000	8.00000	89.0000	0.36000
Paving	Rollers	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	6.00000	37.0000	0.48000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	Worker	17.5000	7.70000	LDA,LDT1,LDT2
Site Preparation	Vendor	—	6.80000	HHDT,MHDT
Site Preparation	Hauling	0.00000	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	20.0000	7.70000	LDA,LDT1,LDT2
Grading	Vendor	—	6.80000	HHDT,MHDT
Grading	Hauling	0.00000	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	0.11840	7.70000	LDA,LDT1,LDT2
Building Construction	Vendor	0.05245	6.80000	HHDT,MHDT

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15.0000	7.70000	LDA,LDT1,LDT2
Paving	Vendor	—	6.80000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	0.02368	7.70000	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	6.80000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	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	0.00000	0.00000	245,025	81,675.0	1,797.00

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	7.50000	0.00000	0.00000
Grading	—	—	24.0000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	2.75000

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	General Heavy Industry	0.00000	0%
Paving	General Office Building	0.00000	0%
Paving	Other Asphalt Surfaces	2.75000	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	0.00000	453.209	0.03300	0.00400

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	34.8500	annual days of extreme heat
Extreme Precipitation	1.000000	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00000	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	1	0	0	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	0	0	0	N/A

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
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	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction

measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	84.5800
AQ-PM	96.7517
AQ-DPM	33.6279
Drinking Water	99.6128
Lead Risk Housing	15.2615
Pesticides	88.2414
Toxic Releases	43.6234
Traffic	19.7875
Effect Indicators	—
CleanUp Sites	46.3419
Groundwater	99.3691
Haz Waste Facilities/Generators	74.9040

Indicator	Result for Project Census Tract
Impaired Water Bodies	43.7841
Solid Waste	96.4490
Sensitive Population	—
Asthma	76.7572
Cardio-vascular	89.0578
Low Birth Weights	38.1832
Socioeconomic Factor Indicators	—
Education	62.6803
Housing	4.03042
Linguistic	40.8986
Poverty	45.7412
Unemployment	32.2749

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	55.58834852
Employed	72.42397023
Median HI	63.26190171
Education	—

Indicator	Result for Project Census Tract
Bachelor's or higher	38.31643783
High school enrollment	26.43397921
Preschool enrollment	45.68202233
Transportation	—
Auto Access	66.18760426
Active commuting	33.33761068
Social	—
2-parent households	75.4908251
Voting	60.23354292
Neighborhood	—
Alcohol availability	80.88027717
Park access	8.37931477
Retail density	8.186834339
Supermarket access	23.54677274
Tree canopy	22.77685102
Housing	—
Homeownership	68.42037726
Housing habitability	85.29449506
Low-inc homeowner severe housing cost burden	79.4174259
Low-inc renter severe housing cost burden	89.285256
Uncrowded housing	43.11561658

Indicator	Result for Project Census Tract
Health Outcomes	—
Insured adults	53.31707943
Arthritis	0.0
Asthma ER Admissions	18.9
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	57.4
Cognitively Disabled	50.3
Physically Disabled	30.9
Heart Attack ER Admissions	16.9
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	39.5
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—

Indicator	Result for Project Census Tract
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	23.1
Elderly	75.9
English Speaking	45.2
Foreign-born	27.4
Outdoor Workers	17.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	83.1
Traffic Density	26.6
Traffic Access	0.0
Other Indices	—
Hardship	47.2
Other Decision Support	—
2016 Voting	64.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	79.0000
Healthy Places Index Score for Project Location (b)	55.0000
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	Medium facilities ~ 11 acres
Construction: Construction Phases	No demolition

Screen	Justification
Construction: Architectural Coatings	Parking areas ~ 25% of all paved areas.

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Building Area	sq. ft	359,210	160.000
Landscape Area	sq. ft	—	0.00000

8.4. Construction

8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Site Preparation	Site Preparation	Start Date	2/2/2027	1/4/2027
Site Preparation	Site Preparation	End Date	2/16/2027	1/8/2027
Site Preparation	Site Preparation	Work Days per Phase	10.00000	5.00000
Grading	Grading	Start Date	2/17/2027	1/11/2027
Grading	Grading	End Date	3/31/2027	1/20/2027
Grading	Grading	Work Days per Phase	30.0000	8.00000
Building Construction	Building Construction	Start Date	4/1/2027	1/21/2027
Building Construction	Building Construction	End Date	5/25/2028	10/27/2027
Building Construction	Building Construction	Work Days per Phase	300.000	200.000
Paving	Paving	Start Date	5/26/2028	10/28/2027

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Paving	Paving	End Date	6/23/2028	11/22/2027
Paving	Paving	Work Days per Phase	20.0000	18.0000
Architectural Coating	Architectural Coating	Start Date	6/24/2028	11/23/2027
Architectural Coating	Architectural Coating	End Date	7/22/2028	12/27/2027
Architectural Coating	Architectural Coating	Work Days per Phase	20.0000	25.0000

8.4.8. Architectural Coatings

Phase Name	Model Parameter	Units	Default Value	New Value
Architectural Coating	Non-Residential Interior VOC	g/L	50.0000	100.0000
Architectural Coating	Non-Residential Exterior VOC	g/L	50.0000	100.0000
Architectural Coating	Non-Residential Interior Area	sq ft	480.000	245,025
Architectural Coating	Non-Residential Exterior Area	sq ft	160.000	81,675.0
Architectural Coating	Parking Area	sq ft	7,187.40	1,797.00

CalRecycle Composting Medium Facilities- SCAQMD Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	CalRecycle Composting Medium Facilities- SCAQMD
Construction Start Date	1/4/2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	0.50000
Precipitation (days)	18.4000
Location	2550 E 27th St, Vernon, CA 90058, USA
County	Los Angeles-South Coast
City	Vernon
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4117
EDFZ	7
Electric Utility	City of Vernon Municipal Light Department
Gas Utility	City of Vernon Gas System
App Version	2022.1.1.45

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	359.210	1000sqft	8.24633	160.000	0.00000	—	—	Composting Area with one 8x20 Maintenance Building
General Office Building	0.16000	1000sqft	0.00367	160.000	0.00000	—	—	Administrative Building
Other Asphalt Surfaces	119.790	1000sqft	2.75000	0.00000	0.00000	—	—	Parking and other paved surfaces

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.03035	9.39307	12.9459	0.02341	0.33659	0.00200	0.33858	0.30966	0.00049	0.31015	—	2,400.25	2,400.25	0.09737	0.01972	0.00909	2,408.58
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Unmit.	61.0343	28.0478	29.1700	0.06093	1.17173	7.89497	9.06671	1.07799	3.99357	5.07157	—	6,850.06	6,850.06	0.27117	0.06301	0.02146	6,875.64
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.91241	6.49634	8.72239	0.01564	0.23935	0.25749	0.49685	0.22020	0.09563	0.31584	—	1,634.18	1,634.18	0.06578	0.01392	0.02748	1,640.00
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.89651	1.18558	1.59184	0.00285	0.04368	0.04699	0.09067	0.04019	0.01745	0.05764	—	270.557	270.557	0.01089	0.00230	0.00455	271.520

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.03035	9.39307	12.9459	0.02341	0.33659	0.00200	0.33858	0.30966	0.00049	0.31015	—	2,400.25	2,400.25	0.09737	0.01972	0.00909	2,408.58
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	61.0343	28.0478	29.1700	0.06093	1.17173	7.89497	9.06671	1.07799	3.99357	5.07157	—	6,850.06	6,850.06	0.27117	0.06301	0.02146	6,875.64
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.91241	6.49634	8.72239	0.01564	0.23935	0.25749	0.49685	0.22020	0.09563	0.31584	—	1,634.18	1,634.18	0.06578	0.01392	0.02748	1,640.00

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.89651	1.18558	1.59184	0.00285	0.04368	0.04699	0.09067	0.04019	0.01745	0.05764	—	270.557	270.557	0.01089	0.00230	0.00455	271.520

2.2.2. Onsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.02988	9.39093	12.9379	0.02340	0.33657	0.00000	0.33657	0.30965	0.00000	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	0.00000	2,405.30
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	61.0342	27.9724	28.2794	0.06093	1.17173	7.66623	8.83797	1.07799	3.93995	5.01795	—	6,598.08	6,598.08	0.26765	0.05353	0.00000	6,620.72
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.90721	6.48895	8.64255	0.01563	0.23934	0.23808	0.47742	0.22020	0.09108	0.31127	—	1,614.32	1,614.32	0.06548	0.01310	0.00000	1,619.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.89557	1.18423	1.57727	0.00285	0.04368	0.04345	0.08713	0.04019	0.01662	0.05681	—	267.269	267.269	0.01084	0.00217	0.00000	268.186

2.2.3. Offsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00047	0.00213	0.00793	0.00001	0.00001	0.00200	0.00201	0.00001	0.00049	0.00050	—	3.17699	3.17699	0.00013	0.00028	0.00909	3.27218
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.06967	0.08620	1.01787	0.00001	0.00001	0.26142	0.26142	0.00001	0.06128	0.06128	—	251.980	251.980	0.00353	0.00948	0.02146	254.915
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00520	0.00739	0.07984	0.00001	0.00001	0.01942	0.01942	0.00001	0.00456	0.00456	—	19.8556	19.8556	0.00030	0.00082	0.02748	20.1364
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00095	0.00135	0.01457	< 0.000005	< 0.000005	0.00354	0.00354	< 0.000005	0.00083	0.00083	—	3.28732	3.28732	0.00005	0.00014	0.00455	3.33380

3. Construction Emissions Details

3.1. Site Preparation (2027)

3.1.1. Onsite - Unmitigated

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

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.05170	27.9724	28.2794	0.04891	1.17173	—	1.17173	1.07799	—	1.07799	—	5,297.82	5,297.82	0.21490	0.04298	—	5,316.00
Dust From Material Movement	—	—	—	—	—	7.66623	7.66623	—	3.93995	3.93995	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04180	0.38318	0.38739	0.00067	0.01605	—	0.01605	0.01477	—	0.01477	—	72.5729	72.5729	0.00294	0.00059	—	72.8219
Dust From Material Movement	—	—	—	—	—	0.10502	0.10502	—	0.05397	0.05397	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00763	0.06993	0.07070	0.00012	0.00293	—	0.00293	0.00269	—	0.00269	—	12.0153	12.0153	0.00049	0.00010	—	12.0565

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Dust From Material Movement	—	—	—	—	—	0.01917	0.01917	—	0.00985	0.00985	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06096	0.07543	0.89064	0.00000	0.00000	0.22874	0.22874	0.00000	0.05362	0.05362	—	220.483	220.483	0.00309	0.00829	0.01878	223.051
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00084	0.00103	0.01282	0.00000	0.00000	0.00310	0.00310	0.00000	0.00073	0.00073	—	3.06487	3.06487	0.00004	0.00011	0.00428	3.10407
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00015	0.00019	0.00234	0.00000	0.00000	0.00057	0.00057	0.00000	0.00013	0.00013	—	0.50742	0.50742	0.00001	0.00002	0.00071	0.51391

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2. Grading (2027)

3.2.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.94546	25.5801	27.2816	0.06093	1.04307	—	1.04307	0.95962	—	0.95962	—	6,598.08	6,598.08	0.26765	0.05353	—	6,620.72
Dust From Material Movement	—	—	—	—	—	6.07097	6.07097	—	1.69292	1.69292	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06456	0.56066	0.59795	0.00134	0.02286	—	0.02286	0.02103	—	0.02103	—	144.615	144.615	0.00587	0.00117	—	145.112

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Dust From Material Movement	—	—	—	—	—	0.13306	0.13306	—	0.03711	0.03711	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01178	0.10232	0.10913	0.00024	0.00417	—	0.00417	0.00384	—	0.00384	—	23.9427	23.9427	0.00097	0.00019	—	24.0249
Dust From Material Movement	—	—	—	—	—	0.02428	0.02428	—	0.00677	0.00677	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06967	0.08620	1.01787	0.00000	0.00000	0.26142	0.26142	0.00000	0.06128	0.06128	—	251.980	251.980	0.00353	0.00948	0.02146	254.915
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00153	0.00189	0.02345	0.00000	0.00000	0.00566	0.00566	0.00000	0.00133	0.00133	—	5.60434	5.60434	0.00008	0.00021	0.00782	5.67602
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00028	0.00034	0.00428	0.00000	0.00000	0.00103	0.00103	0.00000	0.00024	0.00024	—	0.92786	0.92786	0.00001	0.00003	0.00130	0.93973
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3. Building Construction (2027)

3.3.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56432	5.14572	7.08929	0.01282	0.18442	—	0.18442	0.16967	—	0.16967	—	1,313.47	1,313.47	0.05328	0.01066	—	1,317.97
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10299	0.93909	1.29379	0.00234	0.03366	—	0.03366	0.03096	—	0.03096	—	217.459	217.459	0.00882	0.00176	—	218.206
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00042	0.00041	0.00711	0.00000	0.00000	0.00155	0.00155	0.00000	0.00036	0.00036	—	1.57346	1.57346	0.00007	0.00006	0.00490	1.59675

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Vendor	0.00005	0.00173	0.00082	0.00001	0.00001	0.00045	0.00046	0.00001	0.00012	0.00014	—	1.60353	1.60353	0.00007	0.00022	0.00418	1.67543
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00041	0.00051	0.00603	0.00000	0.00000	0.00155	0.00155	0.00000	0.00036	0.00036	—	1.49172	1.49172	0.00002	0.00006	0.00013	1.50910
Vendor	0.00005	0.00180	0.00084	0.00001	0.00001	0.00045	0.00046	0.00001	0.00012	0.00014	—	1.60441	1.60441	0.00007	0.00022	0.00011	1.67224
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00023	0.00028	0.00347	0.00000	0.00000	0.00084	0.00084	0.00000	0.00020	0.00020	—	0.82944	0.82944	0.00001	0.00003	0.00116	0.84005
Vendor	0.00003	0.00099	0.00046	0.00001	0.00001	0.00024	0.00025	0.00001	0.00007	0.00007	—	0.87885	0.87885	0.00004	0.00012	0.00099	0.91694
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00004	0.00005	0.00063	0.00000	0.00000	0.00015	0.00015	0.00000	0.00004	0.00004	—	0.13732	0.13732	< 0.000005	0.00001	0.00019	0.13908
Vendor	< 0.000005	0.00018	0.00008	< 0.000005	< 0.000005	0.00004	0.00005	< 0.000005	0.00001	0.00001	—	0.14550	0.14550	0.00001	0.00002	0.00016	0.15181
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4. Paving (2027)

3.4.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.73744	6.94439	9.95313	0.01395	0.29813	—	0.29813	0.27428	—	0.27428	—	1,511.11	1,511.11	0.06130	0.01226	—	1,516.29
Paving	0.40028	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03637	0.34246	0.49084	0.00069	0.01470	—	0.01470	0.01353	—	0.01353	—	74.5203	74.5203	0.00302	0.00060	—	74.7761
Paving	0.01974	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00664	0.06250	0.08958	0.00013	0.00268	—	0.00268	0.00247	—	0.00247	—	12.3377	12.3377	0.00050	0.00010	—	12.3800
Paving	0.00360	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05225	0.06465	0.76341	0.00000	0.00000	0.19606	0.19606	0.00000	0.04596	0.04596	—	188.985	188.985	0.00265	0.00711	0.01610	191.186
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00258	0.00319	0.03956	0.00000	0.00000	0.00955	0.00955	0.00000	0.00224	0.00224	—	9.45733	9.45733	0.00013	0.00035	0.01320	9.57828
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00047	0.00058	0.00722	0.00000	0.00000	0.00174	0.00174	0.00000	0.00041	0.00041	—	1.56577	1.56577	0.00002	0.00006	0.00219	1.58579
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5. Architectural Coating (2027)

3.5.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11335	0.83116	1.12539	0.00173	0.01905	—	0.01905	0.01752	—	0.01752	—	133.513	133.513	0.00542	0.00108	—	133.971
Architectural Coatings	60.9209	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00776	0.05693	0.07708	0.00012	0.00130	—	0.00130	0.00120	—	0.00120	—	9.14471	9.14471	0.00037	0.00007	—	9.17609
Architectural Coatings	4.17266	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00142	0.01039	0.01407	0.00002	0.00024	—	0.00024	0.00022	—	0.00022	—	1.51401	1.51401	0.00006	0.00001	—	1.51921
Architectural Coatings	0.76151	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00008	0.00010	0.00121	0.00000	0.00000	0.00031	0.00031	0.00000	0.00007	0.00007	—	0.29834	0.29834	< 0.000005	0.00001	0.00003	0.30182
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00001	0.00001	0.00009	0.00000	0.00000	0.00002	0.00002	0.00000	< 0.000005	< 0.000005	—	0.02074	0.02074	< 0.000005	< 0.000005	0.00003	0.02100
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.000005	< 0.000005	0.00002	0.00000	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	—	0.00343	0.00343	< 0.000005	< 0.000005	< 0.000005	0.00348
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

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	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	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	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Site Preparation	Site Preparation	1/4/2027	1/8/2027	5.00000	5.00000	—
Grading	Grading	1/11/2027	1/20/2027	5.00000	8.00000	—
Building Construction	Building Construction	1/21/2027	10/27/2027	5.00000	200.000	—
Paving	Paving	10/28/2027	11/22/2027	5.00000	18.0000	—
Architectural Coating	Architectural Coating	11/23/2027	12/27/2027	5.00000	25.0000	—

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
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00000	8.00000	367.000	0.40000
Site Preparation	Tractors/Loaders/ Backhoes	Diesel	Average	4.00000	8.00000	84.0000	0.37000
Grading	Excavators	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Tractors/Loaders/ Backhoes	Diesel	Average	2.00000	8.00000	84.0000	0.37000
Grading	Scrapers	Diesel	Average	2.00000	8.00000	423.000	0.48000
Building Construction	Cranes	Diesel	Average	1.000000	7.00000	367.000	0.29000

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Forklifts	Diesel	Average	3.00000	8.00000	82.0000	0.20000
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000
Building Construction	Tractors/Loaders/ Backhoes	Diesel	Average	3.00000	7.00000	84.0000	0.37000
Building Construction	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Paving	Pavers	Diesel	Average	2.00000	8.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	2.00000	8.00000	89.0000	0.36000
Paving	Rollers	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	6.00000	37.0000	0.48000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	Worker	17.5000	18.5000	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2000	HHDT,MHDT
Site Preparation	Hauling	0.00000	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	20.0000	18.5000	LDA,LDT1,LDT2
Grading	Vendor	—	10.2000	HHDT,MHDT
Grading	Hauling	0.00000	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	Worker	0.11840	18.5000	LDA,LDT1,LDT2
Building Construction	Vendor	0.05245	10.2000	HHDT,MHDT
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15.0000	18.5000	LDA,LDT1,LDT2
Paving	Vendor	—	10.2000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	0.02368	18.5000	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	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	0.00000	0.00000	245,025	81,675.0	1,797.00

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	7.50000	0.00000	0.00000
Grading	—	—	24.0000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	2.75000

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	General Heavy Industry	0.00000	0%
Paving	General Office Building	0.00000	0%
Paving	Other Asphalt Surfaces	2.75000	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	0.00000	704.704	0.03300	0.00400

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	9.52000	annual days of extreme heat
Extreme Precipitation	6.15000	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00000	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	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction

measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	47.3802
AQ-PM	87.8780
AQ-DPM	87.9029
Drinking Water	48.3077
Lead Risk Housing	—
Pesticides	0.00000
Toxic Releases	89.4849
Traffic	56.2500
Effect Indicators	—
CleanUp Sites	98.7122
Groundwater	81.4710
Haz Waste Facilities/Generators	99.3647

Indicator	Result for Project Census Tract
Impaired Water Bodies	66.7367
Solid Waste	88.9805
Sensitive Population	—
Asthma	94.9277
Cardio-vascular	87.8490
Low Birth Weights	—
Socioeconomic Factor Indicators	—
Education	—
Housing	—
Linguistic	—
Poverty	1.05528
Unemployment	—

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	—

Indicator	Result for Project Census Tract
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	—

Indicator	Result for Project Census Tract
Health Outcomes	—
Insured adults	—
Arthritis	0.0
Asthma ER Admissions	8.8
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	99.8
Physically Disabled	10.4
Heart Attack ER Admissions	15.9
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	—

Indicator	Result for Project Census Tract
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	99.4
Elderly	14.8
English Speaking	0.0
Foreign-born	0.0
Outdoor Workers	98.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	0.3
Traffic Density	0.0
Traffic Access	58.9
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)	—
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

8.1. Justifications

Screen	Justification
Land Use	Medium facilities ~ 11 acres
Construction: Construction Phases	No demolition

Screen	Justification
Construction: Architectural Coatings	Parking areas ~ 25% of all paved areas.

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Building Area	sq. ft	359,210	160.000
Landscape Area	sq. ft	—	0.00000

8.4. Construction

8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Site Preparation	Site Preparation	Start Date	2/2/2027	1/4/2027
Site Preparation	Site Preparation	End Date	2/16/2027	1/8/2027
Site Preparation	Site Preparation	Work Days per Phase	10.00000	5.00000
Grading	Grading	Start Date	2/17/2027	1/11/2027
Grading	Grading	End Date	3/31/2027	1/20/2027
Grading	Grading	Work Days per Phase	30.0000	8.00000
Building Construction	Building Construction	Start Date	4/1/2027	1/21/2027
Building Construction	Building Construction	End Date	5/25/2028	10/27/2027
Building Construction	Building Construction	Work Days per Phase	300.000	200.000
Paving	Paving	Start Date	5/26/2028	10/28/2027

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Paving	Paving	End Date	6/23/2028	11/22/2027
Paving	Paving	Work Days per Phase	20.0000	18.0000
Architectural Coating	Architectural Coating	Start Date	6/24/2028	11/23/2027
Architectural Coating	Architectural Coating	End Date	7/22/2028	12/27/2027
Architectural Coating	Architectural Coating	Work Days per Phase	20.0000	25.0000

8.4.8. Architectural Coatings

Phase Name	Model Parameter	Units	Default Value	New Value
Architectural Coating	Non-Residential Interior Area	sq ft	480.000	245,025
Architectural Coating	Non-Residential Exterior Area	sq ft	160.000	81,675.0
Architectural Coating	Parking Area	sq ft	7,187.40	1,797.00

CalRecycle Composting Medium Facilities- SDAPCD Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	CalRecycle Composting Medium Facilities- SDAPCD
Construction Start Date	1/4/2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.60000
Precipitation (days)	9.80000
Location	5180 Convoy St, San Diego, CA 92111, USA
County	San Diego
City	San Diego
Air District	San Diego County APCD
Air Basin	San Diego
TAZ	6303
EDFZ	12
Electric Utility	San Diego Gas & Electric
Gas Utility	San Diego Gas & Electric
App Version	2022.1.1.45

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	359.210	1000sqft	8.24633	160.000	0.00000	—	—	Composting Area with one 8x20 Maintenance Building
General Office Building	0.16000	1000sqft	0.00367	160.000	0.00000	—	—	Administrative Building
Other Asphalt Surfaces	119.790	1000sqft	2.75000	0.00000	0.00000	—	—	Parking and other paved surfaces

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.03034	9.39282	12.9436	0.02341	0.33659	0.00134	0.33793	0.30967	0.00033	0.30999	—	2,399.42	2,399.42	0.09733	0.01966	0.00632	2,407.72
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Unmit.	61.0343	28.0263	28.9094	0.06093	1.17173	7.81424	8.98597	1.07799	3.97465	5.05264	—	6,770.68	6,770.68	0.27689	0.06057	0.01532	6,795.67
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.91230	6.49439	8.69705	0.01564	0.23935	0.25074	0.49009	0.22021	0.09405	0.31426	—	1,627.94	1,627.94	0.06616	0.01368	0.01965	1,633.69
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.89650	1.18523	1.58721	0.00285	0.04368	0.04576	0.08944	0.04019	0.01716	0.05735	—	269.523	269.523	0.01095	0.00227	0.00325	270.476

2.2. Construction Emissions by Year

2.2.1. Total Construction Emissions by Year, Unmitigated

Includes both onsite and offsite emissions.

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.03034	9.39282	12.9436	0.02341	0.33659	0.00134	0.33793	0.30967	0.00033	0.30999	—	2,399.42	2,399.42	0.09733	0.01966	0.00632	2,407.72
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	61.0343	28.0263	28.9094	0.06093	1.17173	7.81424	8.98597	1.07799	3.97465	5.05264	—	6,770.68	6,770.68	0.27689	0.06057	0.01532	6,795.67
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.91230	6.49439	8.69705	0.01564	0.23935	0.25074	0.49009	0.22021	0.09405	0.31426	—	1,627.94	1,627.94	0.06616	0.01368	0.01965	1,633.69

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.89650	1.18523	1.58721	0.00285	0.04368	0.04576	0.08944	0.04019	0.01716	0.05735	—	269.523	269.523	0.01095	0.00227	0.00325	270.476

2.2.2. Onsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	1.02988	9.39093	12.9379	0.02340	0.33657	0.00000	0.33657	0.30965	0.00000	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	0.00000	2,405.30
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	61.0342	27.9724	28.2794	0.06093	1.17173	7.66623	8.83797	1.07799	3.93995	5.01795	—	6,598.08	6,598.08	0.26765	0.05353	0.00000	6,620.72
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	4.90721	6.48895	8.64255	0.01563	0.23934	0.23808	0.47742	0.22020	0.09108	0.31127	—	1,614.32	1,614.32	0.06548	0.01310	0.00000	1,619.86
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.89557	1.18423	1.57727	0.00285	0.04368	0.04345	0.08713	0.04019	0.01662	0.05681	—	267.269	267.269	0.01084	0.00217	0.00000	268.186

2.2.3. Offsite 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	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00046	0.00188	0.00560	0.00001	0.00002	0.00134	0.00135	0.00002	0.00033	0.00035	—	2.34289	2.34289	0.00010	0.00022	0.00632	2.41600
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.06876	0.06161	0.72000	0.00001	0.00002	0.16915	0.16915	0.00002	0.03965	0.03965	—	172.600	172.600	0.00925	0.00704	0.01532	174.945
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00509	0.00544	0.05450	< 0.000005	0.00001	0.01266	0.01267	0.00001	0.00297	0.00298	—	13.6153	13.6153	0.00068	0.00059	0.01965	13.8268
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.00093	0.00099	0.00995	< 0.000005	< 0.000005	0.00231	0.00231	< 0.000005	0.00054	0.00054	—	2.25417	2.25417	0.00011	0.00010	0.00325	2.28919

3. Construction Emissions Details

3.1. Site Preparation (2027)

3.1.1. Onsite - Unmitigated

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

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.05170	27.9724	28.2794	0.04891	1.17173	—	1.17173	1.07799	—	1.07799	—	5,297.82	5,297.82	0.21490	0.04298	—	5,316.00
Dust From Material Movement	—	—	—	—	—	7.66623	7.66623	—	3.93995	3.93995	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04180	0.38318	0.38739	0.00067	0.01605	—	0.01605	0.01477	—	0.01477	—	72.5729	72.5729	0.00294	0.00059	—	72.8219
Dust From Material Movement	—	—	—	—	—	0.10502	0.10502	—	0.05397	0.05397	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00763	0.06993	0.07070	0.00012	0.00293	—	0.00293	0.00269	—	0.00269	—	12.0153	12.0153	0.00049	0.00010	—	12.0565

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Dust From Material Movement	—	—	—	—	—	0.01917	0.01917	—	0.00985	0.00985	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.1.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06016	0.05391	0.63000	0.00000	0.00000	0.14800	0.14800	0.00000	0.03469	0.03469	—	151.025	151.025	0.00809	0.00616	0.01341	153.077
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00082	0.00073	0.00874	0.00000	0.00000	0.00201	0.00201	0.00000	0.00047	0.00047	—	2.08735	2.08735	0.00011	0.00008	0.00307	2.11663
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00015	0.00013	0.00159	0.00000	0.00000	0.00037	0.00037	0.00000	0.00009	0.00009	—	0.34558	0.34558	0.00002	0.00001	0.00051	0.35043

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2. Grading (2027)

3.2.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.94546	25.5801	27.2816	0.06093	1.04307	—	1.04307	0.95962	—	0.95962	—	6,598.08	6,598.08	0.26765	0.05353	—	6,620.72
Dust From Material Movement	—	—	—	—	—	6.07097	6.07097	—	1.69292	1.69292	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06456	0.56066	0.59795	0.00134	0.02286	—	0.02286	0.02103	—	0.02103	—	144.615	144.615	0.00587	0.00117	—	145.112

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Dust From Material Movement	—	—	—	—	—	0.13306	0.13306	—	0.03711	0.03711	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01178	0.10232	0.10913	0.00024	0.00417	—	0.00417	0.00384	—	0.00384	—	23.9427	23.9427	0.00097	0.00019	—	24.0249
Dust From Material Movement	—	—	—	—	—	0.02428	0.02428	—	0.00677	0.00677	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.2.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06876	0.06161	0.72000	0.00000	0.00000	0.16915	0.16915	0.00000	0.03965	0.03965	—	172.600	172.600	0.00925	0.00704	0.01532	174.945
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00150	0.00134	0.01597	0.00000	0.00000	0.00368	0.00368	0.00000	0.00086	0.00086	—	3.81686	3.81686	0.00019	0.00014	0.00561	3.87041
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00027	0.00024	0.00292	0.00000	0.00000	0.00067	0.00067	0.00000	0.00016	0.00016	—	0.63193	0.63193	0.00003	0.00002	0.00093	0.64079
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3. Building Construction (2027)

3.3.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02988	9.39093	12.9379	0.02340	0.33657	—	0.33657	0.30965	—	0.30965	—	2,397.08	2,397.08	0.09724	0.01945	—	2,405.30
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56432	5.14572	7.08929	0.01282	0.18442	—	0.18442	0.16967	—	0.16967	—	1,313.47	1,313.47	0.05328	0.01066	—	1,317.97
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10299	0.93909	1.29379	0.00234	0.03366	—	0.03366	0.03096	—	0.03096	—	217.459	217.459	0.00882	0.00176	—	218.206
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.3.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00042	0.00029	0.00485	0.00000	0.00000	0.00100	0.00100	0.00000	0.00023	0.00023	—	1.08191	1.08191	0.00005	0.00004	0.00351	1.09830

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Vendor	0.00004	0.00159	0.00075	0.00001	0.00002	0.00034	0.00035	0.00002	0.00009	0.00011	—	1.26098	1.26098	0.00005	0.00018	0.00281	1.31770
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00041	0.00036	0.00426	0.00000	0.00000	0.00100	0.00100	0.00000	0.00023	0.00023	—	1.02179	1.02179	0.00005	0.00004	0.00009	1.03567
Vendor	0.00004	0.00165	0.00076	0.00001	0.00002	0.00034	0.00035	0.00002	0.00009	0.00011	—	1.26182	1.26182	0.00005	0.00018	0.00007	1.31583
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00022	0.00020	0.00236	0.00000	0.00000	0.00055	0.00055	0.00000	0.00013	0.00013	—	0.56490	0.56490	0.00003	0.00002	0.00083	0.57282
Vendor	0.00002	0.00090	0.00042	< 0.000005	0.00001	0.00018	0.00019	0.00001	0.00005	0.00006	—	0.69114	0.69114	0.00003	0.00010	0.00067	0.72136
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00004	0.00004	0.00043	0.00000	0.00000	0.00010	0.00010	0.00000	0.00002	0.00002	—	0.09352	0.09352	< 0.000005	< 0.000005	0.00014	0.09484
Vendor	< 0.000005	0.00016	0.00008	< 0.000005	< 0.000005	0.00003	0.00004	< 0.000005	0.00001	0.00001	—	0.11443	0.11443	< 0.000005	0.00002	0.00011	0.11943
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4. Paving (2027)

3.4.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.73744	6.94439	9.95313	0.01395	0.29813	—	0.29813	0.27428	—	0.27428	—	1,511.11	1,511.11	0.06130	0.01226	—	1,516.29
Paving	0.40028	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03637	0.34246	0.49084	0.00069	0.01470	—	0.01470	0.01353	—	0.01353	—	74.5203	74.5203	0.00302	0.00060	—	74.7761
Paving	0.01974	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00664	0.06250	0.08958	0.00013	0.00268	—	0.00268	0.00247	—	0.00247	—	12.3377	12.3377	0.00050	0.00010	—	12.3800
Paving	0.00360	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.4.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05157	0.04621	0.54000	0.00000	0.00000	0.12686	0.12686	0.00000	0.02974	0.02974	—	129.450	129.450	0.00693	0.00528	0.01149	131.209
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00253	0.00226	0.02695	0.00000	0.00000	0.00622	0.00622	0.00000	0.00146	0.00146	—	6.44095	6.44095	0.00033	0.00024	0.00946	6.53131
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00046	0.00041	0.00492	0.00000	0.00000	0.00113	0.00113	0.00000	0.00027	0.00027	—	1.06637	1.06637	0.00005	0.00004	0.00157	1.08133
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5. Architectural Coating (2027)

3.5.1. Onsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11335	0.83116	1.12539	0.00173	0.01905	—	0.01905	0.01752	—	0.01752	—	133.513	133.513	0.00542	0.00108	—	133.971
Architectural Coatings	60.9209	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00776	0.05693	0.07708	0.00012	0.00130	—	0.00130	0.00120	—	0.00120	—	9.14471	9.14471	0.00037	0.00007	—	9.17609
Architectural Coatings	4.17266	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.00142	0.01039	0.01407	0.00002	0.00024	—	0.00024	0.00022	—	0.00022	—	1.51401	1.51401	0.00006	0.00001	—	1.51921
Architectural Coatings	0.76151	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite truck	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

3.5.2. Offsite - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00008	0.00007	0.00085	0.00000	0.00000	0.00020	0.00020	0.00000	0.00005	0.00005	—	0.20436	0.20436	0.00001	0.00001	0.00002	0.20713
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00001	< 0.000005	0.00006	0.00000	0.00000	0.00001	0.00001	0.00000	< 0.000005	< 0.000005	—	0.01412	0.01412	< 0.000005	< 0.000005	0.00002	0.01432
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.000005	< 0.000005	0.00001	0.00000	0.00000	< 0.000005	< 0.000005	0.00000	< 0.000005	< 0.000005	—	0.00234	0.00234	< 0.000005	< 0.000005	< 0.000005	0.00237
Vendor	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
Hauling	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	—	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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
Site Preparation	Site Preparation	1/4/2027	1/8/2027	5.00000	5.00000	—
Grading	Grading	1/11/2027	1/20/2027	5.00000	8.00000	—
Building Construction	Building Construction	1/21/2027	10/27/2027	5.00000	200.000	—
Paving	Paving	10/28/2027	11/22/2027	5.00000	18.0000	—
Architectural Coating	Architectural Coating	11/23/2027	12/27/2027	5.00000	25.0000	—

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
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00000	8.00000	367.000	0.40000
Site Preparation	Tractors/Loaders/ Backhoes	Diesel	Average	4.00000	8.00000	84.0000	0.37000
Grading	Excavators	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Grading	Graders	Diesel	Average	1.000000	8.00000	148.000	0.41000
Grading	Rubber Tired Dozers	Diesel	Average	1.000000	8.00000	367.000	0.40000
Grading	Tractors/Loaders/ Backhoes	Diesel	Average	2.00000	8.00000	84.0000	0.37000
Grading	Scrapers	Diesel	Average	2.00000	8.00000	423.000	0.48000
Building Construction	Cranes	Diesel	Average	1.000000	7.00000	367.000	0.29000
Building Construction	Forklifts	Diesel	Average	3.00000	8.00000	82.0000	0.20000
Building Construction	Generator Sets	Diesel	Average	1.000000	8.00000	14.0000	0.74000

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Tractors/Loaders/ Backhoes	Diesel	Average	3.00000	7.00000	84.0000	0.37000
Building Construction	Welders	Diesel	Average	1.000000	8.00000	46.0000	0.45000
Paving	Pavers	Diesel	Average	2.00000	8.00000	81.0000	0.42000
Paving	Paving Equipment	Diesel	Average	2.00000	8.00000	89.0000	0.36000
Paving	Rollers	Diesel	Average	2.00000	8.00000	36.0000	0.38000
Architectural Coating	Air Compressors	Diesel	Average	1.000000	6.00000	37.0000	0.48000

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	Worker	17.5000	11.9700	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.63000	HHDT,MHDT
Site Preparation	Hauling	0.00000	20.0000	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	Worker	20.0000	11.9700	LDA,LDT1,LDT2
Grading	Vendor	—	7.63000	HHDT,MHDT
Grading	Hauling	0.00000	20.0000	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	Worker	0.11840	11.9700	LDA,LDT1,LDT2
Building Construction	Vendor	0.05245	7.63000	HHDT,MHDT

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	Hauling	0.00000	20.0000	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	Worker	15.0000	11.9700	LDA,LDT1,LDT2
Paving	Vendor	—	7.63000	HHDT,MHDT
Paving	Hauling	0.00000	20.0000	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	Worker	0.02368	11.9700	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.63000	HHDT,MHDT
Architectural Coating	Hauling	0.00000	20.0000	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	0.00000	0.00000	245,025	81,675.0	1,797.00

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	7.50000	0.00000	0.00000
Grading	—	—	24.0000	0.00000	0.00000
Paving	0.00000	0.00000	0.00000	0.00000	2.75000

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Phase Name	Land Use	Area Paved (acres)	% Asphalt
Paving	General Heavy Industry	0.00000	0%
Paving	General Office Building	0.00000	0%
Paving	Other Asphalt Surfaces	2.75000	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2027	0.00000	588.983	0.03300	0.00400

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	8.91000	annual days of extreme heat
Extreme Precipitation	2.80000	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	8.11000	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	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction

measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	47.1437
AQ-PM	33.0305
AQ-DPM	20.1493
Drinking Water	28.9871
Lead Risk Housing	46.4650
Pesticides	59.6552
Toxic Releases	26.1815
Traffic	90.7750
Effect Indicators	—
CleanUp Sites	64.2217
Groundwater	76.1747
Haz Waste Facilities/Generators	95.4864

Indicator	Result for Project Census Tract
Impaired Water Bodies	33.1583
Solid Waste	54.8454
Sensitive Population	—
Asthma	1.19641
Cardio-vascular	7.68943
Low Birth Weights	19.1686
Socioeconomic Factor Indicators	—
Education	4.66970
Housing	99.8352
Linguistic	—
Poverty	86.8593
Unemployment	98.7897

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	—

Indicator	Result for Project Census Tract
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	—

Indicator	Result for Project Census Tract
Health Outcomes	—
Insured adults	—
Arthritis	99.7
Asthma ER Admissions	98.9
High Blood Pressure	99.8
Cancer (excluding skin)	99.7
Asthma	69.3
Coronary Heart Disease	99.8
Chronic Obstructive Pulmonary Disease	99.2
Diagnosed Diabetes	99.8
Life Expectancy at Birth	0.0
Cognitively Disabled	44.8
Physically Disabled	99.8
Heart Attack ER Admissions	93.1
Mental Health Not Good	45.5
Chronic Kidney Disease	99.7
Obesity	92.0
Pedestrian Injuries	0.0
Physical Health Not Good	99.3
Stroke	99.7
Health Risk Behaviors	—

Indicator	Result for Project Census Tract
Binge Drinking	0.1
Current Smoker	28.8
No Leisure Time for Physical Activity	86.6
Climate Change Exposures	—
Wildfire Risk	0.4
SLR Inundation Area	0.0
Children	29.7
Elderly	99.8
English Speaking	0.0
Foreign-born	0.0
Outdoor Workers	58.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	12.2
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)	52.0000
Healthy Places Index Score for Project Location (b)	—
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Land Use	Medium facilities ~ 11 acres
Construction: Construction Phases	No demolition

Screen	Justification
Construction: Architectural Coatings	Parking areas ~ 25% of all paved areas.

8.3. Land Use

Model Parameter	Units	Default Value	New Value
Building Area	sq. ft	359,210	160.000
Landscape Area	sq. ft	—	0.00000

8.4. Construction

8.4.1. Construction Phases

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Site Preparation	Site Preparation	Start Date	2/2/2027	1/4/2027
Site Preparation	Site Preparation	End Date	2/16/2027	1/8/2027
Site Preparation	Site Preparation	Work Days per Phase	10.00000	5.00000
Grading	Grading	Start Date	2/17/2027	1/11/2027
Grading	Grading	End Date	3/31/2027	1/20/2027
Grading	Grading	Work Days per Phase	30.0000	8.00000
Building Construction	Building Construction	Start Date	4/1/2027	1/21/2027
Building Construction	Building Construction	End Date	5/25/2028	10/27/2027
Building Construction	Building Construction	Work Days per Phase	300.000	200.000
Paving	Paving	Start Date	5/26/2028	10/28/2027

Phase Type	Phase Name	Model Parameter	Default Value	New Value
Paving	Paving	End Date	6/23/2028	11/22/2027
Paving	Paving	Work Days per Phase	20.0000	18.0000
Architectural Coating	Architectural Coating	Start Date	6/24/2028	11/23/2027
Architectural Coating	Architectural Coating	End Date	7/22/2028	12/27/2027
Architectural Coating	Architectural Coating	Work Days per Phase	20.0000	25.0000

8.4.8. Architectural Coatings

Phase Name	Model Parameter	Units	Default Value	New Value
Architectural Coating	Non-Residential Interior VOC	g/L	50.0000	100.0000
Architectural Coating	Non-Residential Exterior VOC	g/L	50.0000	100.0000
Architectural Coating	Non-Residential Interior Area	sq ft	480.000	245,025
Architectural Coating	Non-Residential Exterior Area	sq ft	160.000	81,675.0
Architectural Coating	Parking Area	sq ft	7,187.40	1,797.00

ATTACHMENT 2 – MOBILE AND STATIONARY SOURCES OPERATIONAL EMISSIONS

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Table 1: Compost Facility Operations Assumptions- Scenario 1

Assumption	Scenario 1
Facility Size	Small
Facility Capacity (cu yd)	5,000
Facility Size (acres)	5
Throughput (tpy)	10,000
Operating Schedule (hr/day)	10
Operating Schedule (wk/year)	52
Operating Schedule (day/year)	312
Feedstock	Green Waste (includes vegetative food material)
Feedstock Storage Time (days)	2
Feedstock Storage Building	N/A
Active Technology	Windrows
VOC Control Efficiency	0%
NH3 Control	0%
Curing	Yes
Mulch Colorizer Tons per Hour	0
Diesel Grinders	1
Diesel Screens	1
Diesel Stackers	1
Diesel Colorizer	0
Diesel Emergency Generator	1
Diesel Emergency Fire Pump	1
Employee and Commercial Light Duty Gasoline Vehicle Round Trips Per Day	8
Employee and Commercial Light Duty Diesel Vehicle Round Trips Per Day	1
Employee Mileage (one-way)	15
Tractor Trailers for Raw Materials Round Trips Per Day	14
Tractor Trailers for Product Round Trips Per Day	3
Feedstock Haul Truck Mileage (one-way)	20
Compost Product Haul Truck Mileage (one-way)	15
Baseline Feedstock Haul Truck Mileage (one-way)	15
Fuel Truck	1
Tractors	1
Excavator	1
Loader	2
Windrow Turner	1
Water Truck	1
Sweeper Truck	1
Fuel Truck Hours per Day	1
Other Off-road Engine (mobile and non-emergency stationary) Hours per Day	4

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Table 2: Additional Datasets and Assumptions

Table 2a: Colorizer Data and Assumptions

Parameter	Value	Unit of Measure	Notes
Bulk density - mulch	600	lb/cy	Average per Google AI
Conversion	2000	lb/ton	Constant
Throughput	8.55	cy/hr	Calculated from annual finished product throughput, assuming all is colorized
Annual Hours of Operation	3,120	hr/yr	Assumption
Application rate	6.5	lbs/cy	Google AI, max of listed range
Ammonia Concentration	0.5%	by weight	SDS

Table 2b: Stationary Engine Information[1]

Equipment	Number of Engines	Engine Tier and Information			
		Fuel[2]	Tier[2]	BHp[2]	Op Load[3]
Diesel Grinders	1	Diesel	4	100	95%
Diesel Screens	1	Diesel	4	100	95%
Diesel Stackers	1	Diesel	4	100	95%
Diesel Colorizer	0	Diesel	4	100	95%
Diesel Emergency Generator	1	Diesel	3	150	74%
Diesel Emergency Fire Pump	1	Diesel	3	300	74%

1. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
2. Engineering estimate based on projected throughput and machine capacity.
3. Engineering estimate based on projected throughput and machine capacity except for emergency engines, which are from User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12

Table 2c: Emergency Engine Operation Assumptions

Parameter	Value	Unit of Measure
Emergency Engine Operating Hours	2	hours/day, assumption
Emergency Engine Operating Days	100	day/yr, for 200 hours per year, assumption

Table 2d: Raw Material and Product Truck Loads

Parameter	Value	Unit of Measure
Raw Material quantity per truck	12	tons/truck
Compost quantity per truck	20	tons/truck

Table 2e: Onroad Vehicle Information and Mileage

Vehicle Type	Vehicle Use	Number of Vehicles	Vehicle Weight (lb)			Fuel	One-way Onsite Trip Mileage	One-way Offsite Trip Mileage[4]	Hours of Op Onsite and within
			Gross	Empty	Average				
LDT1	Employee	8	3,750	3,750	3,750	Gasoline	0.00	15	1
LHD2	Delivery of Office Supplies	1	15,006	8,200	11,603	Diesel	0.20	15	1
T7 Tractor	Ship Raw Material	14	47,000	23,000	35,000	Diesel	0.20	5	10
T7 Tractor	Ship Finished Compost	3	63,000	23,000	43,000	Diesel	0.20	15	10

4. Feedstock haul truck mileage is the mileage to the compost facility minus the baseline mileage to a landfill. Mileages are assumptions for representative facilities.

Table 2f: Fraction of Onroad Vehicle VMT by Functional Type of Roadway[5]

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 6

5. SJVAPCD, Appendix A: Comments
6. Rural is assumed to be 0.25 miles per

Table 2g: Onroad Vehicle VMT-weighted Average Vehicle Weight

Parameter	Value	Unit of Measure
Average Vehicle Weight	10.1	ton/vehicle

Table 2h: Offroad Vehicle Information

Offroad Equipment	Typical Model	Fuel	Engine Information		Op Load[7]	Hours per Day
			Tier	BHp		
Fuel Truck	Freightliner M2106	Diesel	4f	350	38%	1
Tractors	Massey Fergusen, 7619	Diesel	4f	200	37%	4
Excavator	Caterpillar 326	Diesel	4f	201	38%	4
Loader	Caterpillar, 962K	Diesel	4f	250	36%	4
Windrow Turner	Scarab	Diesel	4f	250	42%	4
Water Truck	International, 7400 6x4	Diesel	4f	350	38%	4
Sweeper Truck	Freightliner M2	Diesel	4f	240	46%	4

7. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12. Windrow turner using "Other Construction Equipment"

Table 2i: Offsite Mileage Included with Onsite Calculations

Parameter	Value	Unit of Measure
Offsite Mileage Included with Onsite Calculations	0.25	mile/trip

Table 2j: Gasoline Vehicle Mileage and Fuel Consumption

Parameter	Onsite	Near-site[8]
VMT/Day	0.00	4.00
Fuel Consumption (gal/day)	0.000	0.247

Average Fuel Economy Light Truck[9] 16.20 MPG

8. Near site mileage is calculated based on the total number of gasoline vehicle trips per day, multiplied by 0.25 miles (one way) multiplied by 2 (two way trip).
9. https://en.wikipedia.org/wiki/Fuel_efficiency

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Table 3: Emission Factors

Table 3a: Composting Emission Factors

Pollutant	Phase	Emission Factor	Note
VOC	Feedstock Storage	0.2 lb/wet ton/day	1
VOC (uncontrolled)	Composting + Curing	3.58 lb/ton	2
VOC control efficiency	Composting + Curing	0%	---
VOC (controlled)	Composting + Curing	3.58 lb/ton	calculated
VOC (controlled)	Composting (=90%)	3.22 lb/ton	2
VOC (controlled)	Curing (=10%)	0.36 lb/ton	2
VOC	Storage	0.02 lb/ton	3
NH_3	Feedstock Storage	0.02 lb/ton/day	1
NH3 (uncontrolled)	Composting + curing	0.78 lb/ton	4
NH3 control efficiency	Composting + curing	0%	---
NH_3 (controlled)	Composting + curing	0.78 lb/ton	calculated
NH_3	Storage	0.00038 lb/ton	5
GHG - CO2	Composting	0.44 kg/kg	6
GHG - CH4	Composting	0.004 kg/kg	6
GHG - N2O	Composting	0.0003 kg/kg	6

1. SJVAPCD Compost Emission Factor Report, Originally Published September 15, 2010, Revised March 21, 2023, Table 7.
2. SJVAPCD Compost Emission Factor Report Originally Published September 15, 2010 Revised March 21, 2023, Tables 3 and 4
3. Storage EF from SJVAPCD Compost ROG Emission Factors, Sept 15, 2010, App C, Table 4.3 which is based on 15 days storage.
4. SJVAPCD Compost Emission Factor Report, Originally Published September 15, 2010, Revised March 21, 2023, Table 6.
5. SJVAPCD Compost VOC Emission Factors, Sept 15, 2010, App C, Table 4.3 which is based on 15 days storage.
6. Greenhouse Gas Emissions Estimation Methodologies for Biogenic Emissions from Selected Source Categories: Measurement Policy Group, December 14, 2010 Solid Waste Disposal Wastewater Treatment Ethanol Fermentation Submitted to: U.S. Environmental Protection Agency Sector Policies and Programs Division

Table 3b: Uncontrolled Grinding and Screening PM Emission Factors

Process Operation	Emission Factor		Note
	PM10 (lb/ton)	PM2.5 (lb/ton)	
Grinding	0.0144	0.00216	7
Screening	0.0144	0.00216	8
Control Efficiency from Watering	75%		9

7. BAAQMD, Title V Permit Evaluation, Guadalupe Rubbish Disposal Co., Site A3294. BAAQMD references AP-42 for log debarking. Assume 15% fraction of PM2.5.
8. AP-42 section 10.3 Plywood Veneer and Layout Operations Table 10.3-1 (4th Edition) for log debarking, assuming 60% of emissions are PM10 with a 15% fraction of PM2.5.
9. Mojave Desert Air Quality Management District, "Emissions Inventory Guidance, Mineral Handling and Processing Industries", Section G, Wind Erosion from Storage Piles, April 2000.

Table 3c: Material Handling PM Emission Factors

Variable	Emission Factor		Note
	PM10	PM2.5	
Particle Size Multiplier (dimensionless)	0.35	0.053	10
Mean Wind Speed (MPH)	3.25	3.25	11
Material Moisture Content (%)	4.80	4.80	10
Emission Factor (lb/ton/drop point)	1.88E-04	2.84E-05	calculated

10. AP-42, Chapter 13.2.4 Aggregate Handling and Storage Piles. Moisture content used is the maximum allowed by the method. Actual moisture content will be higher, thus these emission factors are conservative.
11. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-1, Average of Los Angeles Airport and San Jose Airport.

Table 3d: Wind Erosion PM Emission Factors[11]

Variable	PM10	PM2.5	Note
Particulate aerodynamic factor	0.50	0.20	12
Average silt loading of storage pile in percent (%),	0.50	0.50	Assumed
Average number of days during the year with at least 0.01 inches of precipitation	24.30	24.30	13
Percentage of time with unobstructed wind speed >12 mph in percent (%)	10.00	10.00	Assumed
Wind Erosion EF (lb/acre/day)	2.74E-01	1.10E-01	Calculated
Control Efficiency from Watering	75%		12

12. Mojave Desert Air Quality Management District, "Emissions Inventory Guidance, Mineral Handling and Processing Industries", Section G, Wind Erosion from Storage Piles, April 2000.
13. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Table 3e: Compost Dust TAC Concentration

TAC	CAS	Concentration (lb/lb Dust)	Note
Arsenic	7440-38-2	6.20E-06	14
Cadmium	7440-43-9	2.00E-06	14
Hexavalent Chromium	18540-29-9	2.45E-06	14, 15
Cobalt	7440-48-4	8.80E-06	14
Copper	7440-50-8	6.90E-05	14
Lead	7439-92-1	2.00E-04	14
Manganese	7439-96-5	4.40E-04	14
Mercury	7439-97-6	1.00E-06	14
Nickel	7440-02-0	9.50E-05	14
Selenium	7782-49-2	1.00E-06	14

14. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm
15. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

Table 3f: Compost Organic TAC Emission Factors (lb TAC/lb VOC)[16]

TAC	Feedstock Storage	Composting	Curing	Finished Compost Storage
Acetone	8.25E-03	7.23E-02	1.08E-01	4.86E-02
1,4-Dichlorobenzene	4.21E-04	2.22E-04	6.10E-04	3.56E-03
2-Propanol (Isopropylalcohol, IPA)	1.13E-03	2.59E-04	7.37E-04	1.46E-03
Acetaldehyde	8.96E-02	4.29E-02	2.83E-02	1.86E-02
Allyl Chloride (3-Chloropropene)	2.19E-04	1.08E-04	8.75E-04	1.86E-03
Benzene	2.24E-04	1.60E-04	5.42E-04	1.89E-03
Carbondisulfide	2.18E-04	3.74E-04	1.30E-03	7.75E-03
Chloroethane	1.85E-04	8.30E-05	2.68E-04	1.56E-03
Chloroform	3.42E-04	1.63E-04	4.99E-04	2.89E-03
Ethylbenzene	3.04E-04	3.50E-04	8.06E-04	2.57E-03
Ethylene Dichloride (1,2-dichloroethane)	2.84E-04	5.37E-04	5.78E-04	2.40E-03
Hexane	7.86E-03	3.18E-04	6.42E-04	2.09E-03
Methanol (Methylalcohol)	9.68E-02	4.88E-02	3.07E-02	7.77E-04
Methyl Ethyl Ketone (2-butanone)	5.36E-02	7.82E-02	3.77E-02	1.75E-03
Naphthalene	2.81E-04	7.14E-04	1.12E-03	3.11E-03
Propene (Propylene)	9.45E-05	5.89E-03	3.21E-02	6.87E-02
Styrene	2.98E-04	3.53E-04	6.34E-04	2.53E-03
Toluene	2.64E-04	6.30E-04	2.54E-03	6.96E-03
Vinyl acetate	1.45E-02	3.01E-03	7.67E-04	2.09E-03
Xylenes	3.15E-04	4.36E-04	1.24E-03	5.15E-03

16. Speciation profile from BAAQMD Permit Handbook, Section 11.15

Table 3g: Stationary Engine Emission Factors[17]

Equipment	Fuel[18]	Tier[17]	NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
Diesel Grinders	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Screens	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Stackers	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Colorizer	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Emergency Generator	Diesel	3	2.85	1.02	3.7	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05
Diesel Emergency Fire Pump	Diesel	3	2.85	1.02	2.6	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05

17. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
18. Project description

Table 3h: Engine GHG Emission Factors[19]

Fuel	HHV (MMBtu/gal)	Default CO2 EF (kg CO2/MMBtu)	CO2 EF (kg/gal)	Default CH4 EF (kg CH4/MMBtu)	CH4 EF (kg/gal)	Default N2O EF (kg N2O/MMBtu)	N2O EF (kg/gal)
Diesel	0.138	73.96	10.20648	3.00E-03	4.14E-04	6.00E-04	8.28E-05

19. 40 CFR 98, Subpart C, Tables C-1 and C-2

Table 3i: Brake Specific Fuel Consumption (BSFC) Conversion - Diesel

Parameter	Value	Unit of Measure	Basis
Brake Specific Fuel Consumption	7,000	btu/hp-hr	Per EPA AP-42 Table 3.3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
Brake Specific Fuel Consumption	0.3602	lb/hp-hr	calculated

Table 3j: Onroad Mobile Sources - Criteria Pollutant Exhaust Emission Factors[20]

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)
NOx	LDT1	0.266	0.000	0.420
	LHD2	0.742	1.641	0.000
	T7 Tractor	0.927	5.946	5.191
VOC	LDT1	0.073	0.000	0.660
	LHD2	0.102	0.120	0.000
	T7 Tractor	0.010	0.635	0.000
CO	LDT1	4.803	0.000	6.799
	LHD2	0.241	0.996	0.000
	T7 Tractor	0.075	9.364	0.000
SOx	LDT1	0.002	0.000	0.000
	LHD2	0.002	0.001	0.000
	T7 Tractor	0.005	0.005	0.000
PM10	LDT1	0.004	0.000	0.003
	LHD2	0.020	0.030	0.000
	T7 Tractor	0.009	0.003	0.000
PM2.5	LDT1	0.004	0.000	0.003
	LHD2	0.020	0.029	0.000
	T7 Tractor	0.008	0.002	0.000

20. Emission factors are from EMFAC2025

Table 3k: Onroad Mobile Sources - Fugitive VOC Emission Factors[21]

Pollutant	Vehicle Type	Hot Soak EF (g/trip)	Running Loss EF (g/mile)	Diurnal EF (g/veh/day)
VOC	LDT1	0.37	0.68	4.24
	LHD2	-	-	-
	T7 Tractor	-	-	-

21. Emission factors are from EMFAC2025

Table 3l: Onroad Mobile Sources - Fugitive PM Emission Factors[22]

Pollutant	Vehicle Type	Tire Wear (g/mile)	Brake Wear (g/mile)
PM10	LDT1	0.0080	0.0085
	LHD2	0.0120	0.0910
	T7 Tractor	0.0360	0.0874
PM2.5	LDT1	0.0020	0.0030
	LHD2	0.0030	0.0319
	T7 Tractor	0.0090	0.0306

22. Emission factors are from EMFAC2025

Table 3m: Onroad Mobile Sources - GHG Exhaust Emission Factors[23,24]

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)
CO2	LDT1	377.335	0.000	90.387
	LHD2	636.055	212.543	0.000
	T7 Tractor	1544.504	1410.663	0.000
CH4	LDT1	0.016	0.000	0.101
	LHD2	0.005	0.006	0.000
	T7 Tractor	0.000	0.029	0.000
N2O	LDT1	0.017	0.000	0.029
	LHD2	0.103	0.034	0.000
	T7 Tractor	0.400	0.227	0.000
HFC	LDT1	0.000	N/A	N/A
	LHD2	0.001	N/A	N/A
	T7 Tractor	0.001	N/A	N/A

23. Emission factors are from EMFAC2025
24. Refrigerant R emission factor is from CalEEMod software

Table 3n: Paved Road PM10 Emission Factors[25]

Vehicle	Average Vehicle Weight (ton)	Pollutant	Freeway (lb/VMT)	Major (lb/VMT)	Collector (lb/VMT)	Local (lb/VMT)	Rural/Onsite (lb/VMT)
		sL (g/m^2)[26] -->	0.020	0.035	0.035	0.320	1.600
Fleet Average	10.12	PM10	6.53E-04	1.09E-03	1.09E-03	8.14E-03	3.52E-02
		PM2.5	1.63E-04	2.72E-04	2.72E-04	2.04E-03	8.81E-03

$E = k\ (sL)^{0.91} \times (W)^{1.02} * C_f$

Variable	Value	UOM
k (PM10)	1.00	g/VMT
k(PM2.5)	0.25	g/VMT
Rain Days[27]	24.30	day/yr
C_f	0.983	

25. Methodology per AP-42, 13.2.1 Paved Roads
26. SJVAPCD, Appendix A: Comments and Responses Rule 9510 and 3180 December 15, 2005
27. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Table 3o: Onroad Equipment Unpaved Road Emission Factors[28]

EMFAC Vehicle Type	Activity	PM Emission Factors[29,30] (lb/VMT)	
		PM10	PM2.5
LDT1	Employee	0.6895	0.0690
LHD2	Delivery of Office Supplies	1.1462	0.1146
T7 Tractor	Ship Raw Material	1.8839	0.1884
T7 Tractor	Ship Finished Compost	2.0667	0.2067

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[31]	24.3	day/year

Overall Control Efficiency[30]	75%	
Control for watering	55%	Ref 32
Control for vehicle speed	44%	Ref 32

28. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
29. MISCELLANEOUS PROCESS METHODOLOGY 7.9 Entrained Road Travel, Paved Road Dust (Revised and updated, November 2016), https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2016.pdf
30. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
31. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
32. Assumes twice daily watering and limiting travel speed to 25 mph; http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

Table 3p: Offroad Equipment Emission Factors[33]

Offroad Equipment	Typical Model	Fuel	Engine Tier and Information		NOx	VOC	CO	SOx	PM10	PM2.5	CO2	CH4	N2O
			Tier	BHp									
Fuel Truck	Freightliner M2106	Diesel	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Tractors	Massey Fergusen, 7619	Diesel	4f	200	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Excavator	Caterpillar 326	Diesel	4f	201	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Loader	Caterpillar, 962K	Diesel	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Windrow Turner	Scarab	Diesel	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Water Truck	International, 7400 6x4	Diesel	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Sweeper Truck	Freightliner M2	Diesel	4f	240	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083

33. From User Guide for CalEEMod Version 2022.1, Appendix G, Table G-13

Table 3q: Emission Factors for Dust Entrainment from Unpaved Roads for Offroad Equipment[34]

Equipment Description and Use		GVW	Empty	Average	PM Emission	
					PM10	PM2.5
Fuel Truck	Freightliner M2106	31.5	11.5	22.5	2.1106	0.2111
Tractors	Massey Fergusen, 7619	7.9	7.9	22.5	2.1106	0.2111
Excavator	Caterpillar 326	28.6	28.6	22.5	2.1106	0.2111
Loader	Caterpillar, 962K	22.5	22.5	22.5	2.1106	0.2111
Windrow Turner	Scarab	20.0	20.0	22.5	2.1106	0.2111
Water Truck[37]	International, 7400 6x4	31.5	11.5	22.5	0.0000	0.0000
Sweeper Truck[37]	Freightliner M2	16.5	16.5	22.5	0.0000	0.0000

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[38]	24.3	day/year

34. Although compost surfaces are paved, because the compost processing areas are expected to have compost residuals covering the active surfaces, the unpaved road calculations are used to estimate emissions.
35. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
36. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
37. Entrained road dust is assumed to be negligible for the water truck due to watering and the sweeper truck due to watering and sweeping.
38. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Overall Control Efficiency[37]	75%	
Control for watering	55%	Ref 39
Control for vehicle speed	44%	Ref 39

39. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

Table 3r: TAC Emissions from Onroad Gasoline Vehicles

TAC	CAS#	Emission Factor[40] (lb/1000-gal)
1,2,4-Trimethylbenzene	95636	5.89E-01
1,3-Butadiene	106990	3.24E-01
Acetaldehyde	75070	1.47E-01
Acrolein	107028	8.25E-02
Benzene	71432	1.57E+00
Chlorine	7782505	4.55E-01
Copper	7440508	3.30E-03
Ethylbenzene	100414	6.42E-01
Formaldehyde	50000	1.01E+00
Hexane	110543	9.42E-01
Manganese	7439965	3.30E-03
Methanol (Methylalcohol)	67561	2.42E-01
Methyl Ethyl Ketone (2-butanone)	78933	1.18E-02
Methyl tert-butyl ether	1634044	1.15E+00
m-Xylene	108383	2.17E+00
Naphthalene	91203	2.95E-02
Nickel	7440020	3.30E-03
o-Xylene	95476	7.54E-01
Styrene	100425	7.07E-02
Toluene	108883	3.50E+00

40. SJVAPCD, AB 2588 "Hot Spots" Air Toxics Profiles, March 27, 2017, District Toxic Profile ID 176, Gasoline-Fired Portable Catalyst ICE

Table 3s: TAC from Paved Road Dust

TAC	Wt. Fraction[41, 42]
Arsenic	0.000013
Cadmium	0.000003
Hexavalent Chromium	0.00000085
Cobalt	0.000023
Copper	0.000148
Lead	0.000124
Manganese	0.0008
Nickel	0.000012
Mercury	0.000009
Selenium	0.000002
Vanadium (Fume Or Dust)	0.000071

41. CARB speciation profile for Paved Roads

42. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

Table 3t: TAC from Vehicle/Equipment Travel on Unpaved Surfaces

TAC	Concentration[43]
Arsenic	6.20E-06
Cadmium	2.00E-06
Hexavalent Chromium	2.45E-06
Cobalt	8.80E-06
Copper	6.90E-05
Lead	2.00E-04
Manganese	4.40E-04
Nickel	9.50E-05
Mercury	1.00E-06
Selenium	1.00E-06

43. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm

Table 3u: Emissions Reduction from Baseline[44]

Waste Type	Compost Emission Reduction Factor (MT CO2e/ton feedstock)
Food Waste	0.62
Green Waste (includes vegetative food material)	0.44
Green Waste (includes vegetative food material) + Food Waste	0.56
Compost Emission Reduction Factor for Scenario 1	**0.44**

44. CARB, Method for Estimating Greenhouse Gas Emission Reductions From Diversion of Organic Waste From Landfills to Compost Facilities, 2017

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Table 4: Process Throughputs

Table 4: Process Throughput Calculations

Processing Step	Loss based on Initial Charge	Loss based on Previous Step	Proposed Project (TPY)	Proposed Project (TPD)
Initial Charge	---	---	10,000	32
Loss Upon Composting	10.0%	90.0%	1,000	3
Initial Charge to Curing	---	---	9,000	29
Loss Upon Curing	5.0%	5.6%	500	2
Initial Charge to Screening	---	---	8,500	27
Loss Upon Screening	5.0%	5.9%	500	2
Finished Product	---	---	8,000	26

Data and Parameters

Daily Operating Hours	10	hours/day
Annual Operating Days	312	Day/year

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Table 5: Grinding and Screening PM Emissions

Table 5a: Emission Factors

Process Operation	PM10	PM2.5
Grinding	0.0144	0.00216
Screening	0.0144	0.00216

Table 5b: Grinding and Screening PM Emissions

Operation	Annual Throughput (ton/yr)	Peak Daily Throughput (ton/day)	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Grinding	10,000	32	36.00	5.40	0.12	0.02	0.01	0.00
Screening	8,500	27	30.60	4.59	0.10	0.01	0.01	0.00
		Total	66.60	9.99	0.21	0.03	0.02	0.00
		Total (TPY)	0.02	0.003				

Data and Parameters

Operating Hours	10	hrs/day
Control Efficiency for Watering	75%	

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Table 6: Material Handling PM Emissions

Table 6: Material Handling PM Emissions

Process Step	Annual Throughput (ton/yr)	Average Daily Throughput (ton/day)	No. of Drop Points	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
				PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Feedstock	10,000	32	1	1.88	0.28	0.0060	0.0009	0.00060	0.00009
Grinding[1]	10,000	32	4	7.51	1.14	0.0241	0.0036	0.00241	0.00036
Composting	10,000	32	1	1.88	0.28	0.0060	0.0009	0.00060	0.00009
Curing	9,000	29	1	1.69	0.26	0.0054	0.0008	0.00054	0.00008
Screening[2]	8,500	27	4	6.39	0.97	0.0205	0.0031	0.00205	0.00031
Finished Compost Storage	8,000	26	1	1.50	0.23	0.0048	0.0007	0.00048	0.00007
Truck Loadout	8,000	26	1	1.50	0.23	0.0048	0.0007	0.00048	0.00007
			Total (lb/yr)	22.35	3.38	0.0716	0.0108	0.00716	0.00108
			Total (TPY)	0.011	0.0017				

Data and Parameters

Operating Schedule	10	hr/day
Days per year	312	day/yr
PM10 EF	1.88E-04	lb/ton/drop
PM2.5 EF	2.84E-05	lb/ton/drop

Notes

1. Four drop points are assumed for the grinding: 1) load hopper, 2) hopper to grinder, 3) grinder to conveyor, 4) conveyor to storage pile
2. Four drop points are assumed for the screens: 1) load hopper, 2) hopper to screen, 3) screen to conveyor, 4) conveyor to storage pile

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Table 7: Wind Erosion PM Emissions

Table 7a: Wind Erosion Dimensions/Area

Area	Acres
Composting Facility	5

Table 7b: Wind Erosion PM Emission Factors

Variable	PM10 lb/acre/day	PM2.5 lb/acre/day
Inactive Day Wind Erosion EF	2.74E-01	1.10E-01

Table 7c: Wind Erosion PM Emissions

Area	Acres	Days per Year	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Composting Facility	5.00	365	124.94	49.98	0.34	0.14	0.014	0.006
		Total (TPY)	0.062	0.025				

Data and Parameters			Notes:
1. Control by watering per MDAQMD Mineral Guidance	75%		All piles are watered for dust suppression or moisture control, or both.
Weeks per year	52	weeks/yr	Constant
Days per year	365	day/yr	Constant
Hours per day	24	hr/day	Constant
Conversion	43,560	ft^2/acre	Constant

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Table 8: Composting VOC Emissions

Table 8: Composting VOC Emissions

Process Unit	Annual Throughput (ton/yr)	Emission Factor	Annual Emissions (lb/yr)	Average Daily Emissions (lb/day)	Average Hourly Emissions (lb/hr)
Feedstock Storage	10,000	0.2 lb/wet ton/day	4,000	10.96	0.46
Composting	10,000	3.22 lb/ton	32,220	88.27	3.68
Curing[1]	10,000	0.36 lb/ton	3,580	9.81	0.41
Finished Compost Storage	8,000	0.02 lb/ton	160	0.44	0.02
1. EF developed for composting throughput		Total (lb/yr)	39,960	109.48	4.56
		Total (TPY)	19.98		

Data and Parameters			Notes
Daily Hours of Emissions	24	hr/day	Constant
Feedstock Storage Duration	2	days	Assumption
Days per year	365	days per year	

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Table 9: Composting GHG Emissions

Table 9a: Composting GHG Emissions[1]

Process Unit	Annual Throughput (ton/yr)	CH4 Emission Factor	N2O Emission Factor	CH4 (MT/yr)	N2O (MT/yr)	CO2e (MT/Yr)
Composting	10,000	0.004 kg/kg	0.0003 kg/kg	36	2.72	1,737

Data and Parameters

Conversion	454	gram/lb
Conversion	1,000	Kg/MT
Conversion	1,000	gram/Kg

Table 9b: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

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Table 10: Stationary Engines - Criteria Pollutant and GHG Emissions

Table 10a: Engine Emission Factors

Equipment	Number of Engines	Engine Tier and Information			NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
		Fuel	Tier	BHp									
Diesel Grinders	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Screens	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Stackers	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Colorizer	0	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Emergency Generator	1	Diesel	3	150	2.85	1.02	3.7	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05
Diesel Emergency Fire Pump	1	Diesel	3	300	2.85	1.02	2.6	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05

Table 10b: Total Daily Criteria Pollutant Emissions from Stationary Engine

Function	Number of Engines	Engine Characteristics		Hr/Day	Criteria Pollutant Exhaust Emissions (lb/day)					
		BHp	Op Load		NOx	VOC	CO	SOx	PM10	PM2.5
Diesel Grinders	1	100	95%	4	0.22	0.04	3.10	0.00	0.01	0.01
Diesel Screens	1	100	95%	4	0.22	0.04	3.10	0.00	0.01	0.01
Diesel Stackers	1	100	95%	4	0.22	0.04	3.10	0.00	0.01	0.01
Diesel Colorizer	0	100	95%	4	0.00	0.00	0.00	0.00	0.00	0.00
Diesel Emergency Generator	1	150	74%	2	1.39	0.50	1.81	0.00	0.07	0.07
Diesel Emergency Fire Pump	1	300	74%	2	2.79	1.00	2.55	0.00	0.15	0.15

Table 10c: Total Annual Criteria Pollutant Emissions from Stationary Engine

Function	Number of Engines	Engine Characteristics		Hr/Yr	Criteria Pollutant Exhaust Emissions (lb/yr)					
		BHp	Op Load		NOx	VOC	CO	SOx	PM10	PM2.5
Diesel Grinders	1	100	95%	1,248	67.96	13.1	967	1.28	2.61	2.61
Diesel Screens	1	100	95%	1,248	67.96	13.1	967	1.28	2.61	2.61
Diesel Stackers	1	100	95%	1,248	67.96	13.1	967	1.28	2.61	2.61
Diesel Colorizer	0	100	95%	1,248	0.00	0	0	0.00	0.00	0.00
Diesel Emergency Generator	1	150	74%	200	139.49	50	181	0.24	7.34	7.34
Diesel Emergency Fire Pump	1	300	74%	200	278.97	100	255	0.48	14.7	14.7

Table 10d: Stationary Engine - GHG Emissions

Function	Number of Engines	Engine Characteristics		Hr/Yr	Fuel (gal/yr)	CO2 (MT/yr)	CH4 (kg/yr)	N2O (kg/yr)	CO2e (MT/Yr)
		BHp	Op Load						
Diesel Grinders	1	100	95%	1,248	6,058	61.8	0.0025	0.0005	61.8
Diesel Screens	1	100	95%	1,248	6,058	61.8	0.0025	0.0005	61.8
Diesel Stackers	1	100	95%	1,248	6,058	61.8	0.0025	0.0005	61.8
Diesel Colorizer	0	100	95%	1,248	0	0.0	0.0000	0.0000	0.0
Diesel Emergency Generator	1	150	74%	200	1,134	11.6	0.0005	0.0001	11.6
Diesel Emergency Fire Pump	1	300	74%	200	2,269	23.2	0.0009	0.0002	23.2

Table 10e: Brake Specific Fuel Consumption (BSFC) Conversion - Diesel

Parameter	Value	Unit of Measure	Basis
Brake Specific Fuel Consumption	7,000	btu/hp-hr	Per EPA AP-42 Table 3.3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
Brake Specific Fuel Consumption	0.3602	lb/hp-hr	calculated

Table 10f: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

Table 10g: CO2 Emission Factors[2]

Fuel	HHV (MMBtu/gal)	Default CO2 EF	CO2 EF (kg/gal)	Default CH4 EF	CH4 EF (kg/gal)	Default N2O EF	N2O EF (kg/gal)
Diesel	0.138	73.96	10.20648	3.00E-03	4.14E-04	6.00E-04	8.28E-05

Data and Parameters

Operating Hours	4	hours/day
Operating Days	312	day/yr
Emergency Engine Operating Hours	2	hours/day
Emergency Engine Operating Days	100	day/yr
Conversion	454	gram/lb
Conversion	1,000,000	gm/MT
Conversion	1,000	Kg/MT
Conversion	1,000	gram/Kg

Notes:

1. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
2. Ref: 40 CFR 98, Subpart C, Tables C-1 and C-2

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Table 11: Summary of Criteria Pollutant and GHG Emissions from Composting Activities

Table 11a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
5. Grinding and Screening	---	---	---	---	0.21	0.03
6. Material Handling	---	---	---	---	0.07	0.01
7. Wind Erosion	---	---	---	---	0.34	0.14
8. Composting VOC	---	109.48	---	---	---	---
10. Stationary Engines	4.84	1.62	13.66	0.02	0.25	0.25
Total	4.84	111.10	13.66	0.02	0.87	0.43

Table 11b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
5. Grinding and Screening	---	---	---	---	66.6	9.99
6. Material Handling	---	---	---	---	22.3	3.38
7. Wind Erosion	---	---	---	---	125	50.0
8. Composting VOC	---	39,960	---	---	---	---
10. Stationary Engines	622	189	3,337	4.6	29.9	29.9
Total (lb/yr)	622	40,149	3,337	4.6	244	93
Total (TPY)	0.31	20.07	1.67	0.0023	0.12	0.047

Table 11c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	CO2e (MT/Yr)
9. Composting GHG	N/A	36	2.72	1,737
10. Stationary Engines	220	0.0089	0.0018	220
Total (MT/yr)	220	36	2.72	1,957

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Table 12: TAC from Composting Dust

Table 12a: Material Handling and Wind Erosion Dust Emissions (PM10)

Source	lb/hr	lb/yr
5. Grinding and Screening	0.02	66.60
6. Material Handling	0.01	22.35
7. Wind Erosion	0.01	124.94
Total PM10	0.04	213.89

Table 12b: TAC from Material Handling and Wind Erosion

TAC	CAS	Concentration[1, 2] (lb/lb Dust)	Total TAC Emissions		Grinding and Screening TAC Emissions		Material Handling TAC Emissions		Wind Erosion TAC Emissions	
			(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)
Arsenic	7440-38-2	6.20E-06	2.65E-07	1.33E-03	1.32E-07	4.13E-04	4.44E-08	1.39E-04	8.84E-08	7.75E-04
Cadmium	7440-43-9	2.00E-06	8.55E-08	4.28E-04	4.27E-08	1.33E-04	1.43E-08	4.47E-05	2.85E-08	2.50E-04
Hexavalent Chromium	18540-29-9	2.45E-06	1.05E-07	5.24E-04	5.23E-08	1.63E-04	1.75E-08	5.48E-05	3.49E-08	3.06E-04
Cobalt	7440-48-4	8.80E-06	3.76E-07	1.88E-03	1.88E-07	5.86E-04	6.30E-08	1.97E-04	1.26E-07	1.10E-03
Copper	7440-50-8	6.90E-05	2.95E-06	1.48E-02	1.47E-06	4.60E-03	4.94E-07	1.54E-03	9.84E-07	8.62E-03
Lead	7439-92-1	2.00E-04	8.55E-06	4.28E-02	4.27E-06	1.33E-02	1.43E-06	4.47E-03	2.85E-06	2.50E-02
Manganese	7439-96-5	4.40E-04	1.88E-05	9.41E-02	9.39E-06	2.93E-02	3.15E-06	9.83E-03	6.28E-06	5.50E-02
Mercury	7439-97-6	1.00E-06	4.28E-08	2.14E-04	2.13E-08	6.66E-05	7.16E-09	2.23E-05	1.43E-08	1.25E-04
Nickel	7440-02-0	9.50E-05	4.06E-06	2.03E-02	2.03E-06	6.33E-03	6.80E-07	2.12E-03	1.35E-06	1.19E-02
Selenium	7782-49-2	1.00E-06	4.28E-08	2.14E-04	2.13E-08	6.66E-05	7.16E-09	2.23E-05	1.43E-08	1.25E-04
			Annual Total	0.177	Annual Total	0.055	Annual Total	0.018	Annual Total	0.103

Notes:

1. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm
2. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

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Table 13: Organic TAC Emissions

Table 13a: Organic Storage VOC Emissions

Process Description	(lb/hr)	(lb/yr)
Feedstock Storage	0.46	4,000
Composting	3.68	32,220
Curing	0.41	3,580
Finished Compost Storage	0.02	160

Table 13b: Feedstock Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	8.25E-03	3.77E-03	33.00
1,4-Dichlorobenzene	4.21E-04	1.92E-04	1.68
2-Propanol (Isopropylalcohol, IPA)	1.13E-03	5.16E-04	4.52
Acetaldehyde	8.96E-02	4.09E-02	358.40
Allyl Chloride (3-Chloropropene)	2.19E-04	1.00E-04	0.88
Benzene	2.24E-04	1.02E-04	0.90
Carbondisulfide	2.18E-04	9.95E-05	0.87
Chloroethane	1.85E-04	8.45E-05	0.74
Chloroform	3.42E-04	1.56E-04	1.37
Ethylbenzene	3.04E-04	1.39E-04	1.22
Ethylene Dichloride (1,2-dichloroethane)	2.84E-04	1.30E-04	1.14
Hexane	7.86E-03	3.59E-03	31.44
Methanol (Methylalcohol)	9.68E-02	4.42E-02	387.20
Methyl Ethyl Ketone (2-butanone)	5.36E-02	2.45E-02	214.40
Naphthalene	2.81E-04	1.28E-04	1.12
Propene (Propylene)	9.45E-05	4.32E-05	0.38
Styrene	2.98E-04	1.36E-04	1.19
Toluene	2.64E-04	1.21E-04	1.06
Vinyl acetate	1.45E-02	6.62E-03	58.00
Xylenes	3.15E-04	1.44E-04	1.26

Table 13c: Composting TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	7.23E-02	2.66E-01	2329.51
1,4-Dichlorobenzene	2.22E-04	8.17E-04	7.15
2-Propanol (Isopropylalcohol, IPA)	2.59E-04	9.53E-04	8.34
Acetaldehyde	4.29E-02	1.58E-01	1382.24
Allyl Chloride (3-Chloropropene)	1.08E-04	3.97E-04	3.48
Benzene	1.60E-04	5.88E-04	5.16
Carbondisulfide	3.74E-04	1.38E-03	12.05
Chloroethane	8.30E-05	3.05E-04	2.67
Chloroform	1.63E-04	6.00E-04	5.25
Ethylbenzene	3.50E-04	1.29E-03	11.28
Ethylene Dichloride (1,2-dichloroethane)	5.37E-04	1.98E-03	17.30
Hexane	3.18E-04	1.17E-03	10.25
Methanol (Methylalcohol)	4.88E-02	1.79E-01	1572.34
Methyl Ethyl Ketone (2-butanone)	7.82E-02	2.88E-01	2519.60
Naphthalene	7.14E-04	2.63E-03	23.01
Propene (Propylene)	5.89E-03	2.17E-02	189.78
Styrene	3.53E-04	1.30E-03	11.37
Toluene	6.30E-04	2.32E-03	20.30
Vinyl acetate	3.01E-03	1.11E-02	96.98
Xylenes	4.36E-04	1.60E-03	14.05

Table 13d: Curing TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	1.08E-01	4.41E-02	386.64
1,4-Dichlorobenzene	6.10E-04	2.49E-04	2.18
2-Propanol (Isopropylalcohol, IPA)	7.37E-04	3.01E-04	2.64
Acetaldehyde	2.83E-02	1.16E-02	101.31
Allyl Chloride (3-Chloropropene)	8.75E-04	3.58E-04	3.13
Benzene	5.42E-04	2.22E-04	1.94
Carbondisulfide	1.30E-03	5.31E-04	4.65
Chloroethane	2.68E-04	1.10E-04	0.96
Chloroform	4.99E-04	2.04E-04	1.79
Ethylbenzene	8.06E-04	3.29E-04	2.89
Ethylene Dichloride (1,2-dichloroethane)	5.78E-04	2.36E-04	2.07
Hexane	6.42E-04	2.62E-04	2.30
Methanol (Methylalcohol)	3.07E-02	1.25E-02	109.91
Methyl Ethyl Ketone (2-butanone)	3.77E-02	1.54E-02	134.97
Naphthalene	1.12E-03	4.58E-04	4.01
Propene (Propylene)	3.21E-02	1.31E-02	114.92
Styrene	6.34E-04	2.59E-04	2.27
Toluene	2.54E-03	1.04E-03	9.09
Vinyl acetate	7.67E-04	3.13E-04	2.75
Xylenes	1.24E-03	5.07E-04	4.44

Table 13e: Finished Compost Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	4.86E-02	8.88E-04	7.78
1,4-Dichlorobenzene	3.56E-03	6.50E-05	0.57
2-Propanol (Isopropylalcohol, IPA)	1.46E-03	2.67E-05	0.23
Acetaldehyde	1.86E-02	3.40E-04	2.98
Allyl Chloride (3-Chloropropene)	1.86E-03	3.40E-05	0.30
Benzene	1.89E-03	3.45E-05	0.30
Carbondisulfide	7.75E-03	1.42E-04	1.24
Chloroethane	1.56E-03	2.85E-05	0.25
Chloroform	2.89E-03	5.28E-05	0.46
Ethylbenzene	2.57E-03	4.69E-05	0.41
Ethylene Dichloride (1,2-dichloroethane)	2.40E-03	4.38E-05	0.38
Hexane	2.09E-03	3.82E-05	0.33
Methanol (Methylalcohol)	7.77E-04	1.42E-05	0.12
Methyl Ethyl Ketone (2-butanone)	1.75E-03	3.20E-05	0.28
Naphthalene	3.11E-03	5.68E-05	0.50
Propene (Propylene)	6.87E-02	1.25E-03	10.99
Styrene	2.53E-03	4.62E-05	0.40
Toluene	6.96E-03	1.27E-04	1.11
Vinyl acetate	2.09E-03	3.82E-05	0.33
Xylenes	5.15E-03	9.41E-05	0.82

Notes:

1. Speciation profile from BAAQMD Permit Handbook, Section 11.15

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Table 14: NH3 Emissions

Table 14a: NH3 Emissions

Process Unit	Annual Throughput (ton/yr)	Daily Throughput (ton/day)	Emission Factor (lb/ton)	Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Feedstock Storage	10,000	32	0.020 lb/ton/day	0.05	400
Composting + Curing	10,000	32	0.78 lb/ton	0.89	7,800
Finished Compost Storage	8,000	26	0.0004 lb/ton	0.0003	3

Assumed Percentage of Composting + Curing to Composting:	90%	Assumed same as percent of VOC emissions

Table 14b: Colorant Application Ammonia Emissions[1]

Equipment	Annual Throughput (ton/yr)	Hourly Throughput (ton/hr)	Ammonia Emissions (lb/hr)	Ammonia Emissions (lb/yr)
Colorizer	0	0.0	0.00	0

	lb/hr	lb/yr
Total Ammonia Emissions:	**0.9364**	**8,203**

1. Ammonia emissions may occur at the colorizer or from the storage piles. No attempt has been made to determine the actual emission point.

Data and Parameters

Daily Hours of Emissions	24	hr/day	
Days of feedstock storage	2	days	
Annual hours of operation	8,760	hr/yr	
Bulk density - mulch	600	lb/cy	Average per Google AI
Conversion	2000	lb/ton	Constant
Application rate	6.5	lbs/cy	Google AI, max of listed range
Ammonia Concentration	0.5%	by weight	SDS

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Table 15: Stationary Diesel Engine TAC Emissions

Table 15: Stationary Diesel Engine TAC Emissions

Vehicle	PM10 Emissions (lb/hr)	PM10 Emissions (lb/day)	PM10 Emissions (lb/yr)
Diesel Grinders	0.002	8.38E-03	2.61
Diesel Screens	0.002	8.38E-03	2.61
Diesel Stackers	0.002	8.38E-03	2.61
Diesel Colorizer	0.000	0.00E+00	0.00
Diesel Emergency Generator	0.037	7.34E-02	7.34
Diesel Emergency Fire Pump	0.073	1.47E-01	14.68
Total PM10 = DPM	**0.116**	**2.45E-01**	**29.87**

Data and Parameters

Operating Hours	4	hours/day
Operating Days	312	day/yr
Emergency Engine Operating Hours	2	hours/day
Emergency Engine Operating Days	100	day/yr

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Table 16: Summary of TAC Emissions from Composting Activities

Table 16a: Summary of TAC Emissions from Composting Activities, lb/yr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine	Emergency Generator	Fire Pump	Total
Arsenic	7440382	4.13E-04	1.39E-04	7.75E-04	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	0.00E+00	0.00E+00	1.33E-03
Cadmium	7440439	1.33E-04	4.47E-05	2.50E-04	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	0.00E+00	0.00E+00	4.28E-04
Hexavalent Chromium	18540299	1.63E-04	5.48E-05	3.06E-04	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	0.00E+00	0.00E+00	5.24E-04
Cobalt	7440484	5.86E-04	1.97E-04	1.10E-03	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	0.00E+00	0.00E+00	1.88E-03
Copper	7440508	4.60E-03	1.54E-03	8.62E-03	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	0.00E+00	0.00E+00	1.48E-02
Lead	7439921	1.33E-02	4.47E-03	2.50E-02	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	0.00E+00	0.00E+00	4.28E-02
Manganese	7439965	2.93E-02	9.83E-03	5.50E-02	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	0.00E+00	0.00E+00	9.41E-02
Mercury	7439976	6.66E-05	2.23E-05	1.25E-04	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	0.00E+00	0.00E+00	2.14E-04
Nickel	7440020	6.33E-03	2.12E-03	1.19E-02	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	0.00E+00	0.00E+00	2.03E-02
Selenium	7782492	6.66E-05	2.23E-05	1.25E-04	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	0.00E+00	0.00E+00	2.14E-04
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	3.30E+01	2.33E+03	3.87E+02	7.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.76E+03
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	1.68E+00	7.15E+00	2.18E+00	5.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E+01
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	4.52E+00	8.34E+00	2.64E+00	2.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E+01
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	3.58E+02	1.38E+03	1.01E+02	2.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E+03
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	8.76E-01	3.48E+00	3.13E+00	2.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.79E+00
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	8.96E-01	5.16E+00	1.94E+00	3.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.29E+00
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	8.72E-01	1.21E+01	4.65E+00	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E+01
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	7.40E-01	2.67E+00	9.59E-01	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.62E+00
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	1.37E+00	5.25E+00	1.79E+00	4.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.87E+00
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	1.22E+00	1.13E+01	2.89E+00	4.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E+01
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	1.14E+00	1.73E+01	2.07E+00	3.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E+01
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	3.14E+01	1.02E+01	2.30E+00	3.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E+01
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	3.87E+02	1.57E+03	1.10E+02	1.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E+03
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	2.14E+02	2.52E+03	1.35E+02	2.80E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E+03
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	1.12E+00	2.30E+01	4.01E+00	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E+01
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	3.78E-01	1.90E+02	1.15E+02	1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E+02
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	1.19E+00	1.14E+01	2.27E+00	4.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+01
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	1.06E+00	2.03E+01	9.09E+00	1.11E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E+01
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	5.80E+01	9.70E+01	2.75E+00	3.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E+02
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	1.26E+00	1.40E+01	4.44E+00	8.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.06E+01
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	4.00E+02	7.02E+03	7.80E+02	3.04E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.20E+03
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E+00	2.61E+00	2.61E+00	0.00E+00	7.34E+00	1.47E+01	2.99E+01

Table 16b: Summary of TAC Emissions from Composting Activities, lb/hr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine	Emergency Generator	Fire Pump	Total
Arsenic	7440382	1.32E-07	4.44E-08	8.84E-08	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	0.00E+00	0.00E+00	2.65E-07
Cadmium	7440439	4.27E-08	1.43E-08	2.85E-08	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	0.00E+00	0.00E+00	8.55E-08
Hexavalent Chromium	18540299	5.23E-08	1.75E-08	3.49E-08	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	0.00E+00	0.00E+00	1.05E-07
Cobalt	7440484	1.88E-07	6.30E-08	1.26E-07	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	0.00E+00	0.00E+00	3.76E-07
Copper	7440508	1.47E-06	4.94E-07	9.84E-07	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	0.00E+00	0.00E+00	2.95E-06
Lead	7439921	4.27E-06	1.43E-06	2.85E-06	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	0.00E+00	0.00E+00	8.55E-06
Manganese	7439965	9.39E-06	3.15E-06	6.28E-06	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	0.00E+00	0.00E+00	1.88E-05
Mercury	7439976	2.13E-08	7.16E-09	1.43E-08	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	0.00E+00	0.00E+00	4.28E-08
Nickel	7440020	2.03E-06	6.80E-07	1.35E-06	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	0.00E+00	0.00E+00	4.06E-06
Selenium	7782492	2.13E-08	7.16E-09	1.43E-08	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	0.00E+00	0.00E+00	4.28E-08
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	3.77E-03	2.66E-01	4.41E-02	8.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-01
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	1.92E-04	8.17E-04	2.49E-04	6.50E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-03
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	5.16E-04	9.53E-04	3.01E-04	2.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-03
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	4.09E-02	1.58E-01	1.16E-02	3.40E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-01
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	1.00E-04	3.97E-04	3.58E-04	3.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.89E-04
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	1.02E-04	5.88E-04	2.22E-04	3.45E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.47E-04
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	9.95E-05	1.38E-03	5.31E-04	1.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.15E-03
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	8.45E-05	3.05E-04	1.10E-04	2.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.28E-04
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	1.56E-04	6.00E-04	2.04E-04	5.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-03
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	1.39E-04	1.29E-03	3.29E-04	4.69E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-03
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	1.30E-04	1.98E-03	2.36E-04	4.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-03
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	3.59E-03	1.17E-03	2.62E-04	3.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.06E-03
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	4.42E-02	1.79E-01	1.25E-02	1.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-01
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	2.45E-02	2.88E-01	1.54E-02	3.20E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-01
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	1.28E-04	2.63E-03	4.58E-04	5.68E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-03
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	4.32E-05	2.17E-02	1.31E-02	1.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.61E-02
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	1.36E-04	1.30E-03	2.59E-04	4.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-03
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	1.21E-04	2.32E-03	1.04E-03	1.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.60E-03
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	6.62E-03	1.11E-02	3.13E-04	3.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-02
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	1.44E-04	1.60E-03	5.07E-04	9.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E-03
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	4.57E-02	8.01E-01	8.90E-02	3.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.36E-01
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-03	2.09E-03	2.09E-03	0.00E+00	3.67E-02	7.34E-02	1.16E-01

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Table 17: Onroad Mobile Sources - Vehicle Information

Table 17: Vehicle Information and Mileage Calculation

Vehicle Type	Vehicle Use	Number of Vehicles per Day	Vehicle Weight (lb)			Fuel	Days	One-way Trips per Vehicle per Day	One-way Trips per Year	One-way Onsite Trip Mileage	One-way Offsite Trip Mileage	Total One-way Trip Mileage	Onsite Total VMT/yr	Offsite Total VMT/yr	Total VMT/yr
			Gross	Empty	Average										
LDT1	Employee	8	3,750	3,750	3,750	Gasoline	312	2	4,992	0.00	15	15.00	0	74,880	74,880
LHD2	Delivery of Office Supplies	1	15,006	8,200	11,603	Diesel	312	2	624	0.20	15	15.20	125	9,360	9,485
T7 Tractor	Ship Raw Material	14	47,000	23,000	35,000	Diesel	312	2	8,736	0.20	5	5.20	1,747	43,680	45,427
T7 Tractor	Ship Finished Compost	3	63,000	23,000	43,000	Diesel	312	2	1,872	0.20	15	15.20	374	28,080	28,454

Assuming 12 cu yd per raw material truck, 20 cu yd per compost product truck

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Table 18: Onroad Mobile Sources Exhaust Emissions

Table 18a: Onroad Mobile Sources - Criteria Pollutant Exhaust Emissions

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)	Total Running Exhaust (lb/yr)	Total Idle (lb/yr)	Total Start (lb/yr)	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)	Onsite Emissions (lb/day)	Offsite Emissions (lb/day)
NOx	LDT1	0.266	0.000	0.420	43.86	0.00	4.62	48.47	0.00	48.47	0.16	0.00E+00	1.55E-01
	LHD2	0.742	1.641	0.000	15.51	1.13	0.00	16.63	0.22	16.42	0.05	7.01E-04	5.26E-02
	T7 Tractor	0.927	5.946	5.191	150.87	69.47	121.30	341.64	9.81	331.83	1.09	3.14E-02	1.06E+00
VOC	LDT1	0.073	0.000	0.660	12.03	0.00	7.26	19.28	0.00	19.28	0.06	0.00E+00	6.18E-02
	LHD2	0.102	0.120	0.000	2.13	0.08	0.00	2.21	0.03	2.18	0.01	9.33E-05	6.99E-03
	T7 Tractor	0.010	0.635	0.000	1.57	7.42	0.00	8.98	0.26	8.72	0.03	8.27E-04	2.80E-02
CO	LDT1	4.803	0.000	6.799	792.20	0.00	74.76	866.96	0.00	866.96	2.78	0.00E+00	2.78E+00
	LHD2	0.241	0.996	0.000	5.04	0.68	0.00	5.72	0.08	5.65	0.02	2.41E-04	1.81E-02
	T7 Tractor	0.075	9.364	0.000	12.17	109.40	0.00	121.56	3.49	118.07	0.39	1.12E-02	3.78E-01
SOx	LDT1	0.002	0.000	0.000	0.27	0.00	0.00	0.27	0.00	0.27	0.00	0.00E+00	8.70E-04
	LHD2	0.002	0.001	0.000	0.04	0.00	0.00	0.05	0.00	0.04	0.00	1.90E-06	1.43E-04
	T7 Tractor	0.005	0.005	0.000	0.84	0.06	0.00	0.90	0.03	0.87	0.00	8.28E-05	2.80E-03
PM10	LDT1	0.004	0.000	0.003	0.70	0.00	0.04	0.74	0.00	0.74	0.00	0.00E+00	2.36E-03
	LHD2	0.020	0.030	0.000	0.43	0.02	0.00	0.45	0.01	0.44	0.00	1.88E-05	1.41E-03
	T7 Tractor	0.009	0.003	0.000	1.41	0.03	0.00	1.44	0.04	1.40	0.00	1.33E-04	4.49E-03
PM2.5	LDT1	0.004	0.000	0.003	0.64	0.00	0.03	0.68	0.00	0.68	0.00	0.00E+00	2.17E-03
	LHD2	0.020	0.029	0.000	0.41	0.02	0.00	0.43	0.01	0.42	0.00	1.80E-05	1.35E-03
	T7 Tractor	0.008	0.002	0.000	1.35	0.03	0.00	1.38	0.04	1.34	0.00	1.27E-04	4.30E-03

Table 18b: Onroad Mobile Sources - Fugitive VOC Emissions

Pollutant	Vehicle Type	Hot Soak EF (g/trip)	Running Loss EF (g/mile)	Diurnal EF (g/veh/day)	Total Hot Soak (lb/yr)	Total Running Loss (lb/yr)	Total Diurnal (lb/yr)	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)
VOC	LDT1	0.37	0.68	4.24	4.0	112.7	23.3	140.01	0.00	140.01	0.45
	LHD2	-	-	-	-	-	-	-	-	-	-
	T7 Tractor	-	-	-	-	-	-	-	-	-	-

Table 18c: Onroad Mobile Sources - Fugitive PM Emissions

Pollutant	Vehicle Type	Tire Wear (g/mile)	Brake Wear (g/mile)	Total Tire Wear (lb/yr)	Total Brake Wear	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)
PM10	LDT1	0.0080	0.0085	1.32	1.40	2.72	0.00	2.72	0.009
	LHD2	0.0120	0.0910	0.25	1.90	2.15	0.03	2.12	0.007
	T7 Tractor	0.0360	0.0874	5.86	14.22	20.08	0.58	19.50	0.064
PM2.5	LDT1	0.0020	0.0030	0.33	0.49	0.82	0.00	0.82	0.003
	LHD2	0.0030	0.0319	0.06	0.67	0.73	0.01	0.72	0.002
	T7 Tractor	0.0090	0.0306	1.46	4.98	6.44	0.18	6.26	0.021

Table 18d: Summary of Criteria Pollutant Emissions from Onroad Operations Vehicles

Type	NO_x (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SO_x (lb/yr)	PM_{10} (lb/yr)	$PM_{2.5}$ (lb/yr)
Exhaust	406.75	30.48	994.24	1.22	2.62	2.48
Fugitive	---	140.01	---	---	24.94	7.99
Total (Lb/Yr)	406.75	170.49	994.24	1.22	27.57	10.47
Total (Lb/day)	1.30	0.55	3.19	0.00	0.09	0.03
Total (TPY)	0.20	0.09	0.50	0.001	0.01	0.01

Table 18e: Onroad Mobile Sources - Greenhouse Gas Exhaust Emissions

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)	Total Running Exhaust (MT/yr)	Total Idle (MT/yr)	Total Start (MT/yr)	Total Emissions (MT/yr)
CO2	LDT1	377.335	0.000	90.387	28.3	0.00E+00	4.51E-01	29
	LHD2	636.055	212.543	0.000	6.0	6.63E-02	0.00E+00	6.10
	T7 Tractor	1544.504	1410.663	0.000	114.1	7.48E+00	0.00E+00	122
CH4	LDT1	0.016	0.000	0.101	0.0	0.00E+00	5.03E-04	0
	LHD2	0.005	0.006	0.000	0.0	1.74E-06	0.00E+00	0.00
	T7 Tractor	0.000	0.029	0.000	0.0	1.56E-04	0.00E+00	0
N2O	LDT1	0.017	0.000	0.029	0.0	0.00E+00	1.47E-04	0
	LHD2	0.103	0.034	0.000	0.0	1.07E-05	0.00E+00	0.00
	T7 Tractor	0.400	0.227	0.000	0.0	1.21E-03	0.00E+00	0
HFC	LDT1	0.000	N/A	N/A	0.0	N/A	N/A	0
	LHD2	0.001	N/A	N/A	0.0	N/A	N/A	0.00
	T7 Tractor	0.001	N/A	N/A	0.0	N/A	N/A	0
CO2e	LDT1							29
	LHD2							6.48
	T7 Tractor							131
							Total	**166**

Table 18f: GHG Emissions from Onroad Mobile Source Activity

CO_2	CH_4	N_2O	Total CO_2e
(MT/Yr)	(Kg/Yr)	(Kg/Yr)	(MT/Yr)
156	1.93	33.18	166

Table 18g: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265
HFC[1]	12,400

1. Conservatively using GWP for HFC-23, the HFC with the highest GWP

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 19: Onroad Mobile Source Paved Road Dust

Table 19a: Paved Road PM_{10} Emission Factors[1]

Vehicle	Average Vehicle Weight (ton)	Pollutant	Freeway (lb/VMT)	Major (lb/VMT)	Collector (lb/VMT)	Local (lb/VMT)	Rural/Onsite (lb/VMT)
		sL (g/m^2)^2 -->	0.020	0.035	0.035	0.320	1.600
Fleet Average	2.40	PM10	1.48E-04	2.46E-04	2.46E-04	1.84E-03	7.97E-03
		PM2.5	3.70E-05	6.15E-05	6.15E-05	4.61E-04	1.99E-03

$E = k\ (sL)^{0.91} \times (W)^{1.02} * C_f$

Variable	Value	UOM
k (PM10)	1.00	g/VMT
k(PM2.5)	0.25	g/VMT
Rain Days[3]	49	day/yr
C_f	0.966	

Table 19b: Fraction of VMT by Functional Type of Roadway[2]

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 4

Table 19c: Summary of Onroad VMT by Phase and Road Type

EMFAC Vehicle Type	Activity	Unit of Measure	Freeway	Major	Collector	Local	Rural	Total Offsite	Onsite	Total VMT
LDT1	Employee	VMT/day	79.80	93.53	66.22	0.48	4.00	244	0	244
		VMT/Yr	24,898	29,181	20,659	150	1,248	74,880	0	74,880
LHD2	Delivery of Office Supplies	VMT/day	9.98	11.69	8.28	0.06	0.50	31	0.4	31
		VMT/Yr	3,112	3,648	2,582	19	156	9,360	125	9,485
T7 Tractor	Ship Raw Material	VMT/day	46.55	54.56	38.63	0.28	7.00	147	5.6	153
		VMT/Yr	14,524	17,022	12,051	87	2,184	43,680	1,747	45,427
T7 Tractor	Ship Finished Compost	VMT/day	29.93	35.07	24.83	0.18	1.50	92	1.2	93
		VMT/Yr	9,337	10,943	7,747	56	468	28,080	374	28,454

Table 19d: Entrained Road Dust Emissions from Travel on Paved Roads (lb/day)

EMFAC Vehicle	Activity	Pollutant	Freeway	Major	Collector	Local	Rural	Onsite	Total
LDT1	Employee	PM10	1.18E-02	2.30E-02	1.63E-02	8.85E-04	3.19E-02	0.00E+00	8.39E-02
		PM2.5	2.95E-03	5.75E-03	4.07E-03	2.21E-04	7.97E-03	0.00E+00	2.10E-02
LHD2	Delivery of Office Supplies	PM10	1.47E-03	2.88E-03	2.04E-03	1.11E-04	3.99E-03	3.19E-03	1.37E-02
		PM2.5	3.69E-04	7.19E-04	5.09E-04	2.77E-05	9.97E-04	7.97E-04	3.42E-03
T7 Tractor	Ship Raw Material	PM10	6.88E-03	1.34E-02	9.50E-03	5.16E-04	5.58E-02	4.47E-02	1.31E-01
		PM2.5	1.72E-03	3.36E-03	2.38E-03	1.29E-04	1.40E-02	1.12E-02	3.27E-02
T7 Tractor	Ship Finished Compost	PM10	4.42E-03	8.63E-03	6.11E-03	3.32E-04	1.20E-02	9.57E-03	4.10E-02
		PM2.5	1.11E-03	2.16E-03	1.53E-03	8.30E-05	2.99E-03	2.39E-03	1.03E-02
Total	All	PM10	0.02	0.05	0.03	0.00	0.10	0.06	0.27
		PM2.5	0.01	0.01	0.01	0.00	0.03	0.01	0.07

Table 19e: Entrained Road Dust Emissions from Travel on Paved Roads (lb/yr)

EMFAC Vehicle	Activity	Pollutant	Freeway	Major	Collector	Local	Rural	Onsite	Total
LDT1	Employee	PM10	3.68	7.18	5.08	0.28	9.95	0.00	26.17
		PM2.5	0.92	1.80	1.27	0.07	2.49	0.00	6.54
LHD2	Delivery of Office Supplies	PM10	0.46	0.90	0.64	0.03	1.24	1.00	4.27
		PM2.5	0.12	0.22	0.16	0.01	0.31	0.25	1.07
T7 Tractor	Ship Raw Material	PM10	2.15	4.19	2.97	0.16	17.42	13.93	40.81
		PM2.5	0.54	1.05	0.74	0.04	4.35	3.48	10.20
T7 Tractor	Ship Finished Compost	PM10	1.38	2.69	1.91	0.10	3.73	2.99	12.80
		PM2.5	0.35	0.67	0.48	0.03	0.93	0.75	3.20
Total	All	PM10	7.67	14.96	10.59	0.58	32.34	17.91	84.05
		PM2.5	1.92	3.74	2.65	0.14	8.09	4.48	21.01

Notes:

1. Methodology per AP-42, 13.2.1 Paved Roads
2. SJVAPCD, Appendix A: Comments and Responses Rule 9510 and 3180 December 15, 2005
3. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
4. Rural is assumed to be 0.25 miles per one-way trip.

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 20: Fugitive Dust From Travel on Unpaved Roads

Table 20a: Unpaved Road Emission Factors[1]

EMFAC Vehicle Type	Activity	PM Emission Factors[2,3] (lb/VMT)	
		PM10	PM2.5
LDT1	Employee	0.6895	0.0690
LHD2	Delivery of Office Supplies	1.1462	0.1146
T7 Tractor	Ship Raw Material	1.8839	0.1884
T7 Tractor	Ship Finished Compost	2.0667	0.2067

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[4]	24.3	day/year

Table 20b: Vehicle Miles Travelled for Transport of Personnel, Supplies, Materials and Product

EMFAC Vehicle Type	Activity	Vehicle Weight (ton)			No. of days	Veh/day	Trips/Day	Trips/Year	One-way Miles per Trip	Total VMT[5] (mi/day)	Total VMT[5] (mi/yr)
		Gross	Empty	Average							
LDT1	Employee	1.88	1.88	1.88	312	8	2	4,992	0.00	0	0
LHD2	Delivery of Office Supplies	7.50	4.10	5.80	312	1	2	624	0.20	0.4	125
T7 Tractor	Ship Raw Material	23.50	11.50	17.50	312	14	2	8,736	0.20	5.6	1,747
T7 Tractor	Ship Finished Compost	31.50	11.50	21.50	312	3	2	1,872	0.20	1.2	374

Table 20c: Entrained Road Dust from Unpaved Roads

EMFAC Vehicle Type	Activity	Uncontrolled (lb/day)		Controlled (lb/day)		Uncontrolled (lb/yr)		Controlled (lb/yr)	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
LDT1	Employee	0.00	0.00	0.00	0.00	0	0	0	0
LHD2	Delivery of Office Supplies	0.46	0.05	0.12	0.01	143	14	36	4
T7 Tractor	Ship Raw Material	10.55	1.05	2.66	0.27	3,292	329	829	83
T7 Tractor	Ship Finished Compost	2.48	0.25	0.62	0.06	774	77	195	19
Total		13.5	1.3	3.40	0.34	4,208	421	1,061	106
Total (ton/yr)						2.1	0.2	0.5	0.1

Overall Control Efficiency[6]	75%
Control for watering	55%
Control for vehicle speed	44%

Notes:

1. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
2. MISCELLANEOUS PROCESS METHODOLOGY 7.9 Entrained Road Travel, Paved Road Dust (Revised and updated, November 2016), https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2016.pdf
3. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
4. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
5. Assume onsite roads are unpaved, offsite roads are paved.
6. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

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Table 21: Offroad Equipment - Criteria Pollutant and GHG Emissions

Table 21a: Emission Factors[1]

Unit Count	Offroad Equipment	Typical Model (or Equivalent)	Engine Tier and Information		NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
			Tier	BHp									
1	Fuel Truck	Freightliner M2106	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Tractors	Massey Fergusen, 7619	4f	200	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Excavator	Caterpillar 326	4f	201	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
2	Loader	Caterpillar, 962K	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Windrow Turner	Scarab	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Water Truck	International, 7400 6x4	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Sweeper Truck	Freightliner M2	4f	240	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083

Table 21b: Total Criteria Pollutant Emissions from Offroad Equipment

Unit	Offroad Equipment	Typical Model	Engine Characteristics			Criteria Pollutant Exhaust Emissions (lb/day)					
			BHp	Op Load	Hr/Day	NOx	VOC	CO	SOx	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	350	0.38	1.00	0.09	0.04	0.76	0.00	0.00	0.00
1	Tractors	Massey Fergusen, 7619	200	0.37	4.00	0.20	0.09	1.70	0.00	0.01	0.01
1	Excavator	Caterpillar 326	201	0.38	4.00	0.20	0.09	1.75	0.00	0.01	0.01
2	Loader	Caterpillar, 962K	250	0.36	4.00	0.48	0.22	4.13	0.01	0.02	0.02
1	Windrow Turner	Scarab	250	0.42	4.00	0.28	0.13	2.41	0.00	0.01	0.01
1	Water Truck	International, 7400 6x4	350	0.38	4.00	0.35	0.16	3.05	0.01	0.01	0.01
1	Sweeper Truck	Freightliner M2	240	0.46	4.00	0.29	0.14	2.53	0.00	0.01	0.01
Total Emissions from offroad equipment (lb/day)						1.88	0.88	16.33	0.03	0.06	0.06

Table 21c: Total Criteria Pollutant Emissions from Offroad Equipment

Unit	Offroad Equipment	Typical Model	Engine Characteristics			Criteria Pollutant Exhaust Emissions (lb/yr)					
			BHp	Op Load[1]	Hr/Yr	NOx	VOC	CO	SOx	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	350	0.38	312	27.44	12.81	237.85	0.45	0.91	0.91
1	Tractors	Massey Fergusen, 7619	200	0.37	1,248	61.08	28.50	529.35	1.00	2.04	2.04
1	Excavator	Caterpillar 326	201	0.38	1,248	63.04	29.42	546.38	1.03	2.10	2.10
2	Loader	Caterpillar, 962K	250	0.36	1,248	148.57	69.33	1,287.62	2.43	4.95	4.95
1	Windrow Turner	Scarab	250	0.42	1,248	86.67	40.44	751.11	1.42	2.89	2.89
1	Water Truck	International, 7400 6x4	350	0.38	1,248	109.78	51.23	951.41	1.79	3.66	3.66
1	Sweeper Truck	Freightliner M2	240	0.46	1,248	91.12	42.52	789.74	1.49	3.04	3.04
Total Emissions from offroad equipment (lb/yr)						587.71	274.26	5,093.46	9.60	19.59	19.59
Total Emissions from offroad equipment (TPY)						0.29	0.14	2.55	0.00	0.01	0.01

Table 21d: Offroad Equipment - GHG Emissions[2]

Unit Count	Offroad Equipment	Typical Model (or Equivalent)	Engine Information				Fuel (gal/yr)	CO2 (MT/yr)	CH4 (kg/yr)	N2O (kg/yr)	CO2e (MT/Yr)
			Tier	BHp	Hr/Yr	Op Load[1]					
1	Fuel Truck	Freightliner M2106	4f	350	312	0.38	2,120	22	0.88	0.18	22
1	Tractors	Massey Fergusen, 7619	4f	200	1,248	0.37	4,719	48	1.95	0.39	48
1	Excavator	Caterpillar 326	4f	201	1,248	0.38	4,870	50	2.02	0.40	50
2	Loader	Caterpillar, 962K	4f	250	1,248	0.36	11,478	117	4.75	0.95	118
1	Windrow Turner	Scarab	4f	250	1,248	0.42	6,695	68	2.77	0.55	69
1	Water Truck	International, 7400 6x4	4f	350	1,248	0.38	8,481	87	3.51	0.70	87
1	Sweeper Truck	Freightliner M2	4f	240	1,248	0.46	7,040	72	2.91	0.58	72
Total							45,404	463	19	3.76	465

Table 21e: Brake Specific Fuel Consumption (BSFC) Conversion

Parameter	Value	Unit of Measure	Basis
BSFC	7000	btu/hp-hr	Per EPA AP-42 Table 3,3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
BSFC	0.3602	lb/hp-hr	calculated

Table 21f: Global Warming Potentials, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

Data and Parameters

Operating Days	312	day/yr

Notes:

1. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12
2. Solid, gaseous, liquid and biomass fuels: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule , 30Oct09, 261 pp.
Tables C-1 and C-2 at FR pp. 56409-56410. Revised emission factors for selected fuels: Federal Register (2010) EPA; 40 CFR Part 98; Mandatory Reporting of Greenhouse Gases; Final Rule, 17Dec10, 81 pp.
With Amendments from Memo: Table of Final 2013 Revisions to the Greenhouse Gas Reporting Rule (PDF) to 40 CFR part 98, subpart C: Table C–1 to Subpart C—Default CO2 Emission Factors and High Heat Values for Various Types of Fuel and Table C–2 to Subpart C—Default CH4 and N2O Emission Factors for Various Types of Fuel.

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Table 22: Fugitive Dust From Offroad Equipment Travel on Unpaved Areas and Haul Roads[1]

Table 22a: EPA Predictive Emission Factors for Offroad Equipment[2]

No. of Units	Equipment	Typical	PM Emission Factors[3] (lb/VMT)	
			PM10	PM2.5
1	Fuel Truck	Freightliner M2106	2.1106	0.2111
1	Tractors	Massey Fergusen, 7619	2.1106	0.2111
1	Excavator	Caterpillar 326	2.1106	0.2111
2	Loader	Caterpillar, 962K	2.1106	0.2111
1	Windrow Turner	Scarab	2.1106	0.2111
1	Water Truck[4]	International, 7400 6x4	0.0000	0.0000
1	Sweeper Truck[4]	Freightliner M2	0.0000	0.0000

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[5]	24.3	day/year

Table 22b: Onsite Equipment Tonnage, Operating Hours, and VMT

No. of Units	Equipment Description and Use		GVW (tons)	Empty (tons)	Average (tons)	Operating Hours (hr/day)	Operating Hours (hr/yr)	Ave. Speed (MPH)	Total Travel (VMT/day)	Total Travel (VMT/yr)
1	Fuel Truck	Freightliner M2106	31.5	11.5	22.5	1.0	312	2.0	2.0	624
1	Tractors	Massey Fergusen, 7619	7.9	7.9	22.5	4.0	1,248	0.3	1.2	374
1	Excavator	Caterpillar 326	28.6	28.6	22.5	4.0	1,248	0.3	1.2	374
2	Loader	Caterpillar, 962K	22.5	22.5	22.5	4.0	1,248	0.3	2.4	749
1	Windrow Turner	Scarab	20.0	20.0	22.5	4.0	1,248	0.3	1.2	374
1	Water Truck[4]	International, 7400 6x4	31.5	11.5	22.5	4.0	1,248	3.0	12.0	3,744
1	Sweeper Truck[4]	Freightliner M2	16.5	16.5	22.5	4.0	1,248	3.0	12.0	3,744

Table 22c: Offroad Equipment Unpaved Road Dust Emissions

No. of	Equipment Description and Use		Uncontrolled (lb/day)		Controlled (lb/day)		Uncontrolled (lb/yr)		Controlled (lb/yr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	4.22	0.42	1.06	0.11	1,317	132	332	33
1	Tractors	Massey Fergusen, 7619	2.53	0.25	0.64	0.06	790	79	199	20
1	Excavator	Caterpillar 326	2.53	0.25	0.64	0.06	790	79	199	20
2	Loader	Caterpillar, 962K	5.07	0.51	1.28	0.13	1,580	158	398	40
1	Windrow Turner	Scarab	2.53	0.25	0.64	0.06	790	79	199	20
1	Water Truck[4]	International, 7400 6x4	0.00	0.00	0.00	0.00	0	0	0	0
1	Sweeper Truck[4]	Freightliner M2	0.00	0.00	0.00	0.00	0	0	0	0
Total Dust from Equip. On Unpaved Areas (Lb/Day or Lb/Year)			16.88	1.69	4.25	0.43	5,268	527	1,328	133
Total Dust from Equip. On Unpaved Areas (Ton/Year)			---	---	---	---	2.6	0.3	0.7	0.1

Overall Control Efficiency[6]	75%
Control for watering	55%
Control for vehicle speed	44%

Notes:

1. Although compost surfaces are paved, because the compost processing areas are expected to have compost residuals covering the active surfaces, the unpaved road calculations are used to esti
2. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
3. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
4. Entrained road dust is assumed to be negligible for the water truck due to watering and the sweeper truck due to watering and sweeping.
5. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
6. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2
7. Chow, Judith C., et. al., "Evaluation of Regenerative-air Vacuum Street Sweeping on Geological Contributions to PM10", Journal of the Air & Waste Management Association, published online 06

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Table 23: Summary of Emissions

Table 23a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
18. Onroad Vehicle Exhaust	1.30	0.55	3.19	0.00	0.09	0.03
19. Onroad Vehicle Paved Road Dust	---	---	---	---	0.27	0.07
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	3.40	0.34
21. Offroad Equipment Exhaust	1.88	0.88	16.33	0.03	0.06	0.06
22. Offroad Equipment Unpaved Dust	---	---	---	---	4.25	0.43
Total	3.19	1.43	19.51	0.03	8.07	0.93

Table 23b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
18. Onroad Vehicle Exhaust	407	170	994	1	28	10
19. Onroad Vehicle Paved Road Dust	---	---	---	---	84	21
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	1,061	106
21. Offroad Equipment Exhaust	588	274	5,093	10	20	20
22. Offroad Equipment Unpaved Dust	---	---	---	---	1,328	133
Total	994	445	6,088	11	2,519	290
Total (TPY)	0.50	0.22	3.04	0.01	1.26	0.14

Table 23c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	HFC (MT/yr)	CO2e (MT/Yr)
18. Onroad Vehicle Exhaust	156	0.0019	0.0332	0.0001	166
19. Onroad Vehicle Paved Road Dust	---	---	---	---	---
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	---
21. Offroad Equipment Exhaust	463	0.0188	0.0038	---	465
22. Offroad Equipment Unpaved Dust	---	---	---	---	---
Total	**620**	**0.0207**	**0.0369**	**0.0001**	**631**

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Table 24: Diesel and Gasoline Vehicle TAC Emissions

Table 24a: DPM Emissions

Vehicle	PM10 Emissions (lb/hr)		PM10 Emissions (lb/day)		PM10 Emissions (lb/yr)	
	Onsite Exhaust	Nearsite Exhaust[1,2]	Onsite Exhaust	Nearsite Exhaust[1,2]	Onsite Exhaust	Nearsite Exhaust[1,2]
LHD2	1.88E-05	2.36E-05	1.88E-05	2.36E-05	0.006	0.007
T7 Tractor	1.33E-05	2.24E-05	1.33E-04	2.24E-04	0.04	0.070
Fuel Truck	2.93E-03	0.00E+00	2.93E-03	0	0.91	0
Tractors	1.63E-03	0.00E+00	6.53E-03	0	2.04	0
Excavator	1.68E-03	0.00E+00	6.74E-03	0	2.10	0
Loader	3.97E-03	0.00E+00	1.59E-02	0	4.95	0
Windrow Turner	2.31E-03	0.00E+00	9.26E-03	0	2.89	0
Water Truck	2.93E-03	0.00E+00	1.17E-02	0	3.66	0
Sweeper Truck	2.43E-03	0.00E+00	9.74E-03	0	3.04	0
Total PM10 = DPM	1.79E-02	4.60E-05	6.29E-02	2.48E-04	19.64	0.077

Table 24b: Gasoline Vehicle Mileage and Fuel Consumption

Parameter	Onsite	Near-site[3]
VMT/Day	0.00	4.00
Fuel Consumption (gal/day)	0.000	0.247

Average Fuel Economy Light Truck[4] 16.20 MPG

Table 24c: TAC Emissions from Onroad Gasoline Vehicles

TAC	CAS#	Emission Factor[5] (lb/1000-gal)	Onsite (lb/day)	Near-site (lb/day)	Total (lb/day)	Onsite (lb/yr)	Near-site (lb/yr)	Total lb/yr)	Onsite (lb/hr)	Near-site (lb/hr)	Total (lb/hr)
1,2,4-Trimethylbenzene	95636	5.89E-01	0.000E+00	1.454E-04	1.45E-04	0.000E+00	4.537E-02	4.54E-02	0.00E+00	1.45E-04	1.45E-04
1,3-Butadiene	106990	3.24E-01	0.000E+00	8.000E-05	8.00E-05	0.000E+00	2.496E-02	2.50E-02	0.00E+00	8.00E-05	8.00E-05
Acetaldehyde	75070	1.47E-01	0.000E+00	3.630E-05	3.63E-05	0.000E+00	1.132E-02	1.13E-02	0.00E+00	3.63E-05	3.63E-05
Acrolein	107028	8.25E-02	0.000E+00	2.037E-05	2.04E-05	0.000E+00	6.356E-03	6.36E-03	0.00E+00	2.04E-05	2.04E-05
Benzene	71432	1.57E+00	0.000E+00	3.877E-04	3.88E-04	0.000E+00	1.209E-01	1.21E-01	0.00E+00	3.88E-04	3.88E-04
Chlorine	7782505	4.55E-01	0.000E+00	1.123E-04	1.12E-04	0.000E+00	3.505E-02	3.51E-02	0.00E+00	1.12E-04	1.12E-04
Copper	7440508	3.30E-03	0.000E+00	8.148E-07	8.15E-07	0.000E+00	2.542E-04	2.54E-04	0.00E+00	8.15E-07	8.15E-07
Ethylbenzene	100414	6.42E-01	0.000E+00	1.585E-04	1.59E-04	0.000E+00	4.946E-02	4.95E-02	0.00E+00	1.59E-04	1.59E-04
Formaldehyde	50000	1.01E+00	0.000E+00	2.494E-04	2.49E-04	0.000E+00	7.781E-02	7.78E-02	0.00E+00	2.49E-04	2.49E-04
Hexane	110543	9.42E-01	0.000E+00	2.326E-04	2.33E-04	0.000E+00	7.257E-02	7.26E-02	0.00E+00	2.33E-04	2.33E-04
Manganese	7439965	3.30E-03	0.000E+00	8.148E-07	8.15E-07	0.000E+00	2.542E-04	2.54E-04	0.00E+00	8.15E-07	8.15E-07
Methanol (Methylalcohol)	67561	2.42E-01	0.000E+00	5.975E-05	5.98E-05	0.000E+00	1.864E-02	1.86E-02	0.00E+00	5.98E-05	5.98E-05
Methyl Ethyl Ketone (2-butanone)	78933	1.18E-02	0.000E+00	2.914E-06	2.91E-06	0.000E+00	9.090E-04	9.09E-04	0.00E+00	2.91E-06	2.91E-06
Methyl tert-butyl ether	1634044	1.15E+00	0.000E+00	2.840E-04	2.84E-04	0.000E+00	8.859E-02	8.86E-02	0.00E+00	2.84E-04	2.84E-04
m-Xylene	108383	2.17E+00	0.000E+00	5.358E-04	5.36E-04	0.000E+00	1.672E-01	1.67E-01	0.00E+00	5.36E-04	5.36E-04
Naphthalene	91203	2.95E-02	0.000E+00	7.284E-06	7.28E-06	0.000E+00	2.273E-03	2.27E-03	0.00E+00	7.28E-06	7.28E-06
Nickel	7440020	3.30E-03	0.000E+00	8.148E-07	8.15E-07	0.000E+00	2.542E-04	2.54E-04	0.00E+00	8.15E-07	8.15E-07
o-Xylene	95476	7.54E-01	0.000E+00	1.862E-04	1.86E-04	0.000E+00	5.809E-02	5.81E-02	0.00E+00	1.86E-04	1.86E-04
Styrene	100425	7.07E-02	0.000E+00	1.746E-05	1.75E-05	0.000E+00	5.447E-03	5.45E-03	0.00E+00	1.75E-05	1.75E-05
Toluene	108883	3.50E+00	0.000E+00	8.642E-04	8.64E-04	0.000E+00	2.696E-01	2.70E-01	0.00E+00	8.64E-04	8.64E-04

Data and Parameters

Fuel Truck Hr/Day	1	
Offorad Diesel Vehicle Operating Hr/Day	4	assuming vehicles are running onsite for this many hours in a day
Haul Truck Operating Hr/Day	10	assuming vehicles are running onsite or within 1/4 mile for this many hours in a day
Employee/Business Vehicle Operating Hr/Day	1	assuming vehicles are running onsite or within 1/4 mile for this many hours in a day
Operating Days day/yr	312	

Notes:

1. Nearsite mileage is estimated based on the total offsite distance multipiled by a ratio of 0.25 miles divided by the one-way trip length.
2. Offroad equipment operates onsite only.
3. Near site mileage is calculated based on the total number of gasoline vehicle trips per year divided by the operating days per year, multiplied by 0.25 miles (one way) multiplied by 2 (two way trip).
4. https://en.wikipedia.org/wiki/Fuel_efficiency
5. SJVAPCD, AB 2588 “Hot Spots” Air Toxics Profiles, March 27, 2017, District Toxic Profile ID 176, Gasoline-Fired Portable Catalyst ICE

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Table 25: TAC from Paved Road Dust

Table 25a: Criteria Pollutant Information

Pollutant	Onsite (lb/hr)	Near-site[1] (lb/hr)	Onsite (lb/day)	Near-site[1] (lb/day)	Onsite (lb/yr)	Near-site[1] (lb/yr)
PM10	0.0057	0.0104	0.06	0.10	17.91	32.34
Total (Onsite & Near-site)		0.01611				50.26

Table 25b: TAC from Paved Road Dust

TAC	Wt.	Total TAC Emissions		Onsite TAC Emissions		Near-site TAC Emissions	
		lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
Arsenic	0.000013	2.09E-07	6.53E-04	7.46E-08	2.33E-04	1.35E-07	4.20E-04
Cadmium	0.000003	4.83E-08	1.51E-04	1.72E-08	5.37E-05	3.11E-08	9.70E-05
Hexavalent Chromium	0.00000085	1.37E-08	4.27E-05	4.88E-09	1.52E-05	8.81E-09	2.75E-05
Cobalt	0.000023	3.70E-07	1.16E-03	1.32E-07	4.12E-04	2.38E-07	7.44E-04
Copper	0.000148	2.38E-06	7.44E-03	8.50E-07	2.65E-03	1.53E-06	4.79E-03
Lead	0.000124	2.00E-06	6.23E-03	7.12E-07	2.22E-03	1.29E-06	4.01E-03
Manganese	0.0008	1.29E-05	4.02E-02	4.59E-06	1.43E-02	8.29E-06	2.59E-02
Nickel	0.000012	1.93E-07	6.03E-04	6.89E-08	2.15E-04	1.24E-07	3.88E-04
Mercury	0.000009	1.45E-07	4.52E-04	5.17E-08	1.61E-04	9.33E-08	2.91E-04
Selenium	0.000002	3.22E-08	1.01E-04	1.15E-08	3.58E-05	2.07E-08	6.47E-05
Vanadium (Fume Or Dust)	0.000071	1.14E-06	3.57E-03	4.08E-07	1.27E-03	7.36E-07	2.30E-03

Data and Parameters

Operating Hr/Day	10	assuming vehicles are running for this many hours in a day
Operating Days	312	day/yr

Notes:

1. Nearsite emissions include emissions up to 1/4 mile offsite. Nearsite PM10 emissions are calculated in Table 4 as "Rural" emissions.
2. CARB speciation profile for Paved Roads (#471):
https://ww2.arb.ca.gov/speciation-profiles-used-carb-modeling
3. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

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Table 26: TAC from Offroad Vehicles Operation on Unpaved Surfaces

Table 26a: Offroad Equipment Entrained Dust Emissions, PM10

Source	lb/hr	lb/day	lb/yr
Unpaved Road Dust from Onroad Vehicles	0.34	3.40	1,061
Unpaved Road Dust from Offroad Vehicles	0.43	4.25	1,328
Total PM10	0.77	7.65	2,388

Table 26b: TAC from Vehicle/Equipment Travel on Unpaved Surfaces

TAC	Concentration[1]	Total TAC Emissions		Onroad Vehicle TAC Emissions		Offroad Vehicle TAC Emissions	
		(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)
Arsenic	6.20E-06	4.75E-06	1.48E-02	2.11E-06	6.58E-03	2.64E-06	8.23E-03
Cadmium	2.00E-06	1.53E-06	4.78E-03	6.80E-07	2.12E-03	8.51E-07	2.66E-03
Hexavalent Chromium	2.45E-06	1.88E-06	5.85E-03	8.33E-07	2.60E-03	1.04E-06	3.25E-03
Cobalt	8.80E-06	6.74E-06	2.10E-02	2.99E-06	9.33E-03	3.74E-06	1.17E-02
Copper	6.90E-05	5.28E-05	1.65E-01	2.35E-05	7.32E-02	2.94E-05	9.16E-02
Lead	2.00E-04	1.53E-04	4.78E-01	6.80E-05	2.12E-01	8.51E-05	2.66E-01
Manganese	4.40E-04	3.37E-04	1.05E+00	1.50E-04	4.67E-01	1.87E-04	5.84E-01
Nickel	9.50E-05	7.27E-05	2.27E-01	3.23E-05	1.01E-01	4.04E-05	1.26E-01
Mercury	1.00E-06	7.65E-07	2.39E-03	3.40E-07	1.06E-03	4.25E-07	1.33E-03
Selenium	1.00E-06	7.65E-07	2.39E-03	3.40E-07	1.06E-03	4.25E-07	1.33E-03

Data and Parameters

Operating Hr/Day	10	assuming vehicles are running for this many hours in a day, including fuel truck
Operating Days	312	day/yr

Notes:

1. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm

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Table 27: Summary of TAC Emissions from Mobile Sources

Table 27a: Summary of TAC Emissions from Mobile Sources, lb/yr

Activity	CAS No.	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total
Diesel PM	9901	4.73E-02	7.74E-02	1.96E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E+01
1,2,4-Trimethylbenzene	95636	0.00E+00	4.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.54E-02
1,3-Butadiene	106990	0.00E+00	2.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-02
Acetaldehyde	75070	0.00E+00	1.13E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-02
Acrolein	107028	0.00E+00	6.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.36E-03
Benzene	71432	0.00E+00	1.21E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-01
Chlorine	7782505	0.00E+00	3.51E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E-02
Copper	7440508	0.00E+00	2.54E-04	0.00E+00	2.65E-03	4.79E-03	7.32E-02	9.16E-02	1.72E-01
Ethylbenzene	100414	0.00E+00	4.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.95E-02
Formaldehyde	50000	0.00E+00	7.78E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.78E-02
Hexane	110543	0.00E+00	7.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.26E-02
Manganese	7439965	0.00E+00	2.54E-04	0.00E+00	1.43E-02	2.59E-02	4.67E-01	5.84E-01	1.09E+00
Methanol (Methylalcohol)	67561	0.00E+00	1.86E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-02
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	9.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.09E-04
Methyl tert-butyl ether	1634044	0.00E+00	8.86E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E-02
m-Xylene	108383	0.00E+00	1.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-01
Naphthalene	91203	0.00E+00	2.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-03
Nickel	7440020	0.00E+00	2.54E-04	0.00E+00	2.15E-04	3.88E-04	1.01E-01	1.26E-01	2.28E-01
o-Xylene	95476	0.00E+00	5.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.81E-02
Styrene	100425	0.00E+00	5.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.45E-03
Toluene	108883	0.00E+00	2.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-01
Arsenic	7440382	0.00E+00	0.00E+00	0.00E+00	2.33E-04	4.20E-04	6.58E-03	8.23E-03	1.55E-02
Cadmium	7440439	0.00E+00	0.00E+00	0.00E+00	5.37E-05	9.70E-05	2.12E-03	2.66E-03	4.93E-03
Hexavalent Chromium	18540299	0.00E+00	0.00E+00	0.00E+00	1.52E-05	2.75E-05	2.60E-03	3.25E-03	5.89E-03
Cobalt	7440484	0.00E+00	0.00E+00	0.00E+00	4.12E-04	7.44E-04	9.33E-03	1.17E-02	2.22E-02
Lead	7439921	0.00E+00	0.00E+00	0.00E+00	2.22E-03	4.01E-03	2.12E-01	2.66E-01	4.84E-01
Mercury	7439976	0.00E+00	0.00E+00	0.00E+00	1.61E-04	2.91E-04	1.06E-03	1.33E-03	2.84E-03
Selenium	7782492	0.00E+00	0.00E+00	0.00E+00	3.58E-05	6.47E-05	1.06E-03	1.33E-03	2.49E-03
Vanadium (Fume Or Dust)	7440622	0.00E+00	0.00E+00	0.00E+00	1.27E-03	2.30E-03	0.00E+00	0.00E+00	3.57E-03

Table 27b: Summary of TAC Emissions from Mobile Sources, lb/hr

Activity	CAS No.	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total
Diesel PM	9901	3.21E-05	4.60E-05	1.79E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-02
1,2,4-Trimethylbenzene	95636	0.00E+00	1.45E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-04
1,3-Butadiene	106990	0.00E+00	8.00E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E-05
Acetaldehyde	75070	0.00E+00	3.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.63E-05
Acrolein	107028	0.00E+00	2.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-05
Benzene	71432	0.00E+00	3.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.88E-04
Chlorine	7782505	0.00E+00	1.12E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-04
Copper	7440508	0.00E+00	8.15E-07	0.00E+00	8.50E-07	1.53E-06	2.35E-05	2.94E-05	5.60E-05
Ethylbenzene	100414	0.00E+00	1.59E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-04
Formaldehyde	50000	0.00E+00	2.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-04
Hexane	110543	0.00E+00	2.33E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-04
Manganese	7439965	0.00E+00	8.15E-07	0.00E+00	4.59E-06	8.29E-06	1.50E-04	1.87E-04	3.50E-04
Methanol (Methylalcohol)	67561	0.00E+00	5.98E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.98E-05
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	2.91E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.91E-06
Methyl tert-butyl ether	1634044	0.00E+00	2.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-04
m-Xylene	108383	0.00E+00	5.36E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.36E-04
Naphthalene	91203	0.00E+00	7.28E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.28E-06
Nickel	7440020	0.00E+00	8.15E-07	0.00E+00	6.89E-08	1.24E-07	3.23E-05	4.04E-05	7.37E-05
o-Xylene	95476	0.00E+00	1.86E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-04
Styrene	100425	0.00E+00	1.75E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-05
Toluene	108883	0.00E+00	8.64E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.64E-04
Arsenic	7440382	0.00E+00	0.00E+00	0.00E+00	7.46E-08	1.35E-07	2.11E-06	2.64E-06	4.95E-06
Cadmium	7440439	0.00E+00	0.00E+00	0.00E+00	1.72E-08	3.11E-08	6.80E-07	8.51E-07	1.58E-06
Hexavalent Chromium	18540299	0.00E+00	0.00E+00	0.00E+00	4.88E-09	8.81E-09	8.33E-07	1.04E-06	1.89E-06
Cobalt	7440484	0.00E+00	0.00E+00	0.00E+00	1.32E-07	2.38E-07	2.99E-06	3.74E-06	7.11E-06
Lead	7439921	0.00E+00	0.00E+00	0.00E+00	7.12E-07	1.29E-06	6.80E-05	8.51E-05	1.55E-04
Mercury	7439976	0.00E+00	0.00E+00	0.00E+00	5.17E-08	9.33E-08	3.40E-07	4.25E-07	9.10E-07
Selenium	7782492	0.00E+00	0.00E+00	0.00E+00	1.15E-08	2.07E-08	3.40E-07	4.25E-07	7.98E-07
Vanadium (Fume Or Dust)	7440622	0.00E+00	0.00E+00	0.00E+00	4.08E-07	7.36E-07	0.00E+00	0.00E+00	1.14E-06

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Table 28: Summary of Criteria Pollutant and GHG Emissions

Table 28a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
11. Composting Criteria and GHG	4.84	111.10	13.66	0.02	0.87	0.43
23. Mobile Criteria and GHG	3.19	1.43	19.51	0.03	8.07	0.93
Total	8.03	112.53	33.17	0.05	8.95	1.35

Table 28b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
11. Composting Criteria and GHG	622	40,149	3,337	5	244	93
23. Mobile Criteria and GHG	994	445	6,088	11	2,519	290
Total	1,617	40,594	9,425	15	2,763	383
Total (TPY)	0.81	20.30	4.71	0.01	1.38	0.19

Table 28c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	HFC (MT/yr)	CO2e (MT/Yr)
11. Composting Criteria and GHG	220	36.30	2.72	N/A	1,957
23. Mobile Criteria and GHG	620	0.0207	0.0369	0.0001	631
Total	**840**	**36.32**	**2.76**	**0.0001**	**2,589**

Table 29: Summary of TAC Emissions

Table 29a: Summary of TAC Emissions, lb/yr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine
Arsenic	7440382	4.13E-04	1.39E-04	7.75E-04	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
Cadmium	7440439	1.33E-04	4.47E-05	2.50E-04	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
Hexavalent Chromium	18540299	1.63E-04	5.48E-05	3.06E-04	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
Cobalt	7440484	5.86E-04	1.97E-04	1.10E-03	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
Copper	7440508	4.60E-03	1.54E-03	8.62E-03	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
Lead	7439921	1.33E-02	4.47E-03	2.50E-02	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
Manganese	7439965	2.93E-02	9.83E-03	5.50E-02	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
Mercury	7439976	6.66E-05	2.23E-05	1.25E-04	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
Nickel	7440020	6.33E-03	2.12E-03	1.19E-02	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
Selenium	7782492	6.66E-05	2.23E-05	1.25E-04	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
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	3.30E+01	2.33E+03	3.87E+02	7.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	1.68E+00	7.15E+00	2.18E+00	5.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	4.52E+00	8.34E+00	2.64E+00	2.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	3.58E+02	1.38E+03	1.01E+02	2.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	8.76E-01	3.48E+00	3.13E+00	2.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	8.96E-01	5.16E+00	1.94E+00	3.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	8.72E-01	1.21E+01	4.65E+00	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	7.40E-01	2.67E+00	9.59E-01	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	1.37E+00	5.25E+00	1.79E+00	4.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	1.22E+00	1.13E+01	2.89E+00	4.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	1.14E+00	1.73E+01	2.07E+00	3.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	3.14E+01	1.02E+01	2.30E+00	3.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	3.87E+02	1.57E+03	1.10E+02	1.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	2.14E+02	2.52E+03	1.35E+02	2.80E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	1.12E+00	2.30E+01	4.01E+00	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	3.78E-01	1.90E+02	1.15E+02	1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	1.19E+00	1.14E+01	2.27E+00	4.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	1.06E+00	2.03E+01	9.09E+00	1.11E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	5.80E+01	9.70E+01	2.75E+00	3.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	1.26E+00	1.40E+01	4.44E+00	8.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	4.00E+02	7.02E+03	7.80E+02	3.04E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E+00	2.61E+00	2.61E+00	0.00E+00
1,2,4-Trimethylbenzene	95636	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	0.00E+00	0.00E+00	0.00E+00
1,3-Butadiene	106990	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	0.00E+00	0.00E+00	0.00E+00
Acrolein	107028	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	0.00E+00	0.00E+00	0.00E+00
Chlorine	7782505	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	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	50000	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	0.00E+00	0.00E+00	0.00E+00
Methyl tert-butyl ether	1634044	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	0.00E+00	0.00E+00	0.00E+00
m-Xylene	108383	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	0.00E+00	0.00E+00	0.00E+00
o-Xylene	95476	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	0.00E+00	0.00E+00	0.00E+00
Vanadium (Fume Or Dust)	7440622	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	0.00E+00	0.00E+00	0.00E+00

Table 29b: Summary of TAC Emissions, lb/hr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine
Arsenic	7440382	1.32E-07	4.44E-08	8.84E-08	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
Cadmium	7440439	4.27E-08	1.43E-08	2.85E-08	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
Hexavalent Chromium	18540299	5.23E-08	1.75E-08	3.49E-08	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
Cobalt	7440484	1.88E-07	6.30E-08	1.26E-07	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
Copper	7440508	1.47E-06	4.94E-07	9.84E-07	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
Lead	7439921	4.27E-06	1.43E-06	2.85E-06	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
Manganese	7439965	9.39E-06	3.15E-06	6.28E-06	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
Mercury	7439976	2.13E-08	7.16E-09	1.43E-08	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
Nickel	7440020	2.03E-06	6.80E-07	1.35E-06	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
Selenium	7782492	2.13E-08	7.16E-09	1.43E-08	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
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	3.77E-03	2.66E-01	4.41E-02	8.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	1.92E-04	8.17E-04	2.49E-04	6.50E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	5.16E-04	9.53E-04	3.01E-04	2.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	4.09E-02	1.58E-01	1.16E-02	3.40E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	1.00E-04	3.97E-04	3.58E-04	3.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	1.02E-04	5.88E-04	2.22E-04	3.45E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	9.95E-05	1.38E-03	5.31E-04	1.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	8.45E-05	3.05E-04	1.10E-04	2.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	1.56E-04	6.00E-04	2.04E-04	5.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	1.39E-04	1.29E-03	3.29E-04	4.69E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	1.30E-04	1.98E-03	2.36E-04	4.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	3.59E-03	1.17E-03	2.62E-04	3.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	4.42E-02	1.79E-01	1.25E-02	1.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	2.45E-02	2.88E-01	1.54E-02	3.20E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	1.28E-04	2.63E-03	4.58E-04	5.68E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	4.32E-05	2.17E-02	1.31E-02	1.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	1.36E-04	1.30E-03	2.59E-04	4.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	1.21E-04	2.32E-03	1.04E-03	1.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	6.62E-03	1.11E-02	3.13E-04	3.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	1.44E-04	1.60E-03	5.07E-04	9.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	4.57E-02	8.01E-01	8.90E-02	3.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-03	2.09E-03	2.09E-03	0.00E+00
1,2,4-Trimethylbenzene	95636	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	0.00E+00	0.00E+00	0.00E+00
1,3-Butadiene	106990	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	0.00E+00	0.00E+00	0.00E+00
Acrolein	107028	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	0.00E+00	0.00E+00	0.00E+00
Chlorine	7782505	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	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	50000	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	0.00E+00	0.00E+00	0.00E+00
Methyl tert-butyl ether	1634044	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	0.00E+00	0.00E+00	0.00E+00
m-Xylene	108383	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	0.00E+00	0.00E+00	0.00E+00
o-Xylene	95476	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	0.00E+00	0.00E+00	0.00E+00
Vanadium (Fume Or Dust)	7440622	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	0.00E+00	0.00E+00	0.00E+00

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Table 29: Summary of TAC Emissions

Table 29a: Summary of TAC Emissions, lb

Activity	Emergency Generator	Fire Pump	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total, Stationary Sources	Total, Mobile Sources	Total
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-04	4.20E-04	6.58E-03	8.23E-03	1.33E-03	1.55E-02	1.68E-02
Cadmium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.37E-05	9.70E-05	2.12E-03	2.66E-03	4.28E-04	4.93E-03	5.35E-03
Hexavalent Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-05	2.75E-05	2.60E-03	3.25E-03	5.24E-04	5.89E-03	6.42E-03
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E-04	7.44E-04	9.33E-03	1.17E-02	1.88E-03	2.22E-02	2.41E-02
Copper	0.00E+00	0.00E+00	0.00E+00	2.54E-04	0.00E+00	2.65E-03	4.79E-03	7.32E-02	9.16E-02	1.48E-02	1.72E-01	1.87E-01
Lead	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-03	4.01E-03	2.12E-01	2.66E-01	4.28E-02	4.84E-01	5.27E-01
Manganese	0.00E+00	0.00E+00	0.00E+00	2.54E-04	0.00E+00	1.43E-02	2.59E-02	4.67E-01	5.84E-01	9.41E-02	1.09E+00	1.19E+00
Mercury	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-04	2.91E-04	1.06E-03	1.33E-03	2.14E-04	2.84E-03	3.05E-03
Nickel	0.00E+00	0.00E+00	0.00E+00	2.54E-04	0.00E+00	2.15E-04	3.88E-04	1.01E-01	1.26E-01	2.03E-02	2.28E-01	2.48E-01
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E-05	6.47E-05	1.06E-03	1.33E-03	2.14E-04	2.49E-03	2.70E-03
Acetone	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	2.76E+03	0.00E+00	2.76E+03
1,4-Dichlorobenzene	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	1.16E+01	0.00E+00	1.16E+01
2-Propanol (Isopropylalcohol, IPA)	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	1.57E+01	0.00E+00	1.57E+01
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	1.13E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E+03	1.13E-02	1.84E+03
Allyl Chloride (3-Chloropropene)	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	7.79E+00	0.00E+00	7.79E+00
Benzene	0.00E+00	0.00E+00	0.00E+00	1.21E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.29E+00	1.21E-01	8.41E+00
Carbondisulfide	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	1.88E+01	0.00E+00	1.88E+01
Chloroethane	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	4.62E+00	0.00E+00	4.62E+00
Chloroform	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	8.87E+00	0.00E+00	8.87E+00
Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	4.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E+01	4.95E-02	1.58E+01
Ethylene Dichloride (1,2-dichloroethane)	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	2.09E+01	0.00E+00	2.09E+01
Hexane	0.00E+00	0.00E+00	0.00E+00	7.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E+01	7.26E-02	4.44E+01
Methanol (Methylalcohol)	0.00E+00	0.00E+00	0.00E+00	1.86E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E+03	1.86E-02	2.07E+03
Methyl Ethyl Ketone (2-butanone)	0.00E+00	0.00E+00	0.00E+00	9.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.87E+03	9.09E-04	2.87E+03
Naphthalene	0.00E+00	0.00E+00	0.00E+00	2.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E+01	2.27E-03	2.86E+01
Propene (Propylene)	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	3.16E+02	0.00E+00	3.16E+02
Styrene	0.00E+00	0.00E+00	0.00E+00	5.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E+01	5.45E-03	1.52E+01
Toluene	0.00E+00	0.00E+00	0.00E+00	2.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.16E+01	2.70E-01	3.18E+01
Vinyl acetate	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	1.58E+02	0.00E+00	1.58E+02
Xylenes	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	2.06E+01	0.00E+00	2.06E+01
Ammonia	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	8.20E+03	0.00E+00	8.20E+03
Diesel PM	7.34E+00	1.47E+01	4.73E-02	7.74E-02	1.96E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.99E+01	1.97E+01	4.96E+01
1,2,4-Trimethylbenzene	0.00E+00	0.00E+00	0.00E+00	4.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.54E-02	4.54E-02
1,3-Butadiene	0.00E+00	0.00E+00	0.00E+00	2.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-02	2.50E-02
Acrolein	0.00E+00	0.00E+00	0.00E+00	6.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.36E-03	6.36E-03
Chlorine	0.00E+00	0.00E+00	0.00E+00	3.51E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E-02	3.51E-02
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	7.78E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.78E-02	7.78E-02
Methyl tert-butyl ether	0.00E+00	0.00E+00	0.00E+00	8.86E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E-02	8.86E-02
m-Xylene	0.00E+00	0.00E+00	0.00E+00	1.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-01	1.67E-01
o-Xylene	0.00E+00	0.00E+00	0.00E+00	5.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.81E-02	5.81E-02
Vanadium (Fume Or Dust)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-03	2.30E-03	0.00E+00	0.00E+00	0.00E+00	3.57E-03	3.57E-03

Table 29b: Summary of TAC Emissions, lb

Activity	Emergency Generator	Fire Pump	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total, Stationary Sources	Total, Mobile Sources	Total
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.46E-08	1.35E-07	2.11E-06	2.64E-06	2.65E-07	4.95E-06	5.22E-06
Cadmium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-08	3.11E-08	6.80E-07	8.51E-07	8.55E-08	1.58E-06	1.66E-06
Hexavalent Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.88E-09	8.81E-09	8.33E-07	1.04E-06	1.05E-07	1.89E-06	1.99E-06
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-07	2.38E-07	2.99E-06	3.74E-06	3.76E-07	7.11E-06	7.48E-06
Copper	0.00E+00	0.00E+00	0.00E+00	8.15E-07	0.00E+00	8.50E-07	1.53E-06	2.35E-05	2.94E-05	2.95E-06	5.60E-05	5.90E-05
Lead	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.12E-07	1.29E-06	6.80E-05	8.51E-05	8.55E-06	1.55E-04	1.64E-04
Manganese	0.00E+00	0.00E+00	0.00E+00	8.15E-07	0.00E+00	4.59E-06	8.29E-06	1.50E-04	1.87E-04	1.88E-05	3.50E-04	3.69E-04
Mercury	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.17E-08	9.33E-08	3.40E-07	4.25E-07	4.28E-08	9.10E-07	9.53E-07
Nickel	0.00E+00	0.00E+00	0.00E+00	8.15E-07	0.00E+00	6.89E-08	1.24E-07	3.23E-05	4.04E-05	4.06E-06	7.37E-05	7.78E-05
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-08	2.07E-08	3.40E-07	4.25E-07	4.28E-08	7.98E-07	8.40E-07
Acetone	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	3.15E-01	0.00E+00	3.15E-01
1,4-Dichlorobenzene	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	1.32E-03	0.00E+00	1.32E-03
2-Propanol (Isopropylalcohol, IPA)	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	1.80E-03	0.00E+00	1.80E-03
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	3.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-01	3.63E-05	2.11E-01
Allyl Chloride (3-Chloropropene)	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	8.89E-04	0.00E+00	8.89E-04
Benzene	0.00E+00	0.00E+00	0.00E+00	3.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.47E-04	3.88E-04	1.33E-03
Carbondisulfide	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	2.15E-03	0.00E+00	2.15E-03
Chloroethane	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	5.28E-04	0.00E+00	5.28E-04
Chloroform	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	1.01E-03	0.00E+00	1.01E-03
Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	1.59E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-03	1.59E-04	1.96E-03
Ethylene Dichloride (1,2-dichloroethane)	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	2.38E-03	0.00E+00	2.38E-03
Hexane	0.00E+00	0.00E+00	0.00E+00	2.33E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.06E-03	2.33E-04	5.29E-03
Methanol (Methylalcohol)	0.00E+00	0.00E+00	0.00E+00	5.98E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.36E-01	5.98E-05	2.36E-01
Methyl Ethyl Ketone (2-butanone)	0.00E+00	0.00E+00	0.00E+00	2.91E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-01	2.91E-06	3.28E-01
Naphthalene	0.00E+00	0.00E+00	0.00E+00	7.28E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E-03	7.28E-06	3.28E-03
Propene (Propylene)	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	3.61E-02	0.00E+00	3.61E-02
Styrene	0.00E+00	0.00E+00	0.00E+00	1.75E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E-03	1.75E-05	1.76E-03
Toluene	0.00E+00	0.00E+00	0.00E+00	8.64E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.60E-03	8.64E-04	4.47E-03
Vinyl acetate	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	1.80E-02	0.00E+00	1.80E-02
Xylenes	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	2.35E-03	0.00E+00	2.35E-03
Ammonia	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	9.36E-01	0.00E+00	9.36E-01
Diesel PM	3.67E-02	7.34E-02	3.21E-05	4.60E-05	1.79E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-01	1.80E-02	1.34E-01
1,2,4-Trimethylbenzene	0.00E+00	0.00E+00	0.00E+00	1.45E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-04	1.45E-04
1,3-Butadiene	0.00E+00	0.00E+00	0.00E+00	8.00E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E-05	8.00E-05
Acrolein	0.00E+00	0.00E+00	0.00E+00	2.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-05	2.04E-05
Chlorine	0.00E+00	0.00E+00	0.00E+00	1.12E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-04	1.12E-04
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	2.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-04	2.49E-04
Methyl tert-butyl ether	0.00E+00	0.00E+00	0.00E+00	2.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-04	2.84E-04
m-Xylene	0.00E+00	0.00E+00	0.00E+00	5.36E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.36E-04	5.36E-04
o-Xylene	0.00E+00	0.00E+00	0.00E+00	1.86E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-04	1.86E-04
Vanadium (Fume Or Dust)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.08E-07	7.36E-07	0.00E+00	0.00E+00	0.00E+00	1.14E-06	1.14E-06

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Table 30: Reduction from Baseline

Table 30: GHG Emissions Reduction from Baseline

Annual Throughput (ton/yr)	Compost Emission Reduction Factor (MT CO2e/ton feed)[1]	GHG Emissions Reduction (MT CO2e)
10,000	0.44	4,400

1. CARB, Method for Estimating Greenhouse Gas Emission Reductions From Diversion of Organic Waste From Landfills to Compost Facilities, 2017

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Table 1: Compost Facility Operations Assumptions- Scenario 2

Assumption	Scenario 2
Facility Size	Small
Facility Capacity (cu yd)	5,000
Facility Size (acres)	5
Throughput (tpy)	10,000
Operating Schedule (hr/day)	10
Operating Schedule (wk/year)	52
Operating Schedule (day/year)	312
Feedstock	Green Waste (includes vegetative food material)
Feedstock Storage Time (days)	2
Feedstock Storage Building	N/A
Active Technology	Positive CASP
VOC Control Efficiency	80%
NH3 Control	80%
Curing	Yes
Mulch Colorizer Tons per Hour	0
Diesel Grinders	1
Diesel Screens	1
Diesel Stackers	1
Diesel Colorizer	0
Diesel Emergency Generator	1
Diesel Emergency Fire Pump	1
Employee and Commercial Light Duty Gasoline Vehicle Round Trips Per Day	8
Employee and Commercial Light Duty Diesel Vehicle Round Trips Per Day	1
Employee Mileage (one-way)	15
Tractor Trailers for Raw Materials Round Trips Per Day	14
Tractor Trailers for Product Round Trips Per Day	3
Feedstock Haul Truck Mileage (one-way)	20
Compost Product Haul Truck Mileage (one-way)	15
Baseline Feedstock Haul Truck Mileage (one-way)	15
Fuel Truck	1
Tractors	1
Excavator	1
Loader	2
Windrow Turner	0
Water Truck	1
Sweeper Truck	1
Fuel Truck Hours per Day	1
Other Off-road Engine (mobile and non-emergency stationary) Hours per Day	4

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Table 2: Additional Datasets and Assumptions

Table 2a: Colorizer Data and Assumptions

Parameter	Value	Unit of Measure	Notes
Bulk density - mulch	600	lb/cy	Average per Google AI
Conversion	2000	lb/ton	Constant
Throughput	8.55	cy/hr	Calculated from annual finished product throughput, assuming all is colorized
Annual Hours of Operation	3,120	hr/yr	Assumption
Application rate	6.5	lbs/cy	Google AI, max of listed range
Ammonia Concentration	0.5%	by weight	SDS

Table 2b: Stationary Engine Information[1]

Equipment	Number of Engines	Engine Tier and Information			
		Fuel[2]	Tier[2]	BHp[2]	Op Load[3]
Diesel Grinders	1	Diesel	4	100	95%
Diesel Screens	1	Diesel	4	100	95%
Diesel Stackers	1	Diesel	4	100	95%
Diesel Colorizer	0	Diesel	4	100	95%
Diesel Emergency Generator	1	Diesel	3	150	74%
Diesel Emergency Fire Pump	1	Diesel	3	300	74%

1. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
2. Engineering estimate based on projected throughput and machine capacity.
3. Engineering estimate based on projected throughput and machine capacity except for emergency engines, which are from User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12

Table 2c: Emergency Engine Operation Assumptions

Parameter	Value	Unit of Measure
Emergency Engine Operating Hours	2	hours/day, assumption
Emergency Engine Operating Days	100	day/yr, for 200 hours per year, assumption

Table 2d: Raw Material and Product Truck Loads

Parameter	Value	Unit of Measure
Raw Material quantity per truck	12	tons/truck
Compost quantity per truck	20	tons/truck

Table 2e: Onroad Vehicle Information and Mileage

Vehicle Type	Vehicle Use	Number of Vehicles	Vehicle Weight (lb)			Fuel	One-way Onsite Trip Mileage	One-way Offsite Trip Mileage[4]	Hours of Op Onsite and within
			Gross	Empty	Average				
LDT1	Employee	8	3,750	3,750	3,750	Gasoline	0.00	15	1
LHD2	Delivery of Office Supplies	1	15,006	8,200	11,603	Diesel	0.20	15	1
T7 Tractor	Ship Raw Material	14	47,000	23,000	35,000	Diesel	0.20	5	10
T7 Tractor	Ship Finished Compost	3	63,000	23,000	43,000	Diesel	0.20	15	10

4. Feedstock haul truck mileage is the mileage to the compost facility minus the baseline mileage to a landfill. Mileages are assumptions for representative facilities.

Table 2f: Fraction of Onroad Vehicle VMT by Functional Type of Roadway[5]

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 6

5. SJVAPCD, Appendix A: Comments
6. Rural is assumed to be 0.25 miles per

Table 2g: Onroad Vehicle VMT-weighted Average Vehicle Weight

Parameter	Value	Unit of Measure
Average Vehicle Weight	10.1	ton/vehicle

Table 2h: Offroad Vehicle Information

Offroad Equipment	Typical Model	Fuel	Engine Information		Op Load[7]	Hours per Day
			Tier	BHp		
Fuel Truck	Freightliner M2106	Diesel	4f	350	38%	1
Tractors	Massey Fergusen, 7619	Diesel	4f	200	37%	4
Excavator	Caterpillar 326	Diesel	4f	201	38%	4
Loader	Caterpillar, 962K	Diesel	4f	250	36%	4
Windrow Turner	Scarab	Diesel	4f	250	42%	4
Water Truck	International, 7400 6x4	Diesel	4f	350	38%	4
Sweeper Truck	Freightliner M2	Diesel	4f	240	46%	4

7. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12. Windrow turner using "Other Construction Equipment"

Table 2i: Offsite Mileage Included with Onsite Calculations

Parameter	Value	Unit of Measure
Offsite Mileage Included with Onsite Calculations	0.25	mile/trip

Table 2j: Gasoline Vehicle Mileage and Fuel Consumption

Parameter	Onsite	Near-site[8]
VMT/Day	0.00	4.00
Fuel Consumption (gal/day)	0.000	0.247

Average Fuel Economy Light Truck[9] 16.20 MPG

8. Near site mileage is calculated based on the total number of gasoline vehicle trips per day, multiplied by 0.25 miles (one way) multiplied by 2 (two way trip).
9. https://en.wikipedia.org/wiki/Fuel_efficiency

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Table 3: Emission Factors

Table 3a: Composting Emission Factors

Pollutant	Phase	Emission Factor	Note
VOC	Feedstock Storage	0.2 lb/wet ton/day	1
VOC (uncontrolled)	Composting + Curing	3.58 lb/ton	2
VOC control efficiency	Composting + Curing	80%	---
VOC (controlled)	Composting + Curing	0.72 lb/ton	calculated
VOC (controlled)	Composting (=90%)	0.64 lb/ton	2
VOC (controlled)	Curing (=10%)	0.07 lb/ton	2
VOC	Storage	0.02 lb/ton	3
NH_3	Feedstock Storage	0.02 lb/ton/day	1
NH3 (uncontrolled)	Composting + curing	0.78 lb/ton	4
NH3 control efficiency	Composting + curing	80%	---
NH_3 (controlled)	Composting + curing	0.16 lb/ton	calculated
NH_3	Storage	0.00038 lb/ton	5
GHG - CO2	Composting	0.44 kg/kg	6
GHG - CH4	Composting	0.004 kg/kg	6
GHG - N2O	Composting	0.0003 kg/kg	6

1. SJVAPCD Compost Emission Factor Report, Originally Published September 15, 2010, Revised March 21, 2023, Table 7.
2. SJVAPCD Compost Emission Factor Report Originally Published September 15, 2010 Revised March 21, 2023, Tables 3 and 4
3. Storage EF from SJVAPCD Compost ROG Emission Factors, Sept 15, 2010, App C, Table 4.3 which is based on 15 days storage.
4. SJVAPCD Compost Emission Factor Report, Originally Published September 15, 2010, Revised March 21, 2023, Table 6.
5. SJVAPCD Compost VOC Emission Factors, Sept 15, 2010, App C, Table 4.3 which is based on 15 days storage.
6. Greenhouse Gas Emissions Estimation Methodologies for Biogenic Emissions from Selected Source Categories: Measurement Policy Group, December 14, 2010 Solid Waste Disposal Wastewater Treatment Ethanol Fermentation Submitted to: U.S. Environmental Protection Agency Sector Policies and Programs Division

Table 3b: Uncontrolled Grinding and Screening PM Emission Factors

Process Operation	Emission Factor		Note
	PM10 (lb/ton)	PM2.5 (lb/ton)	
Grinding	0.0144	0.00216	7
Screening	0.0144	0.00216	8
Control Efficiency from Watering	75%		9

7. BAAQMD, Title V Permit Evaluation, Guadalupe Rubbish Disposal Co., Site A3294. BAAQMD references AP-42 for log debarking. Assume 15% fraction of PM2.5.
8. AP-42 section 10.3 Plywood Veneer and Layout Operations Table 10.3-1 (4th Edition) for log debarking, assuming 60% of emissions are PM10 with a 15% fraction of PM2.5.
9. Mojave Desert Air Quality Management District, "Emissions Inventory Guidance, Mineral Handling and Processing Industries", Section G, Wind Erosion from Storage Piles, April 2000.

Table 3c: Material Handling PM Emission Factors

Variable	Emission Factor		Note
	PM10	PM2.5	
Particle Size Multiplier (dimensionless)	0.35	0.053	10
Mean Wind Speed (MPH)	3.25	3.25	11
Material Moisture Content (%)	4.80	4.80	10
Emission Factor (lb/ton/drop point)	1.88E-04	2.84E-05	calculated

10. AP-42, Chapter 13.2.4 Aggregate Handling and Storage Piles. Moisture content used is the maximum allowed by the method. Actual moisture content will be higher, thus these emission factors are conservative.
11. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-1, Average of Los Angeles Airport and San Jose Airport.

Table 3d: Wind Erosion PM Emission Factors[11]

Variable	PM10	PM2.5	Note
Particulate aerodynamic factor	0.50	0.20	12
Average silt loading of storage pile in percent (%),	0.50	0.50	Assumed
Average number of days during the year with at least 0.01 inches of precipitation	24.30	24.30	13
Percentage of time with unobstructed wind speed >12 mph in percent (%)	10.00	10.00	Assumed
Wind Erosion EF (lb/acre/day)	2.74E-01	1.10E-01	Calculated
Control Efficiency from Watering	75%		12

12. Mojave Desert Air Quality Management District, "Emissions Inventory Guidance, Mineral Handling and Processing Industries", Section G, Wind Erosion from Storage Piles, April 2000.
13. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Table 3e: Compost Dust TAC Concentration

TAC	CAS	Concentration (lb/lb Dust)	Note
Arsenic	7440-38-2	6.20E-06	14
Cadmium	7440-43-9	2.00E-06	14
Hexavalent Chromium	18540-29-9	2.45E-06	14, 15
Cobalt	7440-48-4	8.80E-06	14
Copper	7440-50-8	6.90E-05	14
Lead	7439-92-1	2.00E-04	14
Manganese	7439-96-5	4.40E-04	14
Mercury	7439-97-6	1.00E-06	14
Nickel	7440-02-0	9.50E-05	14
Selenium	7782-49-2	1.00E-06	14

14. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm
15. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

Table 3f: Compost Organic TAC Emission Factors (lb TAC/lb VOC)[16]

TAC	Feedstock Storage	Composting	Curing	Finished Compost Storage
Acetone	8.25E-03	7.23E-02	1.08E-01	4.86E-02
1,4-Dichlorobenzene	4.21E-04	2.22E-04	6.10E-04	3.56E-03
2-Propanol (Isopropylalcohol, IPA)	1.13E-03	2.59E-04	7.37E-04	1.46E-03
Acetaldehyde	8.96E-02	4.29E-02	2.83E-02	1.86E-02
Allyl Chloride (3-Chloropropene)	2.19E-04	1.08E-04	8.75E-04	1.86E-03
Benzene	2.24E-04	1.60E-04	5.42E-04	1.89E-03
Carbondisulfide	2.18E-04	3.74E-04	1.30E-03	7.75E-03
Chloroethane	1.85E-04	8.30E-05	2.68E-04	1.56E-03
Chloroform	3.42E-04	1.63E-04	4.99E-04	2.89E-03
Ethylbenzene	3.04E-04	3.50E-04	8.06E-04	2.57E-03
Ethylene Dichloride (1,2-dichloroethane)	2.84E-04	5.37E-04	5.78E-04	2.40E-03
Hexane	7.86E-03	3.18E-04	6.42E-04	2.09E-03
Methanol (Methylalcohol)	9.68E-02	4.88E-02	3.07E-02	7.77E-04
Methyl Ethyl Ketone (2-butanone)	5.36E-02	7.82E-02	3.77E-02	1.75E-03
Naphthalene	2.81E-04	7.14E-04	1.12E-03	3.11E-03
Propene (Propylene)	9.45E-05	5.89E-03	3.21E-02	6.87E-02
Styrene	2.98E-04	3.53E-04	6.34E-04	2.53E-03
Toluene	2.64E-04	6.30E-04	2.54E-03	6.96E-03
Vinyl acetate	1.45E-02	3.01E-03	7.67E-04	2.09E-03
Xylenes	3.15E-04	4.36E-04	1.24E-03	5.15E-03

16. Speciation profile from BAAQMD Permit Handbook, Section 11.15

Table 3g: Stationary Engine Emission Factors[17]

Equipment	Fuel[18]	Tier[17]	NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
Diesel Grinders	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Screens	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Stackers	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Colorizer	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Emergency Generator	Diesel	3	2.85	1.02	3.7	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05
Diesel Emergency Fire Pump	Diesel	3	2.85	1.02	2.6	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05

17. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
18. Project description

Table 3h: Engine GHG Emission Factors[19]

Fuel	HHV (MMBtu/gal)	Default CO2 EF (kg CO2/MMBtu)	CO2 EF (kg/gal)	Default CH4 EF (kg CH4/MMBtu)	CH4 EF (kg/gal)	Default N2O EF (kg N2O/MMBtu)	N2O EF (kg/gal)
Diesel	0.138	73.96	10.20648	3.00E-03	4.14E-04	6.00E-04	8.28E-05

19. 40 CFR 98, Subpart C, Tables C-1 and C-2

Table 3i: Brake Specific Fuel Consumption (BSFC) Conversion - Diesel

Parameter	Value	Unit of Measure	Basis
Brake Specific Fuel Consumption	7,000	btu/hp-hr	Per EPA AP-42 Table 3.3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
Brake Specific Fuel Consumption	0.3602	lb/hp-hr	calculated

Table 3j: Onroad Mobile Sources - Criteria Pollutant Exhaust Emission Factors[20]

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)
NOx	LDT1	0.266	0.000	0.420
	LHD2	0.742	1.641	0.000
	T7 Tractor	0.927	5.946	5.191
VOC	LDT1	0.073	0.000	0.660
	LHD2	0.102	0.120	0.000
	T7 Tractor	0.010	0.635	0.000
CO	LDT1	4.803	0.000	6.799
	LHD2	0.241	0.996	0.000
	T7 Tractor	0.075	9.364	0.000
SOx	LDT1	0.002	0.000	0.000
	LHD2	0.002	0.001	0.000
	T7 Tractor	0.005	0.005	0.000
PM10	LDT1	0.004	0.000	0.003
	LHD2	0.020	0.030	0.000
	T7 Tractor	0.009	0.003	0.000
PM2.5	LDT1	0.004	0.000	0.003
	LHD2	0.020	0.029	0.000
	T7 Tractor	0.008	0.002	0.000

20. Emission factors are from EMFAC2025

Table 3k: Onroad Mobile Sources - Fugitive VOC Emission Factors[21]

Pollutant	Vehicle Type	Hot Soak EF (g/trip)	Running Loss EF (g/mile)	Diurnal EF (g/veh/day)
VOC	LDT1	0.37	0.68	4.24
	LHD2	-	-	-
	T7 Tractor	-	-	-

21. Emission factors are from EMFAC2025

Table 3l: Onroad Mobile Sources - Fugitive PM Emission Factors[22]

Pollutant	Vehicle Type	Tire Wear (g/mile)	Brake Wear (g/mile)
PM10	LDT1	0.0080	0.0085
	LHD2	0.0120	0.0910
	T7 Tractor	0.0360	0.0874
PM2.5	LDT1	0.0020	0.0030
	LHD2	0.0030	0.0319
	T7 Tractor	0.0090	0.0306

22. Emission factors are from EMFAC2025

Table 3m: Onroad Mobile Sources - GHG Exhaust Emission Factors[23,24]

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)
CO2	LDT1	377.335	0.000	90.387
	LHD2	636.055	212.543	0.000
	T7 Tractor	1544.504	1410.663	0.000
CH4	LDT1	0.016	0.000	0.101
	LHD2	0.005	0.006	0.000
	T7 Tractor	0.000	0.029	0.000
N2O	LDT1	0.017	0.000	0.029
	LHD2	0.103	0.034	0.000
	T7 Tractor	0.400	0.227	0.000
HFC	LDT1	0.000	N/A	N/A
	LHD2	0.001	N/A	N/A
	T7 Tractor	0.001	N/A	N/A

23. Emission factors are from EMFAC2025
24. Refrigerant R emission factor is from CalEEMod software

Table 3n: Paved Road PM10 Emission Factors[25]

Vehicle	Average Vehicle Weight (ton)	Pollutant	Freeway (lb/VMT)	Major (lb/VMT)	Collector (lb/VMT)	Local (lb/VMT)	Rural/Onsite (lb/VMT)
		sL (g/m^2)[26] -->	0.020	0.035	0.035	0.320	1.600
Fleet Average	10.12	PM10	6.53E-04	1.09E-03	1.09E-03	8.14E-03	3.52E-02
		PM2.5	1.63E-04	2.72E-04	2.72E-04	2.04E-03	8.81E-03

$E = k\ (sL)^{0.91} \times (W)^{1.02} * C_f$

Variable	Value	UOM
k (PM10)	1.00	g/VMT
k(PM2.5)	0.25	g/VMT
Rain Days[27]	24.30	day/yr
C_f	0.983	

25. Methodology per AP-42, 13.2.1 Paved Roads
26. SJVAPCD, Appendix A: Comments and Responses Rule 9510 and 3180 December 15, 2005
27. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Table 3o: Onroad Equipment Unpaved Road Emission Factors[28]

EMFAC Vehicle Type	Activity	PM Emission Factors[29,30] (lb/VMT)	
		PM10	PM2.5
LDT1	Employee	0.6895	0.0690
LHD2	Delivery of Office Supplies	1.1462	0.1146
T7 Tractor	Ship Raw Material	1.8839	0.1884
T7 Tractor	Ship Finished Compost	2.0667	0.2067

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[31]	24.3	day/year

Overall Control Efficiency[30]	75%	
Control for watering	55%	Ref 32
Control for vehicle speed	44%	Ref 32

28. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
29. MISCELLANEOUS PROCESS METHODOLOGY 7.9 Entrained Road Travel, Paved Road Dust (Revised and updated, November 2016), https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2016.pdf
30. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
31. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
32. Assumes twice daily watering and limiting travel speed to 25 mph; http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

Table 3p: Offroad Equipment Emission Factors[33]

Offroad Equipment	Typical Model	Fuel	Engine Tier and Information		NOx	VOC	CO	SOx	PM10	PM2.5	CO2	CH4	N2O
			Tier	BHp									
Fuel Truck	Freightliner M2106	Diesel	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Tractors	Massey Fergusen, 7619	Diesel	4f	200	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Excavator	Caterpillar 326	Diesel	4f	201	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Loader	Caterpillar, 962K	Diesel	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Windrow Turner	Scarab	Diesel	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Water Truck	International, 7400 6x4	Diesel	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Sweeper Truck	Freightliner M2	Diesel	4f	240	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083

33. From User Guide for CalEEMod Version 2022.1, Appendix G, Table G-13

Table 3q: Emission Factors for Dust Entrainment from Unpaved Roads for Offroad Equipment[34]

Equipment Description and Use		GVW	Empty	Average	PM Emission	
					PM10	PM2.5
Fuel Truck	Freightliner M2106	31.5	11.5	22.5	2.1106	0.2111
Tractors	Massey Fergusen, 7619	7.9	7.9	22.5	2.1106	0.2111
Excavator	Caterpillar 326	28.6	28.6	22.5	2.1106	0.2111
Loader	Caterpillar, 962K	22.5	22.5	22.5	2.1106	0.2111
Windrow Turner	Scarab	20.0	20.0	22.5	2.1106	0.2111
Water Truck[37]	International, 7400 6x4	31.5	11.5	22.5	0.0000	0.0000
Sweeper Truck[37]	Freightliner M2	16.5	16.5	22.5	0.0000	0.0000

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[38]	24.3	day/year

34. Although compost surfaces are paved, because the compost processing areas are expected to have compost residuals covering the active surfaces, the unpaved road calculations are used to estimate emissions.
35. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
36. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
37. Entrained road dust is assumed to be negligible for the water truck due to watering and the sweeper truck due to watering and sweeping.
38. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Overall Control Efficiency[37]	75%	
Control for watering	55%	Ref 39
Control for vehicle speed	44%	Ref 39

39. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

Table 3r: TAC Emissions from Onroad Gasoline Vehicles

TAC	CAS#	Emission Factor[40] (lb/1000-gal)
1,2,4-Trimethylbenzene	95636	5.89E-01
1,3-Butadiene	106990	3.24E-01
Acetaldehyde	75070	1.47E-01
Acrolein	107028	8.25E-02
Benzene	71432	1.57E+00
Chlorine	7782505	4.55E-01
Copper	7440508	3.30E-03
Ethylbenzene	100414	6.42E-01
Formaldehyde	50000	1.01E+00
Hexane	110543	9.42E-01
Manganese	7439965	3.30E-03
Methanol (Methylalcohol)	67561	2.42E-01
Methyl Ethyl Ketone (2-butanone)	78933	1.18E-02
Methyl tert-butyl ether	1634044	1.15E+00
m-Xylene	108383	2.17E+00
Naphthalene	91203	2.95E-02
Nickel	7440020	3.30E-03
o-Xylene	95476	7.54E-01
Styrene	100425	7.07E-02
Toluene	108883	3.50E+00

40. SJVAPCD, AB 2588 "Hot Spots" Air Toxics Profiles, March 27, 2017, District Toxic Profile ID 176, Gasoline-Fired Portable Catalyst ICE

Table 3s: TAC from Paved Road Dust

TAC	Wt. Fraction[41, 42]
Arsenic	0.000013
Cadmium	0.000003
Hexavalent Chromium	0.00000085
Cobalt	0.000023
Copper	0.000148
Lead	0.000124
Manganese	0.0008
Nickel	0.000012
Mercury	0.000009
Selenium	0.000002
Vanadium (Fume Or Dust)	0.000071

41. CARB speciation profile for Paved Roads

42. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

Table 3t: TAC from Vehicle/Equipment Travel on Unpaved Surfaces

TAC	Concentration[43]
Arsenic	6.20E-06
Cadmium	2.00E-06
Hexavalent Chromium	2.45E-06
Cobalt	8.80E-06
Copper	6.90E-05
Lead	2.00E-04
Manganese	4.40E-04
Nickel	9.50E-05
Mercury	1.00E-06
Selenium	1.00E-06

43. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm

Table 3u: Emissions Reduction from Baseline[44]

Waste Type	Compost Emission Reduction Factor (MT CO2e/ton feedstock)
Food Waste	0.62
Green Waste (includes vegetative food material)	0.44
Green Waste (includes vegetative food material) + Food Waste	0.56
Compost Emission Reduction Factor for Scenario 2	**0.44**

44. CARB, Method for Estimating Greenhouse Gas Emission Reductions From Diversion of Organic Waste From Landfills to Compost Facilities, 2017

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Table 4: Process Throughputs

Table 4: Process Throughput Calculations

Processing Step	Loss based on Initial Charge	Loss based on Previous Step	Proposed Project (TPY)	Proposed Project (TPD)
Initial Charge	---	---	10,000	32
Loss Upon Composting	10.0%	90.0%	1,000	3
Initial Charge to Curing	---	---	9,000	29
Loss Upon Curing	5.0%	5.6%	500	2
Initial Charge to Screening	---	---	8,500	27
Loss Upon Screening	5.0%	5.9%	500	2
Finished Product	---	---	8,000	26

Data and Parameters

Daily Operating Hours	10	hours/day
Annual Operating Days	312	Day/year

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Table 5: Grinding and Screening PM Emissions

Table 5a: Emission Factors

Process Operation	PM10	PM2.5
Grinding	0.0144	0.00216
Screening	0.0144	0.00216

Table 5b: Grinding and Screening PM Emissions

Operation	Annual Throughput (ton/yr)	Peak Daily Throughput (ton/day)	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Grinding	10,000	32	36.00	5.40	0.12	0.02	0.01	0.00
Screening	8,500	27	30.60	4.59	0.10	0.01	0.01	0.00
		Total	66.60	9.99	0.21	0.03	0.02	0.00
		Total (TPY)	0.02	0.003				

Data and Parameters

Operating Hours	10	hrs/day
Control Efficiency for Watering	75%	

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Table 6: Material Handling PM Emissions

Table 6: Material Handling PM Emissions

Process Step	Annual Throughput (ton/yr)	Average Daily Throughput (ton/day)	No. of Drop Points	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
				PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Feedstock	10,000	32	1	1.88	0.28	0.0060	0.0009	0.00060	0.00009
Grinding[1]	10,000	32	4	7.51	1.14	0.0241	0.0036	0.00241	0.00036
Composting	10,000	32	1	1.88	0.28	0.0060	0.0009	0.00060	0.00009
Curing	9,000	29	1	1.69	0.26	0.0054	0.0008	0.00054	0.00008
Screening[2]	8,500	27	4	6.39	0.97	0.0205	0.0031	0.00205	0.00031
Finished Compost Storage	8,000	26	1	1.50	0.23	0.0048	0.0007	0.00048	0.00007
Truck Loadout	8,000	26	1	1.50	0.23	0.0048	0.0007	0.00048	0.00007
			Total (lb/yr)	22.35	3.38	0.0716	0.0108	0.00716	0.00108
			Total (TPY)	0.011	0.0017				

Data and Parameters

Operating Schedule	10	hr/day
Days per year	312	day/yr
PM10 EF	1.88E-04	lb/ton/drop
PM2.5 EF	2.84E-05	lb/ton/drop

Notes

1. Four drop points are assumed for the grinding: 1) load hopper, 2) hopper to grinder, 3) grinder to conveyor, 4) conveyor to storage pile
2. Four drop points are assumed for the screens: 1) load hopper, 2) hopper to screen, 3) screen to conveyor, 4) conveyor to storage pile

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Table 7: Wind Erosion PM Emissions

Table 7a: Wind Erosion Dimensions/Area

Area	Acres
Composting Facility	5

Table 7b: Wind Erosion PM Emission Factors

Variable	PM10 lb/acre/day	PM2.5 lb/acre/day
Inactive Day Wind Erosion EF	2.74E-01	1.10E-01

Table 7c: Wind Erosion PM Emissions

Area	Acres	Days per Year	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Composting Facility	5.00	365	124.94	49.98	0.34	0.14	0.014	0.006
		Total (TPY)	0.062	0.025				

Data and Parameters			Notes:
1. Control by watering per MDAQMD Mineral Guidance	75%		All piles are watered for dust suppression or moisture control, or both.
Weeks per year	52	weeks/yr	Constant
Days per year	365	day/yr	Constant
Hours per day	24	hr/day	Constant
Conversion	43,560	ft^2/acre	Constant

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Table 8: Composting VOC Emissions

Table 8: Composting VOC Emissions

Process Unit	Annual Throughput (ton/yr)	Emission Factor	Annual Emissions (lb/yr)	Average Daily Emissions (lb/day)	Average Hourly Emissions (lb/hr)
Feedstock Storage	10,000	0.2 lb/wet ton/day	4,000	10.96	0.46
Composting	10,000	0.64 lb/ton	6,444	17.65	0.74
Curing[1]	10,000	0.07 lb/ton	716	1.96	0.08
Finished Compost Storage	8,000	0.02 lb/ton	160	0.44	0.02
1. EF developed for composting throughput		Total (lb/yr)	11,320	31.01	1.29
		Total (TPY)	5.66		

Data and Parameters			Notes
Daily Hours of Emissions	24	hr/day	Constant
Feedstock Storage Duration	2	days	Assumption
Days per year	365	days per year	

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Table 9: Composting GHG Emissions

Table 9a: Composting GHG Emissions[1]

Process Unit	Annual Throughput (ton/yr)	CH4 Emission Factor	N2O Emission Factor	CH4 (MT/yr)	N2O (MT/yr)	CO2e (MT/Yr)
Composting	10,000	0.004 kg/kg	0.0003 kg/kg	36	2.72	1,737

Data and Parameters

Conversion	454	gram/lb
Conversion	1,000	Kg/MT
Conversion	1,000	gram/Kg

Table 9b: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

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Table 10: Stationary Engines - Criteria Pollutant and GHG Emissions

Table 10a: Engine Emission Factors

Equipment	Number of Engines	Engine Tier and Information			NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
		Fuel	Tier	BHp									
Diesel Grinders	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Screens	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Stackers	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Colorizer	0	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Emergency Generator	1	Diesel	3	150	2.85	1.02	3.7	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05
Diesel Emergency Fire Pump	1	Diesel	3	300	2.85	1.02	2.6	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05

Table 10b: Total Daily Criteria Pollutant Emissions from Stationary Engine

Function	Number of Engines	Engine Characteristics		Hr/Day	Criteria Pollutant Exhaust Emissions (lb/day)					
		BHp	Op Load		NOx	VOC	CO	SOx	PM10	PM2.5
Diesel Grinders	1	100	95%	4	0.22	0.04	3.10	0.00	0.01	0.01
Diesel Screens	1	100	95%	4	0.22	0.04	3.10	0.00	0.01	0.01
Diesel Stackers	1	100	95%	4	0.22	0.04	3.10	0.00	0.01	0.01
Diesel Colorizer	0	100	95%	4	0.00	0.00	0.00	0.00	0.00	0.00
Diesel Emergency Generator	1	150	74%	2	1.39	0.50	1.81	0.00	0.07	0.07
Diesel Emergency Fire Pump	1	300	74%	2	2.79	1.00	2.55	0.00	0.15	0.15

Table 10c: Total Annual Criteria Pollutant Emissions from Stationary Engine

Function	Number of Engines	Engine Characteristics		Hr/Yr	Criteria Pollutant Exhaust Emissions (lb/yr)					
		BHp	Op Load		NOx	VOC	CO	SOx	PM10	PM2.5
Diesel Grinders	1	100	95%	1,248	67.96	13.1	967	1.28	2.61	2.61
Diesel Screens	1	100	95%	1,248	67.96	13.1	967	1.28	2.61	2.61
Diesel Stackers	1	100	95%	1,248	67.96	13.1	967	1.28	2.61	2.61
Diesel Colorizer	0	100	95%	1,248	0.00	0	0	0.00	0.00	0.00
Diesel Emergency Generator	1	150	74%	200	139.49	50	181	0.24	7.34	7.34
Diesel Emergency Fire Pump	1	300	74%	200	278.97	100	255	0.48	14.7	14.7

Table 10d: Stationary Engine - GHG Emissions

Function	Number of Engines	Engine Characteristics		Hr/Yr	Fuel (gal/yr)	CO2 (MT/yr)	CH4 (kg/yr)	N2O (kg/yr)	CO2e (MT/Yr)
		BHp	Op Load						
Diesel Grinders	1	100	95%	1,248	6,058	61.8	0.0025	0.0005	61.8
Diesel Screens	1	100	95%	1,248	6,058	61.8	0.0025	0.0005	61.8
Diesel Stackers	1	100	95%	1,248	6,058	61.8	0.0025	0.0005	61.8
Diesel Colorizer	0	100	95%	1,248	0	0.0	0.0000	0.0000	0.0
Diesel Emergency Generator	1	150	74%	200	1,134	11.6	0.0005	0.0001	11.6
Diesel Emergency Fire Pump	1	300	74%	200	2,269	23.2	0.0009	0.0002	23.2

Table 10e: Brake Specific Fuel Consumption (BSFC) Conversion - Diesel

Parameter	Value	Unit of Measure	Basis
Brake Specific Fuel Consumption	7,000	btu/hp-hr	Per EPA AP-42 Table 3.3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
Brake Specific Fuel Consumption	0.3602	lb/hp-hr	calculated

Table 10f: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

Table 10g: CO2 Emission Factors[2]

Fuel	HHV (MMBtu/gal)	Default CO2 EF	CO2 EF (kg/gal)	Default CH4 EF	CH4 EF (kg/gal)	Default N2O EF	N2O EF (kg/gal)
Diesel	0.138	73.96	10.20648	3.00E-03	4.14E-04	6.00E-04	8.28E-05

Data and Parameters

Operating Hours	4	hours/day
Operating Days	312	day/yr
Emergency Engine Operating Hours	2	hours/day
Emergency Engine Operating Days	100	day/yr
Conversion	454	gram/lb
Conversion	1,000,000	gm/MT
Conversion	1,000	Kg/MT
Conversion	1,000	gram/Kg

Notes:

1. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
2. Ref: 40 CFR 98, Subpart C, Tables C-1 and C-2

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Table 11: Summary of Criteria Pollutant and GHG Emissions from Composting Activities

Table 11a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
5. Grinding and Screening	---	---	---	---	0.21	0.03
6. Material Handling	---	---	---	---	0.07	0.01
7. Wind Erosion	---	---	---	---	0.34	0.14
8. Composting VOC	---	31.01	---	---	---	---
10. Stationary Engines	4.84	1.62	13.66	0.02	0.25	0.25
Total	4.84	32.64	13.66	0.02	0.87	0.43

Table 11b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
5. Grinding and Screening	---	---	---	---	66.6	9.99
6. Material Handling	---	---	---	---	22.3	3.38
7. Wind Erosion	---	---	---	---	125	50.0
8. Composting VOC	---	11,320	---	---	---	---
10. Stationary Engines	622	189	3,337	4.6	29.9	29.9
Total (lb/yr)	622	11,509	3,337	4.6	244	93
Total (TPY)	0.31	5.75	1.67	0.0023	0.12	0.047

Table 11c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	CO2e (MT/Yr)
9. Composting GHG	N/A	36	2.72	1,737
10. Stationary Engines	220	0.0089	0.0018	220
Total (MT/yr)	220	36	2.72	1,957

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Table 12: TAC from Composting Dust

Table 12a: Material Handling and Wind Erosion Dust Emissions (PM10)

Source	lb/hr	lb/yr
5. Grinding and Screening	0.02	66.60
6. Material Handling	0.01	22.35
7. Wind Erosion	0.01	124.94
Total PM10	0.04	213.89

Table 12b: TAC from Material Handling and Wind Erosion

TAC	CAS	Concentration[1, 2] (lb/lb Dust)	Total TAC Emissions		Grinding and Screening TAC Emissions		Material Handling TAC Emissions		Wind Erosion TAC Emissions	
			(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)
Arsenic	7440-38-2	6.20E-06	2.65E-07	1.33E-03	1.32E-07	4.13E-04	4.44E-08	1.39E-04	8.84E-08	7.75E-04
Cadmium	7440-43-9	2.00E-06	8.55E-08	4.28E-04	4.27E-08	1.33E-04	1.43E-08	4.47E-05	2.85E-08	2.50E-04
Hexavalent Chromium	18540-29-9	2.45E-06	1.05E-07	5.24E-04	5.23E-08	1.63E-04	1.75E-08	5.48E-05	3.49E-08	3.06E-04
Cobalt	7440-48-4	8.80E-06	3.76E-07	1.88E-03	1.88E-07	5.86E-04	6.30E-08	1.97E-04	1.26E-07	1.10E-03
Copper	7440-50-8	6.90E-05	2.95E-06	1.48E-02	1.47E-06	4.60E-03	4.94E-07	1.54E-03	9.84E-07	8.62E-03
Lead	7439-92-1	2.00E-04	8.55E-06	4.28E-02	4.27E-06	1.33E-02	1.43E-06	4.47E-03	2.85E-06	2.50E-02
Manganese	7439-96-5	4.40E-04	1.88E-05	9.41E-02	9.39E-06	2.93E-02	3.15E-06	9.83E-03	6.28E-06	5.50E-02
Mercury	7439-97-6	1.00E-06	4.28E-08	2.14E-04	2.13E-08	6.66E-05	7.16E-09	2.23E-05	1.43E-08	1.25E-04
Nickel	7440-02-0	9.50E-05	4.06E-06	2.03E-02	2.03E-06	6.33E-03	6.80E-07	2.12E-03	1.35E-06	1.19E-02
Selenium	7782-49-2	1.00E-06	4.28E-08	2.14E-04	2.13E-08	6.66E-05	7.16E-09	2.23E-05	1.43E-08	1.25E-04
			Annual Total	0.177	Annual Total	0.055	Annual Total	0.018	Annual Total	0.103

Notes:

1. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm
2. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

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Table 13: Organic TAC Emissions

Table 13a: Organic Storage VOC Emissions

Process Description	(lb/hr)	(lb/yr)
Feedstock Storage	0.46	4,000
Composting	0.74	6,444
Curing	0.08	716
Finished Compost Storage	0.02	160

Table 13b: Feedstock Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	8.25E-03	3.77E-03	33.00
1,4-Dichlorobenzene	4.21E-04	1.92E-04	1.68
2-Propanol (Isopropylalcohol, IPA)	1.13E-03	5.16E-04	4.52
Acetaldehyde	8.96E-02	4.09E-02	358.40
Allyl Chloride (3-Chloropropene)	2.19E-04	1.00E-04	0.88
Benzene	2.24E-04	1.02E-04	0.90
Carbondisulfide	2.18E-04	9.95E-05	0.87
Chloroethane	1.85E-04	8.45E-05	0.74
Chloroform	3.42E-04	1.56E-04	1.37
Ethylbenzene	3.04E-04	1.39E-04	1.22
Ethylene Dichloride (1,2-dichloroethane)	2.84E-04	1.30E-04	1.14
Hexane	7.86E-03	3.59E-03	31.44
Methanol (Methylalcohol)	9.68E-02	4.42E-02	387.20
Methyl Ethyl Ketone (2-butanone)	5.36E-02	2.45E-02	214.40
Naphthalene	2.81E-04	1.28E-04	1.12
Propene (Propylene)	9.45E-05	4.32E-05	0.38
Styrene	2.98E-04	1.36E-04	1.19
Toluene	2.64E-04	1.21E-04	1.06
Vinyl acetate	1.45E-02	6.62E-03	58.00
Xylenes	3.15E-04	1.44E-04	1.26

Table 13c: Composting TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	7.23E-02	5.32E-02	465.90
1,4-Dichlorobenzene	2.22E-04	1.63E-04	1.43
2-Propanol (Isopropylalcohol, IPA)	2.59E-04	1.91E-04	1.67
Acetaldehyde	4.29E-02	3.16E-02	276.45
Allyl Chloride (3-Chloropropene)	1.08E-04	7.94E-05	0.70
Benzene	1.60E-04	1.18E-04	1.03
Carbondisulfide	3.74E-04	2.75E-04	2.41
Chloroethane	8.30E-05	6.11E-05	0.53
Chloroform	1.63E-04	1.20E-04	1.05
Ethylbenzene	3.50E-04	2.57E-04	2.26
Ethylene Dichloride (1,2-dichloroethane)	5.37E-04	3.95E-04	3.46
Hexane	3.18E-04	2.34E-04	2.05
Methanol (Methylalcohol)	4.88E-02	3.59E-02	314.47
Methyl Ethyl Ketone (2-butanone)	7.82E-02	5.75E-02	503.92
Naphthalene	7.14E-04	5.25E-04	4.60
Propene (Propylene)	5.89E-03	4.33E-03	37.96
Styrene	3.53E-04	2.60E-04	2.27
Toluene	6.30E-04	4.63E-04	4.06
Vinyl acetate	3.01E-03	2.21E-03	19.40
Xylenes	4.36E-04	3.21E-04	2.81

Table 13d: Curing TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	1.08E-01	8.83E-03	77.33
1,4-Dichlorobenzene	6.10E-04	4.99E-05	0.44
2-Propanol (Isopropylalcohol, IPA)	7.37E-04	6.02E-05	0.53
Acetaldehyde	2.83E-02	2.31E-03	20.26
Allyl Chloride (3-Chloropropene)	8.75E-04	7.15E-05	0.63
Benzene	5.42E-04	4.43E-05	0.39
Carbondisulfide	1.30E-03	1.06E-04	0.93
Chloroethane	2.68E-04	2.19E-05	0.19
Chloroform	4.99E-04	4.08E-05	0.36
Ethylbenzene	8.06E-04	6.59E-05	0.58
Ethylene Dichloride (1,2-dichloroethane)	5.78E-04	4.72E-05	0.41
Hexane	6.42E-04	5.25E-05	0.46
Methanol (Methylalcohol)	3.07E-02	2.51E-03	21.98
Methyl Ethyl Ketone (2-butanone)	3.77E-02	3.08E-03	26.99
Naphthalene	1.12E-03	9.15E-05	0.80
Propene (Propylene)	3.21E-02	2.62E-03	22.98
Styrene	6.34E-04	5.18E-05	0.45
Toluene	2.54E-03	2.08E-04	1.82
Vinyl acetate	7.67E-04	6.27E-05	0.55
Xylenes	1.24E-03	1.01E-04	0.89

Table 13e: Finished Compost Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	4.86E-02	8.88E-04	7.78
1,4-Dichlorobenzene	3.56E-03	6.50E-05	0.57
2-Propanol (Isopropylalcohol, IPA)	1.46E-03	2.67E-05	0.23
Acetaldehyde	1.86E-02	3.40E-04	2.98
Allyl Chloride (3-Chloropropene)	1.86E-03	3.40E-05	0.30
Benzene	1.89E-03	3.45E-05	0.30
Carbondisulfide	7.75E-03	1.42E-04	1.24
Chloroethane	1.56E-03	2.85E-05	0.25
Chloroform	2.89E-03	5.28E-05	0.46
Ethylbenzene	2.57E-03	4.69E-05	0.41
Ethylene Dichloride (1,2-dichloroethane)	2.40E-03	4.38E-05	0.38
Hexane	2.09E-03	3.82E-05	0.33
Methanol (Methylalcohol)	7.77E-04	1.42E-05	0.12
Methyl Ethyl Ketone (2-butanone)	1.75E-03	3.20E-05	0.28
Naphthalene	3.11E-03	5.68E-05	0.50
Propene (Propylene)	6.87E-02	1.25E-03	10.99
Styrene	2.53E-03	4.62E-05	0.40
Toluene	6.96E-03	1.27E-04	1.11
Vinyl acetate	2.09E-03	3.82E-05	0.33
Xylenes	5.15E-03	9.41E-05	0.82

Notes:

1. Speciation profile from BAAQMD Permit Handbook, Section 11.15

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Table 14: NH3 Emissions

Table 14a: NH3 Emissions

Process Unit	Annual Throughput (ton/yr)	Daily Throughput (ton/day)	Emission Factor (lb/ton)	Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Feedstock Storage	10,000	32	0.020 lb/ton/day	0.05	400
Composting + Curing	10,000	32	0.16 lb/ton	0.18	1,560
Finished Compost Storage	8,000	26	0.0004 lb/ton	0.0003	3

Assumed Percentage of Composting + Curing to Composting:	90%	Assumed same as percent of VOC emissions

Table 14b: Colorant Application Ammonia Emissions[1]

Equipment	Annual Throughput (ton/yr)	Hourly Throughput (ton/hr)	Ammonia Emissions (lb/hr)	Ammonia Emissions (lb/yr)
Colorizer	0	0.0	0.00	0

	lb/hr	lb/yr
Total Ammonia Emissions:	**0.2241**	**1,963**

1. Ammonia emissions may occur at the colorizer or from the storage piles. No attempt has been made to determine the actual emission point.

Data and Parameters

Daily Hours of Emissions	24	hr/day	
Days of feedstock storage	2	days	
Annual hours of operation	8,760	hr/yr	
Bulk density - mulch	600	lb/cy	Average per Google AI
Conversion	2000	lb/ton	Constant
Application rate	6.5	lbs/cy	Google AI, max of listed range
Ammonia Concentration	0.5%	by weight	SDS

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Table 15: Stationary Diesel Engine TAC Emissions

Table 15: Stationary Diesel Engine TAC Emissions

Vehicle	PM10 Emissions (lb/hr)	PM10 Emissions (lb/day)	PM10 Emissions (lb/yr)
Diesel Grinders	0.002	8.38E-03	2.61
Diesel Screens	0.002	8.38E-03	2.61
Diesel Stackers	0.002	8.38E-03	2.61
Diesel Colorizer	0.000	0.00E+00	0.00
Diesel Emergency Generator	0.037	7.34E-02	7.34
Diesel Emergency Fire Pump	0.073	1.47E-01	14.68
Total PM10 = DPM	**0.116**	**2.45E-01**	**29.87**

Data and Parameters

Operating Hours	4	hours/day
Operating Days	312	day/yr
Emergency Engine Operating Hours	2	hours/day
Emergency Engine Operating Days	100	day/yr

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Table 16: Summary of TAC Emissions from Composting Activities

Table 16a: Summary of TAC Emissions from Composting Activities, lb/yr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine	Emergency Generator	Fire Pump	Total
Arsenic	7440382	4.13E-04	1.39E-04	7.75E-04	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	0.00E+00	0.00E+00	1.33E-03
Cadmium	7440439	1.33E-04	4.47E-05	2.50E-04	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	0.00E+00	0.00E+00	4.28E-04
Hexavalent Chromium	18540299	1.63E-04	5.48E-05	3.06E-04	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	0.00E+00	0.00E+00	5.24E-04
Cobalt	7440484	5.86E-04	1.97E-04	1.10E-03	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	0.00E+00	0.00E+00	1.88E-03
Copper	7440508	4.60E-03	1.54E-03	8.62E-03	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	0.00E+00	0.00E+00	1.48E-02
Lead	7439921	1.33E-02	4.47E-03	2.50E-02	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	0.00E+00	0.00E+00	4.28E-02
Manganese	7439965	2.93E-02	9.83E-03	5.50E-02	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	0.00E+00	0.00E+00	9.41E-02
Mercury	7439976	6.66E-05	2.23E-05	1.25E-04	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	0.00E+00	0.00E+00	2.14E-04
Nickel	7440020	6.33E-03	2.12E-03	1.19E-02	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	0.00E+00	0.00E+00	2.03E-02
Selenium	7782492	6.66E-05	2.23E-05	1.25E-04	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	0.00E+00	0.00E+00	2.14E-04
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	3.30E+01	4.66E+02	7.73E+01	7.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.84E+02
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	1.68E+00	1.43E+00	4.37E-01	5.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E+00
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	4.52E+00	1.67E+00	5.28E-01	2.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.95E+00
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	3.58E+02	2.76E+02	2.03E+01	2.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.58E+02
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	8.76E-01	6.96E-01	6.27E-01	2.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E+00
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	8.96E-01	1.03E+00	3.88E-01	3.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E+00
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	8.72E-01	2.41E+00	9.31E-01	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.45E+00
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	7.40E-01	5.35E-01	1.92E-01	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E+00
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	1.37E+00	1.05E+00	3.57E-01	4.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.24E+00
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	1.22E+00	2.26E+00	5.77E-01	4.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.46E+00
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	1.14E+00	3.46E+00	4.14E-01	3.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.39E+00
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	3.14E+01	2.05E+00	4.60E-01	3.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E+01
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	3.87E+02	3.14E+02	2.20E+01	1.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.24E+02
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	2.14E+02	5.04E+02	2.70E+01	2.80E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.46E+02
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	1.12E+00	4.60E+00	8.02E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.02E+00
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	3.78E-01	3.80E+01	2.30E+01	1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.23E+01
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	1.19E+00	2.27E+00	4.54E-01	4.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.33E+00
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	1.06E+00	4.06E+00	1.82E+00	1.11E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.05E+00
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	5.80E+01	1.94E+01	5.49E-01	3.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.83E+01
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	1.26E+00	2.81E+00	8.88E-01	8.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.78E+00
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	4.00E+02	1.40E+03	1.56E+02	3.04E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E+03
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E+00	2.61E+00	2.61E+00	0.00E+00	7.34E+00	1.47E+01	2.99E+01

Table 16b: Summary of TAC Emissions from Composting Activities, lb/hr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine	Emergency Generator	Fire Pump	Total
Arsenic	7440382	1.32E-07	4.44E-08	8.84E-08	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	0.00E+00	0.00E+00	2.65E-07
Cadmium	7440439	4.27E-08	1.43E-08	2.85E-08	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	0.00E+00	0.00E+00	8.55E-08
Hexavalent Chromium	18540299	5.23E-08	1.75E-08	3.49E-08	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	0.00E+00	0.00E+00	1.05E-07
Cobalt	7440484	1.88E-07	6.30E-08	1.26E-07	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	0.00E+00	0.00E+00	3.76E-07
Copper	7440508	1.47E-06	4.94E-07	9.84E-07	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	0.00E+00	0.00E+00	2.95E-06
Lead	7439921	4.27E-06	1.43E-06	2.85E-06	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	0.00E+00	0.00E+00	8.55E-06
Manganese	7439965	9.39E-06	3.15E-06	6.28E-06	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	0.00E+00	0.00E+00	1.88E-05
Mercury	7439976	2.13E-08	7.16E-09	1.43E-08	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	0.00E+00	0.00E+00	4.28E-08
Nickel	7440020	2.03E-06	6.80E-07	1.35E-06	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	0.00E+00	0.00E+00	4.06E-06
Selenium	7782492	2.13E-08	7.16E-09	1.43E-08	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	0.00E+00	0.00E+00	4.28E-08
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	3.77E-03	5.32E-02	8.83E-03	8.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.67E-02
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	1.92E-04	1.63E-04	4.99E-05	6.50E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.70E-04
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	5.16E-04	1.91E-04	6.02E-05	2.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.93E-04
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	4.09E-02	3.16E-02	2.31E-03	3.40E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.51E-02
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	1.00E-04	7.94E-05	7.15E-05	3.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E-04
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	1.02E-04	1.18E-04	4.43E-05	3.45E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.99E-04
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	9.95E-05	2.75E-04	1.06E-04	1.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.22E-04
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	8.45E-05	6.11E-05	2.19E-05	2.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-04
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	1.56E-04	1.20E-04	4.08E-05	5.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.70E-04
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	1.39E-04	2.57E-04	6.59E-05	4.69E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.09E-04
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	1.30E-04	3.95E-04	4.72E-05	4.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.16E-04
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	3.59E-03	2.34E-04	5.25E-05	3.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.91E-03
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	4.42E-02	3.59E-02	2.51E-03	1.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.26E-02
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	2.45E-02	5.75E-02	3.08E-03	3.20E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.51E-02
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	1.28E-04	5.25E-04	9.15E-05	5.68E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.02E-04
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	4.32E-05	4.33E-03	2.62E-03	1.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.25E-03
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	1.36E-04	2.60E-04	5.18E-05	4.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.94E-04
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	1.21E-04	4.63E-04	2.08E-04	1.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.19E-04
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	6.62E-03	2.21E-03	6.27E-05	3.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.94E-03
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	1.44E-04	3.21E-04	1.01E-04	9.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.60E-04
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	4.57E-02	1.60E-01	1.78E-02	3.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E-01
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-03	2.09E-03	2.09E-03	0.00E+00	3.67E-02	7.34E-02	1.16E-01

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Table 17: Onroad Mobile Sources - Vehicle Information

Table 17: Vehicle Information and Mileage Calculation

Vehicle Type	Vehicle Use	Number of Vehicles per Day	Vehicle Weight (lb)			Fuel	Days	One-way Trips per Vehicle per Day	One-way Trips per Year	One-way Onsite Trip Mileage	One-way Offsite Trip Mileage	Total One-way Trip Mileage	Onsite Total VMT/yr	Offsite Total VMT/yr	Total VMT/yr
			Gross	Empty	Average										
LDT1	Employee	8	3,750	3,750	3,750	Gasoline	312	2	4,992	0.00	15	15.00	0	74,880	74,880
LHD2	Delivery of Office Supplies	1	15,006	8,200	11,603	Diesel	312	2	624	0.20	15	15.20	125	9,360	9,485
T7 Tractor	Ship Raw Material	14	47,000	23,000	35,000	Diesel	312	2	8,736	0.20	5	5.20	1,747	43,680	45,427
T7 Tractor	Ship Finished Compost	3	63,000	23,000	43,000	Diesel	312	2	1,872	0.20	15	15.20	374	28,080	28,454

Assuming 12 cu yd per raw material truck, 20 cu yd per compost product truck

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Table 18: Onroad Mobile Sources Exhaust Emissions

Table 18a: Onroad Mobile Sources - Criteria Pollutant Exhaust Emissions

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)	Total Running Exhaust (lb/yr)	Total Idle (lb/yr)	Total Start (lb/yr)	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)	Onsite Emissions (lb/day)	Offsite Emissions (lb/day)
NOx	LDT1	0.266	0.000	0.420	43.86	0.00	4.62	48.47	0.00	48.47	0.16	0.00E+00	1.55E-01
	LHD2	0.742	1.641	0.000	15.51	1.13	0.00	16.63	0.22	16.42	0.05	7.01E-04	5.26E-02
	T7 Tractor	0.927	5.946	5.191	150.87	69.47	121.30	341.64	9.81	331.83	1.09	3.14E-02	1.06E+00
VOC	LDT1	0.073	0.000	0.660	12.03	0.00	7.26	19.28	0.00	19.28	0.06	0.00E+00	6.18E-02
	LHD2	0.102	0.120	0.000	2.13	0.08	0.00	2.21	0.03	2.18	0.01	9.33E-05	6.99E-03
	T7 Tractor	0.010	0.635	0.000	1.57	7.42	0.00	8.98	0.26	8.72	0.03	8.27E-04	2.80E-02
CO	LDT1	4.803	0.000	6.799	792.20	0.00	74.76	866.96	0.00	866.96	2.78	0.00E+00	2.78E+00
	LHD2	0.241	0.996	0.000	5.04	0.68	0.00	5.72	0.08	5.65	0.02	2.41E-04	1.81E-02
	T7 Tractor	0.075	9.364	0.000	12.17	109.40	0.00	121.56	3.49	118.07	0.39	1.12E-02	3.78E-01
SOx	LDT1	0.002	0.000	0.000	0.27	0.00	0.00	0.27	0.00	0.27	0.00	0.00E+00	8.70E-04
	LHD2	0.002	0.001	0.000	0.04	0.00	0.00	0.05	0.00	0.04	0.00	1.90E-06	1.43E-04
	T7 Tractor	0.005	0.005	0.000	0.84	0.06	0.00	0.90	0.03	0.87	0.00	8.28E-05	2.80E-03
PM10	LDT1	0.004	0.000	0.003	0.70	0.00	0.04	0.74	0.00	0.74	0.00	0.00E+00	2.36E-03
	LHD2	0.020	0.030	0.000	0.43	0.02	0.00	0.45	0.01	0.44	0.00	1.88E-05	1.41E-03
	T7 Tractor	0.009	0.003	0.000	1.41	0.03	0.00	1.44	0.04	1.40	0.00	1.33E-04	4.49E-03
PM2.5	LDT1	0.004	0.000	0.003	0.64	0.00	0.03	0.68	0.00	0.68	0.00	0.00E+00	2.17E-03
	LHD2	0.020	0.029	0.000	0.41	0.02	0.00	0.43	0.01	0.42	0.00	1.80E-05	1.35E-03
	T7 Tractor	0.008	0.002	0.000	1.35	0.03	0.00	1.38	0.04	1.34	0.00	1.27E-04	4.30E-03

Table 18b: Onroad Mobile Sources - Fugitive VOC Emissions

Pollutant	Vehicle Type	Hot Soak EF (g/trip)	Running Loss EF (g/mile)	Diurnal EF (g/veh/day)	Total Hot Soak (lb/yr)	Total Running Loss (lb/yr)	Total Diurnal (lb/yr)	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)
VOC	LDT1	0.37	0.68	4.24	4.0	112.7	23.3	140.01	0.00	140.01	0.45
	LHD2	-	-	-	-	-	-	-	-	-	-
	T7 Tractor	-	-	-	-	-	-	-	-	-	-

Table 18c: Onroad Mobile Sources - Fugitive PM Emissions

Pollutant	Vehicle Type	Tire Wear (g/mile)	Brake Wear (g/mile)	Total Tire Wear (lb/yr)	Total Brake Wear	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)
PM10	LDT1	0.0080	0.0085	1.32	1.40	2.72	0.00	2.72	0.009
	LHD2	0.0120	0.0910	0.25	1.90	2.15	0.03	2.12	0.007
	T7 Tractor	0.0360	0.0874	5.86	14.22	20.08	0.58	19.50	0.064
PM2.5	LDT1	0.0020	0.0030	0.33	0.49	0.82	0.00	0.82	0.003
	LHD2	0.0030	0.0319	0.06	0.67	0.73	0.01	0.72	0.002
	T7 Tractor	0.0090	0.0306	1.46	4.98	6.44	0.18	6.26	0.021

Table 18d: Summary of Criteria Pollutant Emissions from Onroad Operations Vehicles

Type	NO_x (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SO_x (lb/yr)	PM_{10} (lb/yr)	$PM_{2.5}$ (lb/yr)
Exhaust	406.75	30.48	994.24	1.22	2.62	2.48
Fugitive	---	140.01	---	---	24.94	7.99
Total (Lb/Yr)	406.75	170.49	994.24	1.22	27.57	10.47
Total (Lb/day)	1.30	0.55	3.19	0.00	0.09	0.03
Total (TPY)	0.20	0.09	0.50	0.001	0.01	0.01

Table 18e: Onroad Mobile Sources - Greenhouse Gas Exhaust Emissions

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)	Total Running Exhaust (MT/yr)	Total Idle (MT/yr)	Total Start (MT/yr)	Total Emissions (MT/yr)
CO2	LDT1	377.335	0.000	90.387	28.3	0.00E+00	4.51E-01	29
	LHD2	636.055	212.543	0.000	6.0	6.63E-02	0.00E+00	6.10
	T7 Tractor	1544.504	1410.663	0.000	114.1	7.48E+00	0.00E+00	122
CH4	LDT1	0.016	0.000	0.101	0.0	0.00E+00	5.03E-04	0
	LHD2	0.005	0.006	0.000	0.0	1.74E-06	0.00E+00	0.00
	T7 Tractor	0.000	0.029	0.000	0.0	1.56E-04	0.00E+00	0
N2O	LDT1	0.017	0.000	0.029	0.0	0.00E+00	1.47E-04	0
	LHD2	0.103	0.034	0.000	0.0	1.07E-05	0.00E+00	0.00
	T7 Tractor	0.400	0.227	0.000	0.0	1.21E-03	0.00E+00	0
HFC	LDT1	0.000	N/A	N/A	0.0	N/A	N/A	0
	LHD2	0.001	N/A	N/A	0.0	N/A	N/A	0.00
	T7 Tractor	0.001	N/A	N/A	0.0	N/A	N/A	0
CO2e	LDT1							29
	LHD2							6.48
	T7 Tractor							131
							Total	**166**

Table 18f: GHG Emissions from Onroad Mobile Source Activity

CO_2	CH_4	N_2O	Total CO_2e
(MT/Yr)	(Kg/Yr)	(Kg/Yr)	(MT/Yr)
156	1.93	33.18	166

Table 18g: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265
HFC[1]	12,400

1. Conservatively using GWP for HFC-23, the HFC with the highest GWP

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 19: Onroad Mobile Source Paved Road Dust

Table 19a: Paved Road PM_{10} Emission Factors[1]

Vehicle	Average Vehicle Weight (ton)	Pollutant	Freeway (lb/VMT)	Major (lb/VMT)	Collector (lb/VMT)	Local (lb/VMT)	Rural/Onsite (lb/VMT)
		sL (g/m^2)^2 -->	0.020	0.035	0.035	0.320	1.600
Fleet Average	2.40	PM10	1.48E-04	2.46E-04	2.46E-04	1.84E-03	7.97E-03
		PM2.5	3.70E-05	6.15E-05	6.15E-05	4.61E-04	1.99E-03

$E = k\ (sL)^{0.91} \times (W)^{1.02} * C_f$

Variable	Value	UOM
k (PM10)	1.00	g/VMT
k(PM2.5)	0.25	g/VMT
Rain Days[3]	49	day/yr
C_f	0.966	

Table 19b: Fraction of VMT by Functional Type of Roadway[2]

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 4

Table 19c: Summary of Onroad VMT by Phase and Road Type

EMFAC Vehicle Type	Activity	Unit of Measure	Freeway	Major	Collector	Local	Rural	Total Offsite	Onsite	Total VMT
LDT1	Employee	VMT/day	79.80	93.53	66.22	0.48	4.00	244	0	244
		VMT/Yr	24,898	29,181	20,659	150	1,248	74,880	0	74,880
LHD2	Delivery of Office Supplies	VMT/day	9.98	11.69	8.28	0.06	0.50	31	0.4	31
		VMT/Yr	3,112	3,648	2,582	19	156	9,360	125	9,485
T7 Tractor	Ship Raw Material	VMT/day	46.55	54.56	38.63	0.28	7.00	147	5.6	153
		VMT/Yr	14,524	17,022	12,051	87	2,184	43,680	1,747	45,427
T7 Tractor	Ship Finished Compost	VMT/day	29.93	35.07	24.83	0.18	1.50	92	1.2	93
		VMT/Yr	9,337	10,943	7,747	56	468	28,080	374	28,454

Table 19d: Entrained Road Dust Emissions from Travel on Paved Roads (lb/day)

EMFAC Vehicle	Activity	Pollutant	Freeway	Major	Collector	Local	Rural	Onsite	Total
LDT1	Employee	PM10	1.18E-02	2.30E-02	1.63E-02	8.85E-04	3.19E-02	0.00E+00	8.39E-02
		PM2.5	2.95E-03	5.75E-03	4.07E-03	2.21E-04	7.97E-03	0.00E+00	2.10E-02
LHD2	Delivery of Office Supplies	PM10	1.47E-03	2.88E-03	2.04E-03	1.11E-04	3.99E-03	3.19E-03	1.37E-02
		PM2.5	3.69E-04	7.19E-04	5.09E-04	2.77E-05	9.97E-04	7.97E-04	3.42E-03
T7 Tractor	Ship Raw Material	PM10	6.88E-03	1.34E-02	9.50E-03	5.16E-04	5.58E-02	4.47E-02	1.31E-01
		PM2.5	1.72E-03	3.36E-03	2.38E-03	1.29E-04	1.40E-02	1.12E-02	3.27E-02
T7 Tractor	Ship Finished Compost	PM10	4.42E-03	8.63E-03	6.11E-03	3.32E-04	1.20E-02	9.57E-03	4.10E-02
		PM2.5	1.11E-03	2.16E-03	1.53E-03	8.30E-05	2.99E-03	2.39E-03	1.03E-02
Total	All	PM10	0.02	0.05	0.03	0.00	0.10	0.06	0.27
		PM2.5	0.01	0.01	0.01	0.00	0.03	0.01	0.07

Table 19e: Entrained Road Dust Emissions from Travel on Paved Roads (lb/yr)

EMFAC Vehicle	Activity	Pollutant	Freeway	Major	Collector	Local	Rural	Onsite	Total
LDT1	Employee	PM10	3.68	7.18	5.08	0.28	9.95	0.00	26.17
		PM2.5	0.92	1.80	1.27	0.07	2.49	0.00	6.54
LHD2	Delivery of Office Supplies	PM10	0.46	0.90	0.64	0.03	1.24	1.00	4.27
		PM2.5	0.12	0.22	0.16	0.01	0.31	0.25	1.07
T7 Tractor	Ship Raw Material	PM10	2.15	4.19	2.97	0.16	17.42	13.93	40.81
		PM2.5	0.54	1.05	0.74	0.04	4.35	3.48	10.20
T7 Tractor	Ship Finished Compost	PM10	1.38	2.69	1.91	0.10	3.73	2.99	12.80
		PM2.5	0.35	0.67	0.48	0.03	0.93	0.75	3.20
Total	All	PM10	7.67	14.96	10.59	0.58	32.34	17.91	84.05
		PM2.5	1.92	3.74	2.65	0.14	8.09	4.48	21.01

Notes:

1. Methodology per AP-42, 13.2.1 Paved Roads
2. SJVAPCD, Appendix A: Comments and Responses Rule 9510 and 3180 December 15, 2005
3. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
4. Rural is assumed to be 0.25 miles per one-way trip.

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 20: Fugitive Dust From Travel on Unpaved Roads

Table 20a: Unpaved Road Emission Factors[1]

EMFAC Vehicle Type	Activity	PM Emission Factors[2,3] (lb/VMT)	
		PM10	PM2.5
LDT1	Employee	0.6895	0.0690
LHD2	Delivery of Office Supplies	1.1462	0.1146
T7 Tractor	Ship Raw Material	1.8839	0.1884
T7 Tractor	Ship Finished Compost	2.0667	0.2067

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[4]	24.3	day/year

Table 20b: Vehicle Miles Travelled for Transport of Personnel, Supplies, Materials and Product

EMFAC Vehicle Type	Activity	Vehicle Weight (ton)			No. of days	Veh/day	Trips/Day	Trips/Year	One-way Miles per Trip	Total VMT[5] (mi/day)	Total VMT[5] (mi/yr)
		Gross	Empty	Average							
LDT1	Employee	1.88	1.88	1.88	312	8	2	4,992	0.00	0	0
LHD2	Delivery of Office Supplies	7.50	4.10	5.80	312	1	2	624	0.20	0.4	125
T7 Tractor	Ship Raw Material	23.50	11.50	17.50	312	14	2	8,736	0.20	5.6	1,747
T7 Tractor	Ship Finished Compost	31.50	11.50	21.50	312	3	2	1,872	0.20	1.2	374

Table 20c: Entrained Road Dust from Unpaved Roads

EMFAC Vehicle Type	Activity	Uncontrolled (lb/day)		Controlled (lb/day)		Uncontrolled (lb/yr)		Controlled (lb/yr)	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
LDT1	Employee	0.00	0.00	0.00	0.00	0	0	0	0
LHD2	Delivery of Office Supplies	0.46	0.05	0.12	0.01	143	14	36	4
T7 Tractor	Ship Raw Material	10.55	1.05	2.66	0.27	3,292	329	829	83
T7 Tractor	Ship Finished Compost	2.48	0.25	0.62	0.06	774	77	195	19
Total		13.5	1.3	3.40	0.34	4,208	421	1,061	106
Total (ton/yr)						2.1	0.2	0.5	0.1

Overall Control Efficiency[6]	75%
Control for watering	55%
Control for vehicle speed	44%

Notes:

1. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
2. MISCELLANEOUS PROCESS METHODOLOGY 7.9 Entrained Road Travel, Paved Road Dust (Revised and updated, November 2016), https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2016.pdf
3. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
4. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
5. Assume onsite roads are unpaved, offsite roads are paved.
6. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

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Table 21: Offroad Equipment - Criteria Pollutant and GHG Emissions

Table 21a: Emission Factors[1]

Unit Count	Offroad Equipment	Typical Model (or Equivalent)	Engine Tier and Information		NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
			Tier	BHp									
1	Fuel Truck	Freightliner M2106	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Tractors	Massey Fergusen, 7619	4f	200	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Excavator	Caterpillar 326	4f	201	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
2	Loader	Caterpillar, 962K	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
0	Windrow Turner	Scarab	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Water Truck	International, 7400 6x4	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Sweeper Truck	Freightliner M2	4f	240	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083

Table 21b: Total Criteria Pollutant Emissions from Offroad Equipment

Unit	Offroad Equipment	Typical Model	Engine Characteristics			Criteria Pollutant Exhaust Emissions (lb/day)					
			BHp	Op Load	Hr/Day	NOx	VOC	CO	SOx	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	350	0.38	1.00	0.09	0.04	0.76	0.00	0.00	0.00
1	Tractors	Massey Fergusen, 7619	200	0.37	4.00	0.20	0.09	1.70	0.00	0.01	0.01
1	Excavator	Caterpillar 326	201	0.38	4.00	0.20	0.09	1.75	0.00	0.01	0.01
2	Loader	Caterpillar, 962K	250	0.36	4.00	0.48	0.22	4.13	0.01	0.02	0.02
0	Windrow Turner	Scarab	250	0.42	4.00	0.00	0.00	0.00	0.00	0.00	0.00
1	Water Truck	International, 7400 6x4	350	0.38	4.00	0.35	0.16	3.05	0.01	0.01	0.01
1	Sweeper Truck	Freightliner M2	240	0.46	4.00	0.29	0.14	2.53	0.00	0.01	0.01
Total Emissions from offroad equipment (lb/day)						1.61	0.75	13.92	0.03	0.05	0.05

Table 21c: Total Criteria Pollutant Emissions from Offroad Equipment

Unit	Offroad Equipment	Typical Model	Engine Characteristics			Criteria Pollutant Exhaust Emissions (lb/yr)					
			BHp	Op Load[1]	Hr/Yr	NOx	VOC	CO	SOx	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	350	0.38	312	27.44	12.81	237.85	0.45	0.91	0.91
1	Tractors	Massey Fergusen, 7619	200	0.37	1,248	61.08	28.50	529.35	1.00	2.04	2.04
1	Excavator	Caterpillar 326	201	0.38	1,248	63.04	29.42	546.38	1.03	2.10	2.10
2	Loader	Caterpillar, 962K	250	0.36	1,248	148.57	69.33	1,287.62	2.43	4.95	4.95
0	Windrow Turner	Scarab	250	0.42	1,248	0.00	0.00	0.00	0.00	0.00	0.00
1	Water Truck	International, 7400 6x4	350	0.38	1,248	109.78	51.23	951.41	1.79	3.66	3.66
1	Sweeper Truck	Freightliner M2	240	0.46	1,248	91.12	42.52	789.74	1.49	3.04	3.04
Total Emissions from offroad equipment (lb/yr)						501.04	233.82	4,342.35	8.19	16.70	16.70
Total Emissions from offroad equipment (TPY)						0.25	0.12	2.17	0.00	0.01	0.01

Table 21d: Offroad Equipment - GHG Emissions[2]

Unit Count	Offroad Equipment	Typical Model (or Equivalent)	Engine Information				Fuel (gal/yr)	CO2 (MT/yr)	CH4 (kg/yr)	N2O (kg/yr)	CO2e (MT/Yr)
			Tier	BHp	Hr/Yr	Op Load[1]					
1	Fuel Truck	Freightliner M2106	4f	350	312	0.38	2,120	22	0.88	0.18	22
1	Tractors	Massey Fergusen, 7619	4f	200	1,248	0.37	4,719	48	1.95	0.39	48
1	Excavator	Caterpillar 326	4f	201	1,248	0.38	4,870	50	2.02	0.40	50
2	Loader	Caterpillar, 962K	4f	250	1,248	0.36	11,478	117	4.75	0.95	118
0	Windrow Turner	Scarab	4f	250	1,248	0.42	0	0	0.00	0.00	0
1	Water Truck	International, 7400 6x4	4f	350	1,248	0.38	8,481	87	3.51	0.70	87
1	Sweeper Truck	Freightliner M2	4f	240	1,248	0.46	7,040	72	2.91	0.58	72
Total							38,708	395	16	3.21	396

Table 21e: Brake Specific Fuel Consumption (BSFC) Conversion

Parameter	Value	Unit of Measure	Basis
BSFC	7000	btu/hp-hr	Per EPA AP-42 Table 3,3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
BSFC	0.3602	lb/hp-hr	calculated

Table 21f: Global Warming Potentials, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

Data and Parameters

Operating Days	312	day/yr

Notes:

1. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12
2. Solid, gaseous, liquid and biomass fuels: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule , 30Oct09, 261 pp. Tables C-1 and C-2 at FR pp. 56409-56410. Revised emission factors for selected fuels: Federal Register (2010) EPA; 40 CFR Part 98; Mandatory Reporting of Greenhouse Gases; Final Rule, 17Dec10, 81 pp. With Amendments from Memo: Table of Final 2013 Revisions to the Greenhouse Gas Reporting Rule (PDF) to 40 CFR part 98, subpart C: Table C–1 to Subpart C—Default CO2 Emission Factors and High Heat Values for Various Types of Fuel and Table C–2 to Subpart C—Default CH4 and N2O Emission Factors for Various Types of Fuel.

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Table 22: Fugitive Dust From Offroad Equipment Travel on Unpaved Areas and Haul Roads[1]

Table 22a: EPA Predictive Emission Factors for Offroad Equipment[2]

No. of Units	Equipment	Typical	PM Emission Factors[3] (lb/VMT)	
			PM10	PM2.5
1	Fuel Truck	Freightliner M2106	2.1106	0.2111
1	Tractors	Massey Fergusen, 7619	2.1106	0.2111
1	Excavator	Caterpillar 326	2.1106	0.2111
2	Loader	Caterpillar, 962K	2.1106	0.2111
0	Windrow Turner	Scarab	2.1106	0.2111
1	Water Truck[4]	International, 7400 6x4	0.0000	0.0000
1	Sweeper Truck[4]	Freightliner M2	0.0000	0.0000

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[5]	24.3	day/year

Table 22b: Onsite Equipment Tonnage, Operating Hours, and VMT

No. of Units	Equipment Description and Use		GVW (tons)	Empty (tons)	Average (tons)	Operating Hours (hr/day)	Operating Hours (hr/yr)	Ave. Speed (MPH)	Total Travel (VMT/day)	Total Travel (VMT/yr)
1	Fuel Truck	Freightliner M2106	31.5	11.5	22.5	1.0	312	2.0	2.0	624
1	Tractors	Massey Fergusen, 7619	7.9	7.9	22.5	4.0	1,248	0.3	1.2	374
1	Excavator	Caterpillar 326	28.6	28.6	22.5	4.0	1,248	0.3	1.2	374
2	Loader	Caterpillar, 962K	22.5	22.5	22.5	4.0	1,248	0.3	2.4	749
0	Windrow Turner	Scarab	20.0	20.0	22.5	4.0	1,248	0.3	0.0	0
1	Water Truck[4]	International, 7400 6x4	31.5	11.5	22.5	4.0	1,248	3.0	12.0	3,744
1	Sweeper Truck[4]	Freightliner M2	16.5	16.5	22.5	4.0	1,248	3.0	12.0	3,744

Table 22c: Offroad Equipment Unpaved Road Dust Emissions

No. of	Equipment Description and Use		Uncontrolled (lb/day)		Controlled (lb/day)		Uncontrolled (lb/yr)		Controlled (lb/yr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	4.22	0.42	1.06	0.11	1,317	132	332	33
1	Tractors	Massey Fergusen, 7619	2.53	0.25	0.64	0.06	790	79	199	20
1	Excavator	Caterpillar 326	2.53	0.25	0.64	0.06	790	79	199	20
2	Loader	Caterpillar, 962K	5.07	0.51	1.28	0.13	1,580	158	398	40
0	Windrow Turner	Scarab	0.00	0.00	0.00	0.00	0	0	0	0
1	Water Truck[4]	International, 7400 6x4	0.00	0.00	0.00	0.00	0	0	0	0
1	Sweeper Truck[4]	Freightliner M2	0.00	0.00	0.00	0.00	0	0	0	0
Total Dust from Equip. On Unpaved Areas (Lb/Day or Lb/Year)			14.35	1.44	3.62	0.36	4,478	448	1,128	113
Total Dust from Equip. On Unpaved Areas (Ton/Year)			---	---	---	---	2.2	0.2	0.6	0.1

Overall Control Efficiency[6]	75%
Control for watering	55%
Control for vehicle speed	44%

Notes:

1. Although compost surfaces are paved, because the compost processing areas are expected to have compost residuals covering the active surfaces, the unpaved road calculations are used to esti
2. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
3. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
4. Entrained road dust is assumed to be negligible for the water truck due to watering and the sweeper truck due to watering and sweeping.
5. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
6. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2
7. Chow, Judith C., et. al., "Evaluation of Regenerative-air Vacuum Street Sweeping on Geological Contributions to PM10", Journal of the Air & Waste Management Association, published online 06

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Table 23: Summary of Emissions

Table 23a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
18. Onroad Vehicle Exhaust	1.30	0.55	3.19	0.00	0.09	0.03
19. Onroad Vehicle Paved Road Dust	---	---	---	---	0.27	0.07
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	3.40	0.34
21. Offroad Equipment Exhaust	1.61	0.75	13.92	0.03	0.05	0.05
22. Offroad Equipment Unpaved Dust	---	---	---	---	3.62	0.36
Total	2.91	1.30	17.10	0.03	7.43	0.86

Table 23b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
18. Onroad Vehicle Exhaust	407	170	994	1	28	10
19. Onroad Vehicle Paved Road Dust	---	---	---	---	84	21
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	1,061	106
21. Offroad Equipment Exhaust	501	234	4,342	8	17	17
22. Offroad Equipment Unpaved Dust	---	---	---	---	1,128	113
Total	908	404	5,337	9	2,317	267
Total (TPY)	0.45	0.20	2.67	0.00	1.16	0.13

Table 23c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	HFC (MT/yr)	CO2e (MT/Yr)
18. Onroad Vehicle Exhaust	156	0.0019	0.0332	0.0001	166
19. Onroad Vehicle Paved Road Dust	---	---	---	---	---
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	---
21. Offroad Equipment Exhaust	395	0.0160	0.0032	---	396
22. Offroad Equipment Unpaved Dust	---	---	---	---	---
Total	**551**	**0.0180**	**0.0364**	**0.0001**	**563**

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Table 24: Diesel and Gasoline Vehicle TAC Emissions

Table 24a: DPM Emissions

Vehicle	PM10 Emissions (lb/hr)		PM10 Emissions (lb/day)		PM10 Emissions (lb/yr)	
	Onsite Exhaust	Nearsite Exhaust[1,2]	Onsite Exhaust	Nearsite Exhaust[1,2]	Onsite Exhaust	Nearsite Exhaust[1,2]
LHD2	1.88E-05	2.36E-05	1.88E-05	2.36E-05	0.006	0.007
T7 Tractor	1.33E-05	2.24E-05	1.33E-04	2.24E-04	0.04	0.070
Fuel Truck	2.93E-03	0.00E+00	2.93E-03	0	0.91	0
Tractors	1.63E-03	0.00E+00	6.53E-03	0	2.04	0
Excavator	1.68E-03	0.00E+00	6.74E-03	0	2.10	0
Loader	3.97E-03	0.00E+00	1.59E-02	0	4.95	0
Windrow Turner	0.00E+00	0.00E+00	0.00E+00	0	0.00	0
Water Truck	2.93E-03	0.00E+00	1.17E-02	0	3.66	0
Sweeper Truck	2.43E-03	0.00E+00	9.74E-03	0	3.04	0
Total PM10 = DPM	1.56E-02	4.60E-05	5.37E-02	2.48E-04	16.75	0.077

Table 24b: Gasoline Vehicle Mileage and Fuel Consumption

Parameter	Onsite	Near-site[3]
VMT/Day	0.00	4.00
Fuel Consumption (gal/day)	0.000	0.247

Average Fuel Economy Light Truck[4] 16.20 MPG

Table 24c: TAC Emissions from Onroad Gasoline Vehicles

TAC	CAS#	Emission Factor[5] (lb/1000-gal)	Onsite (lb/day)	Near-site (lb/day)	Total (lb/day)	Onsite (lb/yr)	Near-site (lb/yr)	Total lb/yr)	Onsite (lb/hr)	Near-site (lb/hr)	Total (lb/hr)
1,2,4-Trimethylbenzene	95636	5.89E-01	0.000E+00	1.454E-04	1.45E-04	0.000E+00	4.537E-02	4.54E-02	0.00E+00	1.45E-04	1.45E-04
1,3-Butadiene	106990	3.24E-01	0.000E+00	8.000E-05	8.00E-05	0.000E+00	2.496E-02	2.50E-02	0.00E+00	8.00E-05	8.00E-05
Acetaldehyde	75070	1.47E-01	0.000E+00	3.630E-05	3.63E-05	0.000E+00	1.132E-02	1.13E-02	0.00E+00	3.63E-05	3.63E-05
Acrolein	107028	8.25E-02	0.000E+00	2.037E-05	2.04E-05	0.000E+00	6.356E-03	6.36E-03	0.00E+00	2.04E-05	2.04E-05
Benzene	71432	1.57E+00	0.000E+00	3.877E-04	3.88E-04	0.000E+00	1.209E-01	1.21E-01	0.00E+00	3.88E-04	3.88E-04
Chlorine	7782505	4.55E-01	0.000E+00	1.123E-04	1.12E-04	0.000E+00	3.505E-02	3.51E-02	0.00E+00	1.12E-04	1.12E-04
Copper	7440508	3.30E-03	0.000E+00	8.148E-07	8.15E-07	0.000E+00	2.542E-04	2.54E-04	0.00E+00	8.15E-07	8.15E-07
Ethylbenzene	100414	6.42E-01	0.000E+00	1.585E-04	1.59E-04	0.000E+00	4.946E-02	4.95E-02	0.00E+00	1.59E-04	1.59E-04
Formaldehyde	50000	1.01E+00	0.000E+00	2.494E-04	2.49E-04	0.000E+00	7.781E-02	7.78E-02	0.00E+00	2.49E-04	2.49E-04
Hexane	110543	9.42E-01	0.000E+00	2.326E-04	2.33E-04	0.000E+00	7.257E-02	7.26E-02	0.00E+00	2.33E-04	2.33E-04
Manganese	7439965	3.30E-03	0.000E+00	8.148E-07	8.15E-07	0.000E+00	2.542E-04	2.54E-04	0.00E+00	8.15E-07	8.15E-07
Methanol (Methylalcohol)	67561	2.42E-01	0.000E+00	5.975E-05	5.98E-05	0.000E+00	1.864E-02	1.86E-02	0.00E+00	5.98E-05	5.98E-05
Methyl Ethyl Ketone (2-butanone)	78933	1.18E-02	0.000E+00	2.914E-06	2.91E-06	0.000E+00	9.090E-04	9.09E-04	0.00E+00	2.91E-06	2.91E-06
Methyl tert-butyl ether	1634044	1.15E+00	0.000E+00	2.840E-04	2.84E-04	0.000E+00	8.859E-02	8.86E-02	0.00E+00	2.84E-04	2.84E-04
m-Xylene	108383	2.17E+00	0.000E+00	5.358E-04	5.36E-04	0.000E+00	1.672E-01	1.67E-01	0.00E+00	5.36E-04	5.36E-04
Naphthalene	91203	2.95E-02	0.000E+00	7.284E-06	7.28E-06	0.000E+00	2.273E-03	2.27E-03	0.00E+00	7.28E-06	7.28E-06
Nickel	7440020	3.30E-03	0.000E+00	8.148E-07	8.15E-07	0.000E+00	2.542E-04	2.54E-04	0.00E+00	8.15E-07	8.15E-07
o-Xylene	95476	7.54E-01	0.000E+00	1.862E-04	1.86E-04	0.000E+00	5.809E-02	5.81E-02	0.00E+00	1.86E-04	1.86E-04
Styrene	100425	7.07E-02	0.000E+00	1.746E-05	1.75E-05	0.000E+00	5.447E-03	5.45E-03	0.00E+00	1.75E-05	1.75E-05
Toluene	108883	3.50E+00	0.000E+00	8.642E-04	8.64E-04	0.000E+00	2.696E-01	2.70E-01	0.00E+00	8.64E-04	8.64E-04

Data and Parameters

Fuel Truck Hr/Day	1	
Offorad Diesel Vehicle Operating Hr/Day	4	assuming vehicles are running onsite for this many hours in a day
Haul Truck Operating Hr/Day	10	assuming vehicles are running onsite or within 1/4 mile for this many hours in a day
Employee/Business Vehicle Operating Hr/Day	1	assuming vehicles are running onsite or within 1/4 mile for this many hours in a day
Operating Days day/yr	312	

Notes:

1. Nearsite mileage is estimated based on the total offsite distance multipiled by a ratio of 0.25 miles divided by the one-way trip length.
2. Offroad equipment operates onsite only.
3. Near site mileage is calculated based on the total number of gasoline vehicle trips per year divided by the operating days per year, multiplied by 0.25 miles (one way) multiplied by 2 (two way trip).
4. https://en.wikipedia.org/wiki/Fuel_efficiency
5. SJVAPCD, AB 2588 “Hot Spots” Air Toxics Profiles, March 27, 2017, District Toxic Profile ID 176, Gasoline-Fired Portable Catalyst ICE

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Table 25: TAC from Paved Road Dust

Table 25a: Criteria Pollutant Information

Pollutant	Onsite (lb/hr)	Near-site[1] (lb/hr)	Onsite (lb/day)	Near-site[1] (lb/day)	Onsite (lb/yr)	Near-site[1] (lb/yr)
PM10	0.0057	0.0104	0.06	0.10	17.91	32.34
Total (Onsite & Near-site)		0.01611				50.26

Table 25b: TAC from Paved Road Dust

TAC	Wt.	Total TAC Emissions		Onsite TAC Emissions		Near-site TAC Emissions	
		lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
Arsenic	0.000013	2.09E-07	6.53E-04	7.46E-08	2.33E-04	1.35E-07	4.20E-04
Cadmium	0.000003	4.83E-08	1.51E-04	1.72E-08	5.37E-05	3.11E-08	9.70E-05
Hexavalent Chromium	0.00000085	1.37E-08	4.27E-05	4.88E-09	1.52E-05	8.81E-09	2.75E-05
Cobalt	0.000023	3.70E-07	1.16E-03	1.32E-07	4.12E-04	2.38E-07	7.44E-04
Copper	0.000148	2.38E-06	7.44E-03	8.50E-07	2.65E-03	1.53E-06	4.79E-03
Lead	0.000124	2.00E-06	6.23E-03	7.12E-07	2.22E-03	1.29E-06	4.01E-03
Manganese	0.0008	1.29E-05	4.02E-02	4.59E-06	1.43E-02	8.29E-06	2.59E-02
Nickel	0.000012	1.93E-07	6.03E-04	6.89E-08	2.15E-04	1.24E-07	3.88E-04
Mercury	0.000009	1.45E-07	4.52E-04	5.17E-08	1.61E-04	9.33E-08	2.91E-04
Selenium	0.000002	3.22E-08	1.01E-04	1.15E-08	3.58E-05	2.07E-08	6.47E-05
Vanadium (Fume Or Dust)	0.000071	1.14E-06	3.57E-03	4.08E-07	1.27E-03	7.36E-07	2.30E-03

Data and Parameters

Operating Hr/Day	10	assuming vehicles are running for this many hours in a day
Operating Days	312	day/yr

Notes:

1. Nearsite emissions include emissions up to 1/4 mile offsite. Nearsite PM10 emissions are calculated in Table 4 as "Rural" emissions.
2. CARB speciation profile for Paved Roads (#471):
https://ww2.arb.ca.gov/speciation-profiles-used-carb-modeling
3. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

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Table 26: TAC from Offroad Vehicles Operation on Unpaved Surfaces

Table 26a: Offroad Equipment Entrained Dust Emissions, PM10

Source	lb/hr	lb/day	lb/yr
Unpaved Road Dust from Onroad Vehicles	0.34	3.40	1,061
Unpaved Road Dust from Offroad Vehicles	0.36	3.62	1,128
Total PM10	0.70	7.02	2,189

Table 26b: TAC from Vehicle/Equipment Travel on Unpaved Surfaces

TAC	Concentration[1]	Total TAC Emissions		Onroad Vehicle TAC Emissions		Offroad Vehicle TAC Emissions	
		(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)
Arsenic	6.20E-06	4.35E-06	1.36E-02	2.11E-06	6.58E-03	2.24E-06	7.00E-03
Cadmium	2.00E-06	1.40E-06	4.38E-03	6.80E-07	2.12E-03	7.23E-07	2.26E-03
Hexavalent Chromium	2.45E-06	1.72E-06	5.36E-03	8.33E-07	2.60E-03	8.86E-07	2.76E-03
Cobalt	8.80E-06	6.17E-06	1.93E-02	2.99E-06	9.33E-03	3.18E-06	9.93E-03
Copper	6.90E-05	4.84E-05	1.51E-01	2.35E-05	7.32E-02	2.50E-05	7.79E-02
Lead	2.00E-04	1.40E-04	4.38E-01	6.80E-05	2.12E-01	7.23E-05	2.26E-01
Manganese	4.40E-04	3.09E-04	9.63E-01	1.50E-04	4.67E-01	1.59E-04	4.97E-01
Nickel	9.50E-05	6.66E-05	2.08E-01	3.23E-05	1.01E-01	3.44E-05	1.07E-01
Mercury	1.00E-06	7.02E-07	2.19E-03	3.40E-07	1.06E-03	3.62E-07	1.13E-03
Selenium	1.00E-06	7.02E-07	2.19E-03	3.40E-07	1.06E-03	3.62E-07	1.13E-03

Data and Parameters

Operating Hr/Day	10	assuming vehicles are running for this many hours in a day, including fuel truck
Operating Days	312	day/yr

Notes:

1. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm

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Table 27: Summary of TAC Emissions from Mobile Sources

Table 27a: Summary of TAC Emissions from Mobile Sources, lb/yr

Activity	CAS No.	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total
Diesel PM	9901	4.73E-02	7.74E-02	1.67E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E+01
1,2,4-Trimethylbenzene	95636	0.00E+00	4.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.54E-02
1,3-Butadiene	106990	0.00E+00	2.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-02
Acetaldehyde	75070	0.00E+00	1.13E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-02
Acrolein	107028	0.00E+00	6.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.36E-03
Benzene	71432	0.00E+00	1.21E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-01
Chlorine	7782505	0.00E+00	3.51E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E-02
Copper	7440508	0.00E+00	2.54E-04	0.00E+00	2.65E-03	4.79E-03	7.32E-02	7.79E-02	1.59E-01
Ethylbenzene	100414	0.00E+00	4.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.95E-02
Formaldehyde	50000	0.00E+00	7.78E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.78E-02
Hexane	110543	0.00E+00	7.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.26E-02
Manganese	7439965	0.00E+00	2.54E-04	0.00E+00	1.43E-02	2.59E-02	4.67E-01	4.97E-01	1.00E+00
Methanol (Methylalcohol)	67561	0.00E+00	1.86E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-02
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	9.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.09E-04
Methyl tert-butyl ether	1634044	0.00E+00	8.86E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E-02
m-Xylene	108383	0.00E+00	1.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-01
Naphthalene	91203	0.00E+00	2.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-03
Nickel	7440020	0.00E+00	2.54E-04	0.00E+00	2.15E-04	3.88E-04	1.01E-01	1.07E-01	2.09E-01
o-Xylene	95476	0.00E+00	5.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.81E-02
Styrene	100425	0.00E+00	5.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.45E-03
Toluene	108883	0.00E+00	2.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-01
Arsenic	7440382	0.00E+00	0.00E+00	0.00E+00	2.33E-04	4.20E-04	6.58E-03	7.00E-03	1.42E-02
Cadmium	7440439	0.00E+00	0.00E+00	0.00E+00	5.37E-05	9.70E-05	2.12E-03	2.26E-03	4.53E-03
Hexavalent Chromium	18540299	0.00E+00	0.00E+00	0.00E+00	1.52E-05	2.75E-05	2.60E-03	2.76E-03	5.41E-03
Cobalt	7440484	0.00E+00	0.00E+00	0.00E+00	4.12E-04	7.44E-04	9.33E-03	9.93E-03	2.04E-02
Lead	7439921	0.00E+00	0.00E+00	0.00E+00	2.22E-03	4.01E-03	2.12E-01	2.26E-01	4.44E-01
Mercury	7439976	0.00E+00	0.00E+00	0.00E+00	1.61E-04	2.91E-04	1.06E-03	1.13E-03	2.64E-03
Selenium	7782492	0.00E+00	0.00E+00	0.00E+00	3.58E-05	6.47E-05	1.06E-03	1.13E-03	2.29E-03
Vanadium (Fume Or Dust)	7440622	0.00E+00	0.00E+00	0.00E+00	1.27E-03	2.30E-03	0.00E+00	0.00E+00	3.57E-03

Table 27b: Summary of TAC Emissions from Mobile Sources, lb/hr

Activity	CAS No.	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total
Diesel PM	9901	3.21E-05	4.60E-05	1.56E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-02
1,2,4-Trimethylbenzene	95636	0.00E+00	1.45E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-04
1,3-Butadiene	106990	0.00E+00	8.00E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E-05
Acetaldehyde	75070	0.00E+00	3.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.63E-05
Acrolein	107028	0.00E+00	2.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-05
Benzene	71432	0.00E+00	3.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.88E-04
Chlorine	7782505	0.00E+00	1.12E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-04
Copper	7440508	0.00E+00	8.15E-07	0.00E+00	8.50E-07	1.53E-06	2.35E-05	2.50E-05	5.16E-05
Ethylbenzene	100414	0.00E+00	1.59E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-04
Formaldehyde	50000	0.00E+00	2.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-04
Hexane	110543	0.00E+00	2.33E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-04
Manganese	7439965	0.00E+00	8.15E-07	0.00E+00	4.59E-06	8.29E-06	1.50E-04	1.59E-04	3.22E-04
Methanol (Methylalcohol)	67561	0.00E+00	5.98E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.98E-05
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	2.91E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.91E-06
Methyl tert-butyl ether	1634044	0.00E+00	2.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-04
m-Xylene	108383	0.00E+00	5.36E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.36E-04
Naphthalene	91203	0.00E+00	7.28E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.28E-06
Nickel	7440020	0.00E+00	8.15E-07	0.00E+00	6.89E-08	1.24E-07	3.23E-05	3.44E-05	6.77E-05
o-Xylene	95476	0.00E+00	1.86E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-04
Styrene	100425	0.00E+00	1.75E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-05
Toluene	108883	0.00E+00	8.64E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.64E-04
Arsenic	7440382	0.00E+00	0.00E+00	0.00E+00	7.46E-08	1.35E-07	2.11E-06	2.24E-06	4.56E-06
Cadmium	7440439	0.00E+00	0.00E+00	0.00E+00	1.72E-08	3.11E-08	6.80E-07	7.23E-07	1.45E-06
Hexavalent Chromium	18540299	0.00E+00	0.00E+00	0.00E+00	4.88E-09	8.81E-09	8.33E-07	8.86E-07	1.73E-06
Cobalt	7440484	0.00E+00	0.00E+00	0.00E+00	1.32E-07	2.38E-07	2.99E-06	3.18E-06	6.54E-06
Lead	7439921	0.00E+00	0.00E+00	0.00E+00	7.12E-07	1.29E-06	6.80E-05	7.23E-05	1.42E-04
Mercury	7439976	0.00E+00	0.00E+00	0.00E+00	5.17E-08	9.33E-08	3.40E-07	3.62E-07	8.47E-07
Selenium	7782492	0.00E+00	0.00E+00	0.00E+00	1.15E-08	2.07E-08	3.40E-07	3.62E-07	7.34E-07
Vanadium (Fume Or Dust)	7440622	0.00E+00	0.00E+00	0.00E+00	4.08E-07	7.36E-07	0.00E+00	0.00E+00	1.14E-06

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Table 28: Summary of Criteria Pollutant and GHG Emissions

Table 28a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
11. Composting Criteria and GHG	4.84	32.64	13.66	0.02	0.87	0.43
23. Mobile Criteria and GHG	2.91	1.30	17.10	0.03	7.43	0.86
Total	7.75	33.93	30.76	0.05	8.30	1.28

Table 28b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
11. Composting Criteria and GHG	622	11,509	3,337	5	244	93
23. Mobile Criteria and GHG	908	404	5,337	9	2,317	267
Total	1,530	11,913	8,674	14	2,561	360
Total (TPY)	0.77	5.96	4.34	0.01	1.28	0.18

Table 28c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	HFC (MT/yr)	CO2e (MT/Yr)
11. Composting Criteria and GHG	220	36.30	2.72	N/A	1,957
23. Mobile Criteria and GHG	551	0.0180	0.0364	0.0001	563
Total	**772**	**36.31**	**2.76**	**0.0001**	**2,520**

Table 29: Summary of TAC Emissions

Table 29a: Summary of TAC Emissions, lb/yr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine
Arsenic	7440382	4.13E-04	1.39E-04	7.75E-04	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
Cadmium	7440439	1.33E-04	4.47E-05	2.50E-04	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
Hexavalent Chromium	18540299	1.63E-04	5.48E-05	3.06E-04	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
Cobalt	7440484	5.86E-04	1.97E-04	1.10E-03	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
Copper	7440508	4.60E-03	1.54E-03	8.62E-03	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
Lead	7439921	1.33E-02	4.47E-03	2.50E-02	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
Manganese	7439965	2.93E-02	9.83E-03	5.50E-02	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
Mercury	7439976	6.66E-05	2.23E-05	1.25E-04	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
Nickel	7440020	6.33E-03	2.12E-03	1.19E-02	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
Selenium	7782492	6.66E-05	2.23E-05	1.25E-04	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
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	3.30E+01	4.66E+02	7.73E+01	7.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	1.68E+00	1.43E+00	4.37E-01	5.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	4.52E+00	1.67E+00	5.28E-01	2.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	3.58E+02	2.76E+02	2.03E+01	2.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	8.76E-01	6.96E-01	6.27E-01	2.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	8.96E-01	1.03E+00	3.88E-01	3.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	8.72E-01	2.41E+00	9.31E-01	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	7.40E-01	5.35E-01	1.92E-01	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	1.37E+00	1.05E+00	3.57E-01	4.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	1.22E+00	2.26E+00	5.77E-01	4.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	1.14E+00	3.46E+00	4.14E-01	3.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	3.14E+01	2.05E+00	4.60E-01	3.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	3.87E+02	3.14E+02	2.20E+01	1.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	2.14E+02	5.04E+02	2.70E+01	2.80E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	1.12E+00	4.60E+00	8.02E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	3.78E-01	3.80E+01	2.30E+01	1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	1.19E+00	2.27E+00	4.54E-01	4.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	1.06E+00	4.06E+00	1.82E+00	1.11E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	5.80E+01	1.94E+01	5.49E-01	3.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	1.26E+00	2.81E+00	8.88E-01	8.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	4.00E+02	1.40E+03	1.56E+02	3.04E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E+00	2.61E+00	2.61E+00	0.00E+00
1,2,4-Trimethylbenzene	95636	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	0.00E+00	0.00E+00	0.00E+00
1,3-Butadiene	106990	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	0.00E+00	0.00E+00	0.00E+00
Acrolein	107028	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	0.00E+00	0.00E+00	0.00E+00
Chlorine	7782505	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	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	50000	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	0.00E+00	0.00E+00	0.00E+00
Methyl tert-butyl ether	1634044	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	0.00E+00	0.00E+00	0.00E+00
m-Xylene	108383	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	0.00E+00	0.00E+00	0.00E+00
o-Xylene	95476	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	0.00E+00	0.00E+00	0.00E+00
Vanadium (Fume Or Dust)	7440622	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	0.00E+00	0.00E+00	0.00E+00

Table 29b: Summary of TAC Emissions, lb/hr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine
Arsenic	7440382	1.32E-07	4.44E-08	8.84E-08	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
Cadmium	7440439	4.27E-08	1.43E-08	2.85E-08	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
Hexavalent Chromium	18540299	5.23E-08	1.75E-08	3.49E-08	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
Cobalt	7440484	1.88E-07	6.30E-08	1.26E-07	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
Copper	7440508	1.47E-06	4.94E-07	9.84E-07	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
Lead	7439921	4.27E-06	1.43E-06	2.85E-06	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
Manganese	7439965	9.39E-06	3.15E-06	6.28E-06	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
Mercury	7439976	2.13E-08	7.16E-09	1.43E-08	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
Nickel	7440020	2.03E-06	6.80E-07	1.35E-06	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
Selenium	7782492	2.13E-08	7.16E-09	1.43E-08	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
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	3.77E-03	5.32E-02	8.83E-03	8.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	1.92E-04	1.63E-04	4.99E-05	6.50E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	5.16E-04	1.91E-04	6.02E-05	2.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	4.09E-02	3.16E-02	2.31E-03	3.40E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	1.00E-04	7.94E-05	7.15E-05	3.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	1.02E-04	1.18E-04	4.43E-05	3.45E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	9.95E-05	2.75E-04	1.06E-04	1.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	8.45E-05	6.11E-05	2.19E-05	2.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	1.56E-04	1.20E-04	4.08E-05	5.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	1.39E-04	2.57E-04	6.59E-05	4.69E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	1.30E-04	3.95E-04	4.72E-05	4.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	3.59E-03	2.34E-04	5.25E-05	3.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	4.42E-02	3.59E-02	2.51E-03	1.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	2.45E-02	5.75E-02	3.08E-03	3.20E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	1.28E-04	5.25E-04	9.15E-05	5.68E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	4.32E-05	4.33E-03	2.62E-03	1.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	1.36E-04	2.60E-04	5.18E-05	4.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	1.21E-04	4.63E-04	2.08E-04	1.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	6.62E-03	2.21E-03	6.27E-05	3.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	1.44E-04	3.21E-04	1.01E-04	9.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	4.57E-02	1.60E-01	1.78E-02	3.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-03	2.09E-03	2.09E-03	0.00E+00
1,2,4-Trimethylbenzene	95636	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	0.00E+00	0.00E+00	0.00E+00
1,3-Butadiene	106990	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	0.00E+00	0.00E+00	0.00E+00
Acrolein	107028	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	0.00E+00	0.00E+00	0.00E+00
Chlorine	7782505	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	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	50000	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	0.00E+00	0.00E+00	0.00E+00
Methyl tert-butyl ether	1634044	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	0.00E+00	0.00E+00	0.00E+00
m-Xylene	108383	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	0.00E+00	0.00E+00	0.00E+00
o-Xylene	95476	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	0.00E+00	0.00E+00	0.00E+00
Vanadium (Fume Or Dust)	7440622	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	0.00E+00	0.00E+00	0.00E+00

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Table 29: Summary of TAC Emissions

Table 29a: Summary of TAC Emissions, lb

Activity	Emergency Generator	Fire Pump	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total, Stationary Sources	Total, Mobile Sources	Total
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-04	4.20E-04	6.58E-03	7.00E-03	1.33E-03	1.42E-02	1.56E-02
Cadmium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.37E-05	9.70E-05	2.12E-03	2.26E-03	4.28E-04	4.53E-03	4.96E-03
Hexavalent Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-05	2.75E-05	2.60E-03	2.76E-03	5.24E-04	5.41E-03	5.93E-03
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E-04	7.44E-04	9.33E-03	9.93E-03	1.88E-03	2.04E-02	2.23E-02
Copper	0.00E+00	0.00E+00	0.00E+00	2.54E-04	0.00E+00	2.65E-03	4.79E-03	7.32E-02	7.79E-02	1.48E-02	1.59E-01	1.73E-01
Lead	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-03	4.01E-03	2.12E-01	2.26E-01	4.28E-02	4.44E-01	4.87E-01
Manganese	0.00E+00	0.00E+00	0.00E+00	2.54E-04	0.00E+00	1.43E-02	2.59E-02	4.67E-01	4.97E-01	9.41E-02	1.00E+00	1.10E+00
Mercury	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-04	2.91E-04	1.06E-03	1.13E-03	2.14E-04	2.64E-03	2.86E-03
Nickel	0.00E+00	0.00E+00	0.00E+00	2.54E-04	0.00E+00	2.15E-04	3.88E-04	1.01E-01	1.07E-01	2.03E-02	2.09E-01	2.29E-01
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E-05	6.47E-05	1.06E-03	1.13E-03	2.14E-04	2.29E-03	2.50E-03
Acetone	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	5.84E+02	0.00E+00	5.84E+02
1,4-Dichlorobenzene	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	4.12E+00	0.00E+00	4.12E+00
2-Propanol (Isopropylalcohol, IPA)	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	6.95E+00	0.00E+00	6.95E+00
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	1.13E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.58E+02	1.13E-02	6.58E+02
Allyl Chloride (3-Chloropropene)	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	2.50E+00	0.00E+00	2.50E+00
Benzene	0.00E+00	0.00E+00	0.00E+00	1.21E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E+00	1.21E-01	2.74E+00
Carbondisulfide	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	5.45E+00	0.00E+00	5.45E+00
Chloroethane	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	1.72E+00	0.00E+00	1.72E+00
Chloroform	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	3.24E+00	0.00E+00	3.24E+00
Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	4.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.46E+00	4.95E-02	4.51E+00
Ethylene Dichloride (1,2-dichloroethane)	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	5.39E+00	0.00E+00	5.39E+00
Hexane	0.00E+00	0.00E+00	0.00E+00	7.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.43E+01	7.26E-02	3.44E+01
Methanol (Methylalcohol)	0.00E+00	0.00E+00	0.00E+00	1.86E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.24E+02	1.86E-02	7.24E+02
Methyl Ethyl Ketone (2-butanone)	0.00E+00	0.00E+00	0.00E+00	9.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.46E+02	9.09E-04	7.46E+02
Naphthalene	0.00E+00	0.00E+00	0.00E+00	2.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.02E+00	2.27E-03	7.03E+00
Propene (Propylene)	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	7.23E+01	0.00E+00	7.23E+01
Styrene	0.00E+00	0.00E+00	0.00E+00	5.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.33E+00	5.45E-03	4.33E+00
Toluene	0.00E+00	0.00E+00	0.00E+00	2.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.05E+00	2.70E-01	8.32E+00
Vinyl acetate	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	7.83E+01	0.00E+00	7.83E+01
Xylenes	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	5.78E+00	0.00E+00	5.78E+00
Ammonia	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	1.96E+03	0.00E+00	1.96E+03
Diesel PM	7.34E+00	1.47E+01	4.73E-02	7.74E-02	1.67E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.99E+01	1.68E+01	4.67E+01
1,2,4-Trimethylbenzene	0.00E+00	0.00E+00	0.00E+00	4.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.54E-02	4.54E-02
1,3-Butadiene	0.00E+00	0.00E+00	0.00E+00	2.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-02	2.50E-02
Acrolein	0.00E+00	0.00E+00	0.00E+00	6.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.36E-03	6.36E-03
Chlorine	0.00E+00	0.00E+00	0.00E+00	3.51E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E-02	3.51E-02
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	7.78E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.78E-02	7.78E-02
Methyl tert-butyl ether	0.00E+00	0.00E+00	0.00E+00	8.86E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E-02	8.86E-02
m-Xylene	0.00E+00	0.00E+00	0.00E+00	1.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-01	1.67E-01
o-Xylene	0.00E+00	0.00E+00	0.00E+00	5.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.81E-02	5.81E-02
Vanadium (Fume Or Dust)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-03	2.30E-03	0.00E+00	0.00E+00	0.00E+00	3.57E-03	3.57E-03

Table 29b: Summary of TAC Emissions, lb

Activity	Emergency Generator	Fire Pump	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total, Stationary Sources	Total, Mobile Sources	Total
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.46E-08	1.35E-07	2.11E-06	2.24E-06	2.65E-07	4.56E-06	4.82E-06
Cadmium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-08	3.11E-08	6.80E-07	7.23E-07	8.55E-08	1.45E-06	1.54E-06
Hexavalent Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.88E-09	8.81E-09	8.33E-07	8.86E-07	1.05E-07	1.73E-06	1.84E-06
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-07	2.38E-07	2.99E-06	3.18E-06	3.76E-07	6.54E-06	6.92E-06
Copper	0.00E+00	0.00E+00	0.00E+00	8.15E-07	0.00E+00	8.50E-07	1.53E-06	2.35E-05	2.50E-05	2.95E-06	5.16E-05	5.46E-05
Lead	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.12E-07	1.29E-06	6.80E-05	7.23E-05	8.55E-06	1.42E-04	1.51E-04
Manganese	0.00E+00	0.00E+00	0.00E+00	8.15E-07	0.00E+00	4.59E-06	8.29E-06	1.50E-04	1.59E-04	1.88E-05	3.22E-04	3.41E-04
Mercury	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.17E-08	9.33E-08	3.40E-07	3.62E-07	4.28E-08	8.47E-07	8.89E-07
Nickel	0.00E+00	0.00E+00	0.00E+00	8.15E-07	0.00E+00	6.89E-08	1.24E-07	3.23E-05	3.44E-05	4.06E-06	6.77E-05	7.17E-05
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-08	2.07E-08	3.40E-07	3.62E-07	4.28E-08	7.34E-07	7.77E-07
Acetone	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	6.67E-02	0.00E+00	6.67E-02
1,4-Dichlorobenzene	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	4.70E-04	0.00E+00	4.70E-04
2-Propanol (Isopropylalcohol, IPA)	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	7.93E-04	0.00E+00	7.93E-04
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	3.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.51E-02	3.63E-05	7.52E-02
Allyl Chloride (3-Chloropropene)	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	2.85E-04	0.00E+00	2.85E-04
Benzene	0.00E+00	0.00E+00	0.00E+00	3.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.99E-04	3.88E-04	6.86E-04
Carbondisulfide	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	6.22E-04	0.00E+00	6.22E-04
Chloroethane	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	1.96E-04	0.00E+00	1.96E-04
Chloroform	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	3.70E-04	0.00E+00	3.70E-04
Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	1.59E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.09E-04	1.59E-04	6.68E-04
Ethylene Dichloride (1,2-dichloroethane)	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	6.16E-04	0.00E+00	6.16E-04
Hexane	0.00E+00	0.00E+00	0.00E+00	2.33E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.91E-03	2.33E-04	4.15E-03
Methanol (Methylalcohol)	0.00E+00	0.00E+00	0.00E+00	5.98E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.26E-02	5.98E-05	8.27E-02
Methyl Ethyl Ketone (2-butanone)	0.00E+00	0.00E+00	0.00E+00	2.91E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.51E-02	2.91E-06	8.51E-02
Naphthalene	0.00E+00	0.00E+00	0.00E+00	7.28E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.02E-04	7.28E-06	8.09E-04
Propene (Propylene)	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	8.25E-03	0.00E+00	8.25E-03
Styrene	0.00E+00	0.00E+00	0.00E+00	1.75E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.94E-04	1.75E-05	5.11E-04
Toluene	0.00E+00	0.00E+00	0.00E+00	8.64E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.19E-04	8.64E-04	1.78E-03
Vinyl acetate	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	8.94E-03	0.00E+00	8.94E-03
Xylenes	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	6.60E-04	0.00E+00	6.60E-04
Ammonia	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	2.24E-01	0.00E+00	2.24E-01
Diesel PM	3.67E-02	7.34E-02	3.21E-05	4.60E-05	1.56E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-01	1.57E-02	1.32E-01
1,2,4-Trimethylbenzene	0.00E+00	0.00E+00	0.00E+00	1.45E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-04	1.45E-04
1,3-Butadiene	0.00E+00	0.00E+00	0.00E+00	8.00E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E-05	8.00E-05
Acrolein	0.00E+00	0.00E+00	0.00E+00	2.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-05	2.04E-05
Chlorine	0.00E+00	0.00E+00	0.00E+00	1.12E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-04	1.12E-04
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	2.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-04	2.49E-04
Methyl tert-butyl ether	0.00E+00	0.00E+00	0.00E+00	2.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-04	2.84E-04
m-Xylene	0.00E+00	0.00E+00	0.00E+00	5.36E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.36E-04	5.36E-04
o-Xylene	0.00E+00	0.00E+00	0.00E+00	1.86E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-04	1.86E-04
Vanadium (Fume Or Dust)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.08E-07	7.36E-07	0.00E+00	0.00E+00	0.00E+00	1.14E-06	1.14E-06

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Table 30: Reduction from Baseline

Table 30: GHG Emissions Reduction from Baseline

Annual Throughput (ton/yr)	Compost Emission Reduction Factor (MT CO2e/ton feed)[1]	GHG Emissions Reduction (MT CO2e)
10,000	0.44	4,400

1. CARB, Method for Estimating Greenhouse Gas Emission Reductions From Diversion of Organic Waste From Landfills to Compost Facilities, 2017

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Table 1: Compost Facility Operations Assumptions- Scenario 3

Assumption	Scenario 3
Facility Size	Small
Facility Capacity (cu yd)	5,000
Facility Size (acres)	5
Throughput (tpy)	10,000
Operating Schedule (hr/day)	10
Operating Schedule (wk/year)	52
Operating Schedule (day/year)	312
Feedstock	Green Waste (includes vegetative food material)
Feedstock Storage Time (days)	2
Feedstock Storage Building	N/A
Active Technology	Negative ASP w Filter
VOC Control Efficiency	90%
NH3 Control	80%
Curing	Yes
Mulch Colorizer Tons per Hour	0
Diesel Grinders	1
Diesel Screens	1
Diesel Stackers	1
Diesel Colorizer	0
Diesel Emergency Generator	1
Diesel Emergency Fire Pump	1
Employee and Commercial Light Duty Gasoline Vehicle Round Trips Per Day	8
Employee and Commercial Light Duty Diesel Vehicle Round Trips Per Day	1
Employee Mileage (one-way)	15
Tractor Trailers for Raw Materials Round Trips Per Day	14
Tractor Trailers for Product Round Trips Per Day	3
Feedstock Haul Truck Mileage (one-way)	20
Compost Product Haul Truck Mileage (one-way)	15
Baseline Feedstock Haul Truck Mileage (one-way)	15
Fuel Truck	1
Tractors	1
Excavator	1
Loader	2
Windrow Turner	0
Water Truck	1
Sweeper Truck	1
Fuel Truck Hours per Day	1
Other Off-road Engine (mobile and non-emergency stationary) Hours per Day	4

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Table 2: Additional Datasets and Assumptions

Table 2a: Colorizer Data and Assumptions

Parameter	Value	Unit of Measure	Notes
Bulk density - mulch	600	lb/cy	Average per Google AI
Conversion	2000	lb/ton	Constant
Throughput	8.55	cy/hr	Calculated from annual finished product throughput, assuming all is colorized
Annual Hours of Operation	3,120	hr/yr	Assumption
Application rate	6.5	lbs/cy	Google AI, max of listed range
Ammonia Concentration	0.5%	by weight	SDS

Table 2b: Stationary Engine Information[1]

Equipment	Number of Engines	Engine Tier and Information			
		Fuel[2]	Tier[2]	BHp[2]	Op Load[3]
Diesel Grinders	1	Diesel	4	100	95%
Diesel Screens	1	Diesel	4	100	95%
Diesel Stackers	1	Diesel	4	100	95%
Diesel Colorizer	0	Diesel	4	100	95%
Diesel Emergency Generator	1	Diesel	3	150	74%
Diesel Emergency Fire Pump	1	Diesel	3	300	74%

1. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
2. Engineering estimate based on projected throughput and machine capacity.
3. Engineering estimate based on projected throughput and machine capacity except for emergency engines, which are from User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12

Table 2c: Emergency Engine Operation Assumptions

Parameter	Value	Unit of Measure
Emergency Engine Operating Hours	2	hours/day, assumption
Emergency Engine Operating Days	100	day/yr, for 200 hours per year, assumption

Table 2d: Raw Material and Product Truck Loads

Parameter	Value	Unit of Measure
Raw Material quantity per truck	12	tons/truck
Compost quantity per truck	20	tons/truck

Table 2e: Onroad Vehicle Information and Mileage

Vehicle Type	Vehicle Use	Number of Vehicles	Vehicle Weight (lb)			Fuel	One-way Onsite Trip Mileage	One-way Offsite Trip Mileage[4]	Hours of Op Onsite and within
			Gross	Empty	Average				
LDT1	Employee	8	3,750	3,750	3,750	Gasoline	0.00	15	1
LHD2	Delivery of Office Supplies	1	15,006	8,200	11,603	Diesel	0.20	15	1
T7 Tractor	Ship Raw Material	14	47,000	23,000	35,000	Diesel	0.20	5	10
T7 Tractor	Ship Finished Compost	3	63,000	23,000	43,000	Diesel	0.20	15	10

4. Feedstock haul truck mileage is the mileage to the compost facility minus the baseline mileage to a landfill. Mileages are assumptions for representative facilities.

Table 2f: Fraction of Onroad Vehicle VMT by Functional Type of Roadway[5]

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 6

5. SJVAPCD, Appendix A: Comments
6. Rural is assumed to be 0.25 miles per

Table 2g: Onroad Vehicle VMT-weighted Average Vehicle Weight

Parameter	Value	Unit of Measure
Average Vehicle Weight	10.1	ton/vehicle

Table 2h: Offroad Vehicle Information

Offroad Equipment	Typical Model	Fuel	Engine Information		Op Load[7]	Hours per Day
			Tier	BHp		
Fuel Truck	Freightliner M2106	Diesel	4f	350	38%	1
Tractors	Massey Fergusen, 7619	Diesel	4f	200	37%	4
Excavator	Caterpillar 326	Diesel	4f	201	38%	4
Loader	Caterpillar, 962K	Diesel	4f	250	36%	4
Windrow Turner	Scarab	Diesel	4f	250	42%	4
Water Truck	International, 7400 6x4	Diesel	4f	350	38%	4
Sweeper Truck	Freightliner M2	Diesel	4f	240	46%	4

7. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12. Windrow turner using "Other Construction Equipment"

Table 2i: Offsite Mileage Included with Onsite Calculations

Parameter	Value	Unit of Measure
Offsite Mileage Included with Onsite Calculations	0.25	mile/trip

Table 2j: Gasoline Vehicle Mileage and Fuel Consumption

Parameter	Onsite	Near-site[8]
VMT/Day	0.00	4.00
Fuel Consumption (gal/day)	0.000	0.247

Average Fuel Economy Light Truck[9] 16.20 MPG

8. Near site mileage is calculated based on the total number of gasoline vehicle trips per day, multiplied by 0.25 miles (one way) multiplied by 2 (two way trip).
9. https://en.wikipedia.org/wiki/Fuel_efficiency

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Table 3: Emission Factors

Table 3a: Composting Emission Factors

Pollutant	Phase	Emission Factor	Note
VOC	Feedstock Storage	0.2 lb/wet ton/day	1
VOC (uncontrolled)	Composting + Curing	3.58 lb/ton	2
VOC control efficiency	Composting + Curing	90%	---
VOC (controlled)	Composting + Curing	0.36 lb/ton	calculated
VOC (controlled)	Composting (=90%)	0.32 lb/ton	2
VOC (controlled)	Curing (=10%)	0.04 lb/ton	2
VOC	Storage	0.02 lb/ton	3
NH_3	Feedstock Storage	0.02 lb/ton/day	1
NH3 (uncontrolled)	Composting + curing	0.78 lb/ton	4
NH3 control efficiency	Composting + curing	80%	---
NH_3 (controlled)	Composting + curing	0.16 lb/ton	calculated
NH_3	Storage	0.00038 lb/ton	5
GHG - CO2	Composting	0.44 kg/kg	6
GHG - CH4	Composting	0.004 kg/kg	6
GHG - N2O	Composting	0.0003 kg/kg	6

1. SJVAPCD Compost Emission Factor Report, Originally Published September 15, 2010, Revised March 21, 2023, Table 7.
2. SJVAPCD Compost Emission Factor Report Originally Published September 15, 2010 Revised March 21, 2023, Tables 3 and 4
3. Storage EF from SJVAPCD Compost ROG Emission Factors, Sept 15, 2010, App C, Table 4.3 which is based on 15 days storage.
4. SJVAPCD Compost Emission Factor Report, Originally Published September 15, 2010, Revised March 21, 2023, Table 6.
5. SJVAPCD Compost VOC Emission Factors, Sept 15, 2010, App C, Table 4.3 which is based on 15 days storage.
6. Greenhouse Gas Emissions Estimation Methodologies for Biogenic Emissions from Selected Source Categories: Measurement Policy Group, December 14, 2010 Solid Waste Disposal Wastewater Treatment Ethanol Fermentation Submitted to: U.S. Environmental Protection Agency Sector Policies and Programs Division

Table 3b: Uncontrolled Grinding and Screening PM Emission Factors

Process Operation	Emission Factor		Note
	PM10 (lb/ton)	PM2.5 (lb/ton)	
Grinding	0.0144	0.00216	7
Screening	0.0144	0.00216	8
Control Efficiency from Watering	75%		9

7. BAAQMD, Title V Permit Evaluation, Guadalupe Rubbish Disposal Co., Site A3294. BAAQMD references AP-42 for log debarking. Assume 15% fraction of PM2.5.
8. AP-42 section 10.3 Plywood Veneer and Layout Operations Table 10.3-1 (4th Edition) for log debarking, assuming 60% of emissions are PM10 with a 15% fraction of PM2.5.
9. Mojave Desert Air Quality Management District, "Emissions Inventory Guidance, Mineral Handling and Processing Industries", Section G, Wind Erosion from Storage Piles, April 2000.

Table 3c: Material Handling PM Emission Factors

Variable	Emission Factor		Note
	PM10	PM2.5	
Particle Size Multiplier (dimensionless)	0.35	0.053	10
Mean Wind Speed (MPH)	3.25	3.25	11
Material Moisture Content (%)	4.80	4.80	10
Emission Factor (lb/ton/drop point)	1.88E-04	2.84E-05	calculated

10. AP-42, Chapter 13.2.4 Aggregate Handling and Storage Piles. Moisture content used is the maximum allowed by the method. Actual moisture content will be higher, thus these emission factors are conservative.
11. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-1, Average of Los Angeles Airport and San Jose Airport.

Table 3d: Wind Erosion PM Emission Factors[11]

Variable	PM10	PM2.5	Note
Particulate aerodynamic factor	0.50	0.20	12
Average silt loading of storage pile in percent (%),	0.50	0.50	Assumed
Average number of days during the year with at least 0.01 inches of precipitation	24.30	24.30	13
Percentage of time with unobstructed wind speed >12 mph in percent (%)	10.00	10.00	Assumed
Wind Erosion EF (lb/acre/day)	2.74E-01	1.10E-01	Calculated
Control Efficiency from Watering	75%		12

12. Mojave Desert Air Quality Management District, "Emissions Inventory Guidance, Mineral Handling and Processing Industries", Section G, Wind Erosion from Storage Piles, April 2000.
13. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Table 3e: Compost Dust TAC Concentration

TAC	CAS	Concentration (lb/lb Dust)	Note
Arsenic	7440-38-2	6.20E-06	14
Cadmium	7440-43-9	2.00E-06	14
Hexavalent Chromium	18540-29-9	2.45E-06	14, 15
Cobalt	7440-48-4	8.80E-06	14
Copper	7440-50-8	6.90E-05	14
Lead	7439-92-1	2.00E-04	14
Manganese	7439-96-5	4.40E-04	14
Mercury	7439-97-6	1.00E-06	14
Nickel	7440-02-0	9.50E-05	14
Selenium	7782-49-2	1.00E-06	14

14. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm
15. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

Table 3f: Compost Organic TAC Emission Factors (lb TAC/lb VOC)[16]

TAC	Feedstock Storage	Composting	Curing	Finished Compost Storage
Acetone	8.25E-03	7.23E-02	1.08E-01	4.86E-02
1,4-Dichlorobenzene	4.21E-04	2.22E-04	6.10E-04	3.56E-03
2-Propanol (Isopropylalcohol, IPA)	1.13E-03	2.59E-04	7.37E-04	1.46E-03
Acetaldehyde	8.96E-02	4.29E-02	2.83E-02	1.86E-02
Allyl Chloride (3-Chloropropene)	2.19E-04	1.08E-04	8.75E-04	1.86E-03
Benzene	2.24E-04	1.60E-04	5.42E-04	1.89E-03
Carbondisulfide	2.18E-04	3.74E-04	1.30E-03	7.75E-03
Chloroethane	1.85E-04	8.30E-05	2.68E-04	1.56E-03
Chloroform	3.42E-04	1.63E-04	4.99E-04	2.89E-03
Ethylbenzene	3.04E-04	3.50E-04	8.06E-04	2.57E-03
Ethylene Dichloride (1,2-dichloroethane)	2.84E-04	5.37E-04	5.78E-04	2.40E-03
Hexane	7.86E-03	3.18E-04	6.42E-04	2.09E-03
Methanol (Methylalcohol)	9.68E-02	4.88E-02	3.07E-02	7.77E-04
Methyl Ethyl Ketone (2-butanone)	5.36E-02	7.82E-02	3.77E-02	1.75E-03
Naphthalene	2.81E-04	7.14E-04	1.12E-03	3.11E-03
Propene (Propylene)	9.45E-05	5.89E-03	3.21E-02	6.87E-02
Styrene	2.98E-04	3.53E-04	6.34E-04	2.53E-03
Toluene	2.64E-04	6.30E-04	2.54E-03	6.96E-03
Vinyl acetate	1.45E-02	3.01E-03	7.67E-04	2.09E-03
Xylenes	3.15E-04	4.36E-04	1.24E-03	5.15E-03

16. Speciation profile from BAAQMD Permit Handbook, Section 11.15

Table 3g: Stationary Engine Emission Factors[17]

Equipment	Fuel[18]	Tier[17]	NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
Diesel Grinders	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Screens	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Stackers	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Colorizer	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Emergency Generator	Diesel	3	2.85	1.02	3.7	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05
Diesel Emergency Fire Pump	Diesel	3	2.85	1.02	2.6	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05

17. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
18. Project description

Table 3h: Engine GHG Emission Factors[19]

Fuel	HHV (MMBtu/gal)	Default CO2 EF (kg CO2/MMBtu)	CO2 EF (kg/gal)	Default CH4 EF (kg CH4/MMBtu)	CH4 EF (kg/gal)	Default N2O EF (kg N2O/MMBtu)	N2O EF (kg/gal)
Diesel	0.138	73.96	10.20648	3.00E-03	4.14E-04	6.00E-04	8.28E-05

19. 40 CFR 98, Subpart C, Tables C-1 and C-2

Table 3i: Brake Specific Fuel Consumption (BSFC) Conversion - Diesel

Parameter	Value	Unit of Measure	Basis
Brake Specific Fuel Consumption	7,000	btu/hp-hr	Per EPA AP-42 Table 3.3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
Brake Specific Fuel Consumption	0.3602	lb/hp-hr	calculated

Table 3j: Onroad Mobile Sources - Criteria Pollutant Exhaust Emission Factors[20]

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)
NOx	LDT1	0.266	0.000	0.420
	LHD2	0.742	1.641	0.000
	T7 Tractor	0.927	5.946	5.191
VOC	LDT1	0.073	0.000	0.660
	LHD2	0.102	0.120	0.000
	T7 Tractor	0.010	0.635	0.000
CO	LDT1	4.803	0.000	6.799
	LHD2	0.241	0.996	0.000
	T7 Tractor	0.075	9.364	0.000
SOx	LDT1	0.002	0.000	0.000
	LHD2	0.002	0.001	0.000
	T7 Tractor	0.005	0.005	0.000
PM10	LDT1	0.004	0.000	0.003
	LHD2	0.020	0.030	0.000
	T7 Tractor	0.009	0.003	0.000
PM2.5	LDT1	0.004	0.000	0.003
	LHD2	0.020	0.029	0.000
	T7 Tractor	0.008	0.002	0.000

20. Emission factors are from EMFAC2025

Table 3k: Onroad Mobile Sources - Fugitive VOC Emission Factors[21]

Pollutant	Vehicle Type	Hot Soak EF (g/trip)	Running Loss EF (g/mile)	Diurnal EF (g/veh/day)
VOC	LDT1	0.37	0.68	4.24
	LHD2	-	-	-
	T7 Tractor	-	-	-

21. Emission factors are from EMFAC2025

Table 3l: Onroad Mobile Sources - Fugitive PM Emission Factors[22]

Pollutant	Vehicle Type	Tire Wear (g/mile)	Brake Wear (g/mile)
PM10	LDT1	0.0080	0.0085
	LHD2	0.0120	0.0910
	T7 Tractor	0.0360	0.0874
PM2.5	LDT1	0.0020	0.0030
	LHD2	0.0030	0.0319
	T7 Tractor	0.0090	0.0306

22. Emission factors are from EMFAC2025

Table 3m: Onroad Mobile Sources - GHG Exhaust Emission Factors[23,24]

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)
CO2	LDT1	377.335	0.000	90.387
	LHD2	636.055	212.543	0.000
	T7 Tractor	1544.504	1410.663	0.000
CH4	LDT1	0.016	0.000	0.101
	LHD2	0.005	0.006	0.000
	T7 Tractor	0.000	0.029	0.000
N2O	LDT1	0.017	0.000	0.029
	LHD2	0.103	0.034	0.000
	T7 Tractor	0.400	0.227	0.000
HFC	LDT1	0.000	N/A	N/A
	LHD2	0.001	N/A	N/A
	T7 Tractor	0.001	N/A	N/A

23. Emission factors are from EMFAC2025
24. Refrigerant R emission factor is from CalEEMod software

Table 3n: Paved Road PM10 Emission Factors[25]

Vehicle	Average Vehicle Weight (ton)	Pollutant	Freeway (lb/VMT)	Major (lb/VMT)	Collector (lb/VMT)	Local (lb/VMT)	Rural/Onsite (lb/VMT)
		sL (g/m^2)[26] -->	0.020	0.035	0.035	0.320	1.600
Fleet Average	10.12	PM10	6.53E-04	1.09E-03	1.09E-03	8.14E-03	3.52E-02
		PM2.5	1.63E-04	2.72E-04	2.72E-04	2.04E-03	8.81E-03

$E = k\ (sL)^{0.91} \times (W)^{1.02} * C_f$

Variable	Value	UOM
k (PM10)	1.00	g/VMT
k(PM2.5)	0.25	g/VMT
Rain Days[27]	24.30	day/yr
C_f	0.983	

25. Methodology per AP-42, 13.2.1 Paved Roads
26. SJVAPCD, Appendix A: Comments and Responses Rule 9510 and 3180 December 15, 2005
27. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Table 3o: Onroad Equipment Unpaved Road Emission Factors[28]

EMFAC Vehicle Type	Activity	PM Emission Factors[29,30] (lb/VMT)	
		PM10	PM2.5
LDT1	Employee	0.6895	0.0690
LHD2	Delivery of Office Supplies	1.1462	0.1146
T7 Tractor	Ship Raw Material	1.8839	0.1884
T7 Tractor	Ship Finished Compost	2.0667	0.2067

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[31]	24.3	day/year

Overall Control Efficiency[30]	75%	
Control for watering	55%	Ref 32
Control for vehicle speed	44%	Ref 32

28. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
29. MISCELLANEOUS PROCESS METHODOLOGY 7.9 Entrained Road Travel, Paved Road Dust (Revised and updated, November 2016), https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2016.pdf
30. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
31. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
32. Assumes twice daily watering and limiting travel speed to 25 mph; http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

Table 3p: Offroad Equipment Emission Factors[33]

Offroad Equipment	Typical Model	Fuel	Engine Tier and Information		NOx	VOC	CO	SOx	PM10	PM2.5	CO2	CH4	N2O
			Tier	BHp									
Fuel Truck	Freightliner M2106	Diesel	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Tractors	Massey Fergusen, 7619	Diesel	4f	200	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Excavator	Caterpillar 326	Diesel	4f	201	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Loader	Caterpillar, 962K	Diesel	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Windrow Turner	Scarab	Diesel	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Water Truck	International, 7400 6x4	Diesel	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Sweeper Truck	Freightliner M2	Diesel	4f	240	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083

33. From User Guide for CalEEMod Version 2022.1, Appendix G, Table G-13

Table 3q: Emission Factors for Dust Entrainment from Unpaved Roads for Offroad Equipment[34]

Equipment Description and Use		GVW	Empty	Average	PM Emission	
					PM10	PM2.5
Fuel Truck	Freightliner M2106	31.5	11.5	22.5	2.1106	0.2111
Tractors	Massey Fergusen, 7619	7.9	7.9	22.5	2.1106	0.2111
Excavator	Caterpillar 326	28.6	28.6	22.5	2.1106	0.2111
Loader	Caterpillar, 962K	22.5	22.5	22.5	2.1106	0.2111
Windrow Turner	Scarab	20.0	20.0	22.5	2.1106	0.2111
Water Truck[37]	International, 7400 6x4	31.5	11.5	22.5	0.0000	0.0000
Sweeper Truck[37]	Freightliner M2	16.5	16.5	22.5	0.0000	0.0000

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[38]	24.3	day/year

34. Although compost surfaces are paved, because the compost processing areas are expected to have compost residuals covering the active surfaces, the unpaved road calculations are used to estimate emissions.
35. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
36. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
37. Entrained road dust is assumed to be negligible for the water truck due to watering and the sweeper truck due to watering and sweeping.
38. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Overall Control Efficiency[37]	75%	
Control for watering	55%	Ref 39
Control for vehicle speed	44%	Ref 39

39. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

Table 3r: TAC Emissions from Onroad Gasoline Vehicles

TAC	CAS#	Emission Factor[40] (lb/1000-gal)
1,2,4-Trimethylbenzene	95636	5.89E-01
1,3-Butadiene	106990	3.24E-01
Acetaldehyde	75070	1.47E-01
Acrolein	107028	8.25E-02
Benzene	71432	1.57E+00
Chlorine	7782505	4.55E-01
Copper	7440508	3.30E-03
Ethylbenzene	100414	6.42E-01
Formaldehyde	50000	1.01E+00
Hexane	110543	9.42E-01
Manganese	7439965	3.30E-03
Methanol (Methylalcohol)	67561	2.42E-01
Methyl Ethyl Ketone (2-butanone)	78933	1.18E-02
Methyl tert-butyl ether	1634044	1.15E+00
m-Xylene	108383	2.17E+00
Naphthalene	91203	2.95E-02
Nickel	7440020	3.30E-03
o-Xylene	95476	7.54E-01
Styrene	100425	7.07E-02
Toluene	108883	3.50E+00

40. SJVAPCD, AB 2588 "Hot Spots" Air Toxics Profiles, March 27, 2017, District Toxic Profile ID 176, Gasoline-Fired Portable Catalyst ICE

Table 3s: TAC from Paved Road Dust

TAC	Wt. Fraction[41, 42]
Arsenic	0.000013
Cadmium	0.000003
Hexavalent Chromium	0.00000085
Cobalt	0.000023
Copper	0.000148
Lead	0.000124
Manganese	0.0008
Nickel	0.000012
Mercury	0.000009
Selenium	0.000002
Vanadium (Fume Or Dust)	0.000071

41. CARB speciation profile for Paved Roads

42. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

Table 3t: TAC from Vehicle/Equipment Travel on Unpaved Surfaces

TAC	Concentration[43]
Arsenic	6.20E-06
Cadmium	2.00E-06
Hexavalent Chromium	2.45E-06
Cobalt	8.80E-06
Copper	6.90E-05
Lead	2.00E-04
Manganese	4.40E-04
Nickel	9.50E-05
Mercury	1.00E-06
Selenium	1.00E-06

43. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm

Table 3u: Emissions Reduction from Baseline[44]

Waste Type	Compost Emission Reduction Factor (MT CO2e/ton feedstock)
Food Waste	0.62
Green Waste (includes vegetative food material)	0.44
Green Waste (includes vegetative food material) + Food Waste	0.56
Compost Emission Reduction Factor for Scenario 3	**0.44**

44. CARB, Method for Estimating Greenhouse Gas Emission Reductions From Diversion of Organic Waste From Landfills to Compost Facilities, 2017

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Table 4: Process Throughputs

Table 4: Process Throughput Calculations

Processing Step	Loss based on Initial Charge	Loss based on Previous Step	Proposed Project (TPY)	Proposed Project (TPD)
Initial Charge	---	---	10,000	32
Loss Upon Composting	10.0%	90.0%	1,000	3
Initial Charge to Curing	---	---	9,000	29
Loss Upon Curing	5.0%	5.6%	500	2
Initial Charge to Screening	---	---	8,500	27
Loss Upon Screening	5.0%	5.9%	500	2
Finished Product	---	---	8,000	26

Data and Parameters

Daily Operating Hours	10	hours/day
Annual Operating Days	312	Day/year

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Table 5: Grinding and Screening PM Emissions

Table 5a: Emission Factors

Process Operation	PM10	PM2.5
Grinding	0.0144	0.00216
Screening	0.0144	0.00216

Table 5b: Grinding and Screening PM Emissions

Operation	Annual Throughput (ton/yr)	Peak Daily Throughput (ton/day)	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Grinding	10,000	32	36.00	5.40	0.12	0.02	0.01	0.00
Screening	8,500	27	30.60	4.59	0.10	0.01	0.01	0.00
		Total	66.60	9.99	0.21	0.03	0.02	0.00
		Total (TPY)	0.02	0.003				

Data and Parameters

Operating Hours	10	hrs/day
Control Efficiency for Watering	75%	

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Table 6: Material Handling PM Emissions

Table 6: Material Handling PM Emissions

Process Step	Annual Throughput (ton/yr)	Average Daily Throughput (ton/day)	No. of Drop Points	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
				PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Feedstock	10,000	32	1	1.88	0.28	0.0060	0.0009	0.00060	0.00009
Grinding[1]	10,000	32	4	7.51	1.14	0.0241	0.0036	0.00241	0.00036
Composting	10,000	32	1	1.88	0.28	0.0060	0.0009	0.00060	0.00009
Curing	9,000	29	1	1.69	0.26	0.0054	0.0008	0.00054	0.00008
Screening[2]	8,500	27	4	6.39	0.97	0.0205	0.0031	0.00205	0.00031
Finished Compost Storage	8,000	26	1	1.50	0.23	0.0048	0.0007	0.00048	0.00007
Truck Loadout	8,000	26	1	1.50	0.23	0.0048	0.0007	0.00048	0.00007
			Total (lb/yr)	22.35	3.38	0.0716	0.0108	0.00716	0.00108
			Total (TPY)	0.011	0.0017				

Data and Parameters

Operating Schedule	10	hr/day
Days per year	312	day/yr
PM10 EF	1.88E-04	lb/ton/drop
PM2.5 EF	2.84E-05	lb/ton/drop

Notes

1. Four drop points are assumed for the grinding: 1) load hopper, 2) hopper to grinder, 3) grinder to conveyor, 4) conveyor to storage pile
2. Four drop points are assumed for the screens: 1) load hopper, 2) hopper to screen, 3) screen to conveyor, 4) conveyor to storage pile

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Table 7: Wind Erosion PM Emissions

Table 7a: Wind Erosion Dimensions/Area

Area	Acres
Composting Facility	5

Table 7b: Wind Erosion PM Emission Factors

Variable	PM10 lb/acre/day	PM2.5 lb/acre/day
Inactive Day Wind Erosion EF	2.74E-01	1.10E-01

Table 7c: Wind Erosion PM Emissions

Area	Acres	Days per Year	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Composting Facility	5.00	365	124.94	49.98	0.34	0.14	0.014	0.006
		Total (TPY)	0.062	0.025				

Data and Parameters			Notes:
1. Control by watering per MDAQMD Mineral Guidance	75%		All piles are watered for dust suppression or moisture control, or both.
Weeks per year	52	weeks/yr	Constant
Days per year	365	day/yr	Constant
Hours per day	24	hr/day	Constant
Conversion	43,560	ft^2/acre	Constant

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Table 8: Composting VOC Emissions

Table 8: Composting VOC Emissions

Process Unit	Annual Throughput (ton/yr)	Emission Factor	Annual Emissions (lb/yr)	Average Daily Emissions (lb/day)	Average Hourly Emissions (lb/hr)
Feedstock Storage	10,000	0.2 lb/wet ton/day	4,000	10.96	0.46
Composting	10,000	0.32 lb/ton	3,222	8.83	0.37
Curing[1]	10,000	0.04 lb/ton	358	0.98	0.04
Finished Compost Storage	8,000	0.02 lb/ton	160	0.44	0.02
1. EF developed for composting throughput		Total (lb/yr)	7,740	21.21	0.88
		Total (TPY)	3.87		

Data and Parameters			Notes
Daily Hours of Emissions	24	hr/day	Constant
Feedstock Storage Duration	2	days	Assumption
Days per year	365	days per year	

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Table 9: Composting GHG Emissions

Table 9a: Composting GHG Emissions[1]

Process Unit	Annual Throughput (ton/yr)	CH4 Emission Factor	N2O Emission Factor	CH4 (MT/yr)	N2O (MT/yr)	CO2e (MT/Yr)
Composting	10,000	0.004 kg/kg	0.0003 kg/kg	36	2.72	1,737

Data and Parameters

Conversion	454	gram/lb
Conversion	1,000	Kg/MT
Conversion	1,000	gram/Kg

Table 9b: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

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Table 10: Stationary Engines - Criteria Pollutant and GHG Emissions

Table 10a: Engine Emission Factors

Equipment	Number of Engines	Engine Tier and Information			NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
		Fuel	Tier	BHp									
Diesel Grinders	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Screens	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Stackers	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Colorizer	0	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Emergency Generator	1	Diesel	3	150	2.85	1.02	3.7	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05
Diesel Emergency Fire Pump	1	Diesel	3	300	2.85	1.02	2.6	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05

Table 10b: Total Daily Criteria Pollutant Emissions from Stationary Engine

Function	Number of Engines	Engine Characteristics		Hr/Day	Criteria Pollutant Exhaust Emissions (lb/day)					
		BHp	Op Load		NOx	VOC	CO	SOx	PM10	PM2.5
Diesel Grinders	1	100	95%	4	0.22	0.04	3.10	0.00	0.01	0.01
Diesel Screens	1	100	95%	4	0.22	0.04	3.10	0.00	0.01	0.01
Diesel Stackers	1	100	95%	4	0.22	0.04	3.10	0.00	0.01	0.01
Diesel Colorizer	0	100	95%	4	0.00	0.00	0.00	0.00	0.00	0.00
Diesel Emergency Generator	1	150	74%	2	1.39	0.50	1.81	0.00	0.07	0.07
Diesel Emergency Fire Pump	1	300	74%	2	2.79	1.00	2.55	0.00	0.15	0.15

Table 10c: Total Annual Criteria Pollutant Emissions from Stationary Engine

Function	Number of Engines	Engine Characteristics		Hr/Yr	Criteria Pollutant Exhaust Emissions (lb/yr)					
		BHp	Op Load		NOx	VOC	CO	SOx	PM10	PM2.5
Diesel Grinders	1	100	95%	1,248	67.96	13.1	967	1.28	2.61	2.61
Diesel Screens	1	100	95%	1,248	67.96	13.1	967	1.28	2.61	2.61
Diesel Stackers	1	100	95%	1,248	67.96	13.1	967	1.28	2.61	2.61
Diesel Colorizer	0	100	95%	1,248	0.00	0	0	0.00	0.00	0.00
Diesel Emergency Generator	1	150	74%	200	139.49	50	181	0.24	7.34	7.34
Diesel Emergency Fire Pump	1	300	74%	200	278.97	100	255	0.48	14.7	14.7

Table 10d: Stationary Engine - GHG Emissions

Function	Number of Engines	Engine Characteristics		Hr/Yr	Fuel (gal/yr)	CO2 (MT/yr)	CH4 (kg/yr)	N2O (kg/yr)	CO2e (MT/Yr)
		BHp	Op Load						
Diesel Grinders	1	100	95%	1,248	6,058	61.8	0.0025	0.0005	61.8
Diesel Screens	1	100	95%	1,248	6,058	61.8	0.0025	0.0005	61.8
Diesel Stackers	1	100	95%	1,248	6,058	61.8	0.0025	0.0005	61.8
Diesel Colorizer	0	100	95%	1,248	0	0.0	0.0000	0.0000	0.0
Diesel Emergency Generator	1	150	74%	200	1,134	11.6	0.0005	0.0001	11.6
Diesel Emergency Fire Pump	1	300	74%	200	2,269	23.2	0.0009	0.0002	23.2

Table 10e: Brake Specific Fuel Consumption (BSFC) Conversion - Diesel

Parameter	Value	Unit of Measure	Basis
Brake Specific Fuel Consumption	7,000	btu/hp-hr	Per EPA AP-42 Table 3.3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
Brake Specific Fuel Consumption	0.3602	lb/hp-hr	calculated

Table 10f: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

Table 10g: CO2 Emission Factors[2]

Fuel	HHV (MMBtu/gal)	Default CO2 EF	CO2 EF (kg/gal)	Default CH4 EF	CH4 EF (kg/gal)	Default N2O EF	N2O EF (kg/gal)
Diesel	0.138	73.96	10.20648	3.00E-03	4.14E-04	6.00E-04	8.28E-05

Data and Parameters

Operating Hours	4	hours/day
Operating Days	312	day/yr
Emergency Engine Operating Hours	2	hours/day
Emergency Engine Operating Days	100	day/yr
Conversion	454	gram/lb
Conversion	1,000,000	gm/MT
Conversion	1,000	Kg/MT
Conversion	1,000	gram/Kg

Notes:

1. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
2. Ref: 40 CFR 98, Subpart C, Tables C-1 and C-2

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Table 11: Summary of Criteria Pollutant and GHG Emissions from Composting Activities

Table 11a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
5. Grinding and Screening	---	---	---	---	0.21	0.03
6. Material Handling	---	---	---	---	0.07	0.01
7. Wind Erosion	---	---	---	---	0.34	0.14
8. Composting VOC	---	21.21	---	---	---	---
10. Stationary Engines	4.84	1.62	13.66	0.02	0.25	0.25
Total	4.84	22.83	13.66	0.02	0.87	0.43

Table 11b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
5. Grinding and Screening	---	---	---	---	66.6	9.99
6. Material Handling	---	---	---	---	22.3	3.38
7. Wind Erosion	---	---	---	---	125	50.0
8. Composting VOC	---	7,740	---	---	---	---
10. Stationary Engines	622	189	3,337	4.6	29.9	29.9
Total (lb/yr)	622	7,929	3,337	4.6	244	93
Total (TPY)	0.31	3.96	1.67	0.0023	0.12	0.047

Table 11c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	CO2e (MT/Yr)
9. Composting GHG	N/A	36	2.72	1,737
10. Stationary Engines	220	0.0089	0.0018	220
Total (MT/yr)	220	36	2.72	1,957

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Table 12: TAC from Composting Dust

Table 12a: Material Handling and Wind Erosion Dust Emissions (PM10)

Source	lb/hr	lb/yr
5. Grinding and Screening	0.02	66.60
6. Material Handling	0.01	22.35
7. Wind Erosion	0.01	124.94
Total PM10	0.04	213.89

Table 12b: TAC from Material Handling and Wind Erosion

TAC	CAS	Concentration[1, 2] (lb/lb Dust)	Total TAC Emissions		Grinding and Screening TAC Emissions		Material Handling TAC Emissions		Wind Erosion TAC Emissions	
			(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)
Arsenic	7440-38-2	6.20E-06	2.65E-07	1.33E-03	1.32E-07	4.13E-04	4.44E-08	1.39E-04	8.84E-08	7.75E-04
Cadmium	7440-43-9	2.00E-06	8.55E-08	4.28E-04	4.27E-08	1.33E-04	1.43E-08	4.47E-05	2.85E-08	2.50E-04
Hexavalent Chromium	18540-29-9	2.45E-06	1.05E-07	5.24E-04	5.23E-08	1.63E-04	1.75E-08	5.48E-05	3.49E-08	3.06E-04
Cobalt	7440-48-4	8.80E-06	3.76E-07	1.88E-03	1.88E-07	5.86E-04	6.30E-08	1.97E-04	1.26E-07	1.10E-03
Copper	7440-50-8	6.90E-05	2.95E-06	1.48E-02	1.47E-06	4.60E-03	4.94E-07	1.54E-03	9.84E-07	8.62E-03
Lead	7439-92-1	2.00E-04	8.55E-06	4.28E-02	4.27E-06	1.33E-02	1.43E-06	4.47E-03	2.85E-06	2.50E-02
Manganese	7439-96-5	4.40E-04	1.88E-05	9.41E-02	9.39E-06	2.93E-02	3.15E-06	9.83E-03	6.28E-06	5.50E-02
Mercury	7439-97-6	1.00E-06	4.28E-08	2.14E-04	2.13E-08	6.66E-05	7.16E-09	2.23E-05	1.43E-08	1.25E-04
Nickel	7440-02-0	9.50E-05	4.06E-06	2.03E-02	2.03E-06	6.33E-03	6.80E-07	2.12E-03	1.35E-06	1.19E-02
Selenium	7782-49-2	1.00E-06	4.28E-08	2.14E-04	2.13E-08	6.66E-05	7.16E-09	2.23E-05	1.43E-08	1.25E-04
			Annual Total	0.177	Annual Total	0.055	Annual Total	0.018	Annual Total	0.103

Notes:

1. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm
2. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

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Table 13: Organic TAC Emissions

Table 13a: Organic Storage VOC Emissions

Process Description	(lb/hr)	(lb/yr)
Feedstock Storage	0.46	4,000
Composting	0.37	3,222
Curing	0.04	358
Finished Compost Storage	0.02	160

Table 13b: Feedstock Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	8.25E-03	3.77E-03	33.00
1,4-Dichlorobenzene	4.21E-04	1.92E-04	1.68
2-Propanol (Isopropylalcohol, IPA)	1.13E-03	5.16E-04	4.52
Acetaldehyde	8.96E-02	4.09E-02	358.40
Allyl Chloride (3-Chloropropene)	2.19E-04	1.00E-04	0.88
Benzene	2.24E-04	1.02E-04	0.90
Carbondisulfide	2.18E-04	9.95E-05	0.87
Chloroethane	1.85E-04	8.45E-05	0.74
Chloroform	3.42E-04	1.56E-04	1.37
Ethylbenzene	3.04E-04	1.39E-04	1.22
Ethylene Dichloride (1,2-dichloroethane)	2.84E-04	1.30E-04	1.14
Hexane	7.86E-03	3.59E-03	31.44
Methanol (Methylalcohol)	9.68E-02	4.42E-02	387.20
Methyl Ethyl Ketone (2-butanone)	5.36E-02	2.45E-02	214.40
Naphthalene	2.81E-04	1.28E-04	1.12
Propene (Propylene)	9.45E-05	4.32E-05	0.38
Styrene	2.98E-04	1.36E-04	1.19
Toluene	2.64E-04	1.21E-04	1.06
Vinyl acetate	1.45E-02	6.62E-03	58.00
Xylenes	3.15E-04	1.44E-04	1.26

Table 13c: Composting TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	7.23E-02	2.66E-02	232.95
1,4-Dichlorobenzene	2.22E-04	8.17E-05	0.72
2-Propanol (Isopropylalcohol, IPA)	2.59E-04	9.53E-05	0.83
Acetaldehyde	4.29E-02	1.58E-02	138.22
Allyl Chloride (3-Chloropropene)	1.08E-04	3.97E-05	0.35
Benzene	1.60E-04	5.88E-05	0.52
Carbondisulfide	3.74E-04	1.38E-04	1.21
Chloroethane	8.30E-05	3.05E-05	0.27
Chloroform	1.63E-04	6.00E-05	0.53
Ethylbenzene	3.50E-04	1.29E-04	1.13
Ethylene Dichloride (1,2-dichloroethane)	5.37E-04	1.98E-04	1.73
Hexane	3.18E-04	1.17E-04	1.02
Methanol (Methylalcohol)	4.88E-02	1.79E-02	157.23
Methyl Ethyl Ketone (2-butanone)	7.82E-02	2.88E-02	251.96
Naphthalene	7.14E-04	2.63E-04	2.30
Propene (Propylene)	5.89E-03	2.17E-03	18.98
Styrene	3.53E-04	1.30E-04	1.14
Toluene	6.30E-04	2.32E-04	2.03
Vinyl acetate	3.01E-03	1.11E-03	9.70
Xylenes	4.36E-04	1.60E-04	1.40

Table 13d: Curing TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	1.08E-01	4.41E-03	38.66
1,4-Dichlorobenzene	6.10E-04	2.49E-05	0.22
2-Propanol (Isopropylalcohol, IPA)	7.37E-04	3.01E-05	0.26
Acetaldehyde	2.83E-02	1.16E-03	10.13
Allyl Chloride (3-Chloropropene)	8.75E-04	3.58E-05	0.31
Benzene	5.42E-04	2.22E-05	0.19
Carbondisulfide	1.30E-03	5.31E-05	0.47
Chloroethane	2.68E-04	1.10E-05	0.10
Chloroform	4.99E-04	2.04E-05	0.18
Ethylbenzene	8.06E-04	3.29E-05	0.29
Ethylene Dichloride (1,2-dichloroethane)	5.78E-04	2.36E-05	0.21
Hexane	6.42E-04	2.62E-05	0.23
Methanol (Methylalcohol)	3.07E-02	1.25E-03	10.99
Methyl Ethyl Ketone (2-butanone)	3.77E-02	1.54E-03	13.50
Naphthalene	1.12E-03	4.58E-05	0.40
Propene (Propylene)	3.21E-02	1.31E-03	11.49
Styrene	6.34E-04	2.59E-05	0.23
Toluene	2.54E-03	1.04E-04	0.91
Vinyl acetate	7.67E-04	3.13E-05	0.27
Xylenes	1.24E-03	5.07E-05	0.44

Table 13e: Finished Compost Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	4.86E-02	8.88E-04	7.78
1,4-Dichlorobenzene	3.56E-03	6.50E-05	0.57
2-Propanol (Isopropylalcohol, IPA)	1.46E-03	2.67E-05	0.23
Acetaldehyde	1.86E-02	3.40E-04	2.98
Allyl Chloride (3-Chloropropene)	1.86E-03	3.40E-05	0.30
Benzene	1.89E-03	3.45E-05	0.30
Carbondisulfide	7.75E-03	1.42E-04	1.24
Chloroethane	1.56E-03	2.85E-05	0.25
Chloroform	2.89E-03	5.28E-05	0.46
Ethylbenzene	2.57E-03	4.69E-05	0.41
Ethylene Dichloride (1,2-dichloroethane)	2.40E-03	4.38E-05	0.38
Hexane	2.09E-03	3.82E-05	0.33
Methanol (Methylalcohol)	7.77E-04	1.42E-05	0.12
Methyl Ethyl Ketone (2-butanone)	1.75E-03	3.20E-05	0.28
Naphthalene	3.11E-03	5.68E-05	0.50
Propene (Propylene)	6.87E-02	1.25E-03	10.99
Styrene	2.53E-03	4.62E-05	0.40
Toluene	6.96E-03	1.27E-04	1.11
Vinyl acetate	2.09E-03	3.82E-05	0.33
Xylenes	5.15E-03	9.41E-05	0.82

Notes:

1. Speciation profile from BAAQMD Permit Handbook, Section 11.15

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Table 14: NH3 Emissions

Table 14a: NH3 Emissions

Process Unit	Annual Throughput (ton/yr)	Daily Throughput (ton/day)	Emission Factor (lb/ton)	Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Feedstock Storage	10,000	32	0.020 lb/ton/day	0.05	400
Composting + Curing	10,000	32	0.16 lb/ton	0.18	1,560
Finished Compost Storage	8,000	26	0.0004 lb/ton	0.0003	3

Assumed Percentage of Composting + Curing to Composting:	90%	Assumed same as percent of VOC emissions

Table 14b: Colorant Application Ammonia Emissions[1]

Equipment	Annual Throughput (ton/yr)	Hourly Throughput (ton/hr)	Ammonia Emissions (lb/hr)	Ammonia Emissions (lb/yr)
Colorizer	0	0.0	0.00	0

	lb/hr	lb/yr
Total Ammonia Emissions:	**0.2241**	**1,963**

1. Ammonia emissions may occur at the colorizer or from the storage piles. No attempt has been made to determine the actual emission point.

Data and Parameters

Daily Hours of Emissions	24	hr/day	
Days of feedstock storage	2	days	
Annual hours of operation	8,760	hr/yr	
Bulk density - mulch	600	lb/cy	Average per Google AI
Conversion	2000	lb/ton	Constant
Application rate	6.5	lbs/cy	Google AI, max of listed range
Ammonia Concentration	0.5%	by weight	SDS

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Table 15: Stationary Diesel Engine TAC Emissions

Table 15: Stationary Diesel Engine TAC Emissions

Vehicle	PM10 Emissions (lb/hr)	PM10 Emissions (lb/day)	PM10 Emissions (lb/yr)
Diesel Grinders	0.002	8.38E-03	2.61
Diesel Screens	0.002	8.38E-03	2.61
Diesel Stackers	0.002	8.38E-03	2.61
Diesel Colorizer	0.000	0.00E+00	0.00
Diesel Emergency Generator	0.037	7.34E-02	7.34
Diesel Emergency Fire Pump	0.073	1.47E-01	14.68
Total PM10 = DPM	**0.116**	**2.45E-01**	**29.87**

Data and Parameters

Operating Hours	4	hours/day
Operating Days	312	day/yr
Emergency Engine Operating Hours	2	hours/day
Emergency Engine Operating Days	100	day/yr

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Table 16: Summary of TAC Emissions from Composting Activities

Table 16a: Summary of TAC Emissions from Composting Activities, lb/yr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine	Emergency Generator	Fire Pump	Total
Arsenic	7440382	4.13E-04	1.39E-04	7.75E-04	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	0.00E+00	0.00E+00	1.33E-03
Cadmium	7440439	1.33E-04	4.47E-05	2.50E-04	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	0.00E+00	0.00E+00	4.28E-04
Hexavalent Chromium	18540299	1.63E-04	5.48E-05	3.06E-04	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	0.00E+00	0.00E+00	5.24E-04
Cobalt	7440484	5.86E-04	1.97E-04	1.10E-03	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	0.00E+00	0.00E+00	1.88E-03
Copper	7440508	4.60E-03	1.54E-03	8.62E-03	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	0.00E+00	0.00E+00	1.48E-02
Lead	7439921	1.33E-02	4.47E-03	2.50E-02	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	0.00E+00	0.00E+00	4.28E-02
Manganese	7439965	2.93E-02	9.83E-03	5.50E-02	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	0.00E+00	0.00E+00	9.41E-02
Mercury	7439976	6.66E-05	2.23E-05	1.25E-04	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	0.00E+00	0.00E+00	2.14E-04
Nickel	7440020	6.33E-03	2.12E-03	1.19E-02	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	0.00E+00	0.00E+00	2.03E-02
Selenium	7782492	6.66E-05	2.23E-05	1.25E-04	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	0.00E+00	0.00E+00	2.14E-04
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	3.30E+01	2.33E+02	3.87E+01	7.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.12E+02
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	1.68E+00	7.15E-01	2.18E-01	5.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E+00
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	4.52E+00	8.34E-01	2.64E-01	2.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.85E+00
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	3.58E+02	1.38E+02	1.01E+01	2.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+02
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	8.76E-01	3.48E-01	3.13E-01	2.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+00
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	8.96E-01	5.16E-01	1.94E-01	3.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E+00
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	8.72E-01	1.21E+00	4.65E-01	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.78E+00
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	7.40E-01	2.67E-01	9.59E-02	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E+00
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	1.37E+00	5.25E-01	1.79E-01	4.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E+00
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	1.22E+00	1.13E+00	2.89E-01	4.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E+00
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	1.14E+00	1.73E+00	2.07E-01	3.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.46E+00
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	3.14E+01	1.02E+00	2.30E-01	3.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E+01
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	3.87E+02	1.57E+02	1.10E+01	1.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E+02
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	2.14E+02	2.52E+02	1.35E+01	2.80E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E+02
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	1.12E+00	2.30E+00	4.01E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E+00
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	3.78E-01	1.90E+01	1.15E+01	1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.18E+01
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	1.19E+00	1.14E+00	2.27E-01	4.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.96E+00
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	1.06E+00	2.03E+00	9.09E-01	1.11E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.11E+00
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	5.80E+01	9.70E+00	2.75E-01	3.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.83E+01
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	1.26E+00	1.40E+00	4.44E-01	8.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.93E+00
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	4.00E+02	1.40E+03	1.56E+02	3.04E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E+03
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E+00	2.61E+00	2.61E+00	0.00E+00	7.34E+00	1.47E+01	2.99E+01

Table 16b: Summary of TAC Emissions from Composting Activities, lb/hr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine	Emergency Generator	Fire Pump	Total
Arsenic	7440382	1.32E-07	4.44E-08	8.84E-08	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	0.00E+00	0.00E+00	2.65E-07
Cadmium	7440439	4.27E-08	1.43E-08	2.85E-08	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	0.00E+00	0.00E+00	8.55E-08
Hexavalent Chromium	18540299	5.23E-08	1.75E-08	3.49E-08	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	0.00E+00	0.00E+00	1.05E-07
Cobalt	7440484	1.88E-07	6.30E-08	1.26E-07	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	0.00E+00	0.00E+00	3.76E-07
Copper	7440508	1.47E-06	4.94E-07	9.84E-07	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	0.00E+00	0.00E+00	2.95E-06
Lead	7439921	4.27E-06	1.43E-06	2.85E-06	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	0.00E+00	0.00E+00	8.55E-06
Manganese	7439965	9.39E-06	3.15E-06	6.28E-06	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	0.00E+00	0.00E+00	1.88E-05
Mercury	7439976	2.13E-08	7.16E-09	1.43E-08	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	0.00E+00	0.00E+00	4.28E-08
Nickel	7440020	2.03E-06	6.80E-07	1.35E-06	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	0.00E+00	0.00E+00	4.06E-06
Selenium	7782492	2.13E-08	7.16E-09	1.43E-08	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	0.00E+00	0.00E+00	4.28E-08
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	3.77E-03	2.66E-02	4.41E-03	8.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.57E-02
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	1.92E-04	8.17E-05	2.49E-05	6.50E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E-04
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	5.16E-04	9.53E-05	3.01E-05	2.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.68E-04
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	4.09E-02	1.58E-02	1.16E-03	3.40E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.82E-02
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	1.00E-04	3.97E-05	3.58E-05	3.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-04
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	1.02E-04	5.88E-05	2.22E-05	3.45E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-04
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	9.95E-05	1.38E-04	5.31E-05	1.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E-04
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	8.45E-05	3.05E-05	1.10E-05	2.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-04
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	1.56E-04	6.00E-05	2.04E-05	5.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.89E-04
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	1.39E-04	1.29E-04	3.29E-05	4.69E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.47E-04
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	1.30E-04	1.98E-04	2.36E-05	4.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E-04
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	3.59E-03	1.17E-04	2.62E-05	3.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-03
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	4.42E-02	1.79E-02	1.25E-03	1.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.34E-02
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	2.45E-02	2.88E-02	1.54E-03	3.20E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.48E-02
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	1.28E-04	2.63E-04	4.58E-05	5.68E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.94E-04
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	4.32E-05	2.17E-03	1.31E-03	1.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.78E-03
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	1.36E-04	1.30E-04	2.59E-05	4.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-04
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	1.21E-04	2.32E-04	1.04E-04	1.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.83E-04
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	6.62E-03	1.11E-03	3.13E-05	3.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.80E-03
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	1.44E-04	1.60E-04	5.07E-05	9.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.49E-04
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	4.57E-02	1.60E-01	1.78E-02	3.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E-01
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-03	2.09E-03	2.09E-03	0.00E+00	3.67E-02	7.34E-02	1.16E-01

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Table 17: Onroad Mobile Sources - Vehicle Information

Table 17: Vehicle Information and Mileage Calculation

Vehicle Type	Vehicle Use	Number of Vehicles per Day	Vehicle Weight (lb)			Fuel	Days	One-way Trips per Vehicle per Day	One-way Trips per Year	One-way Onsite Trip Mileage	One-way Offsite Trip Mileage	Total One-way Trip Mileage	Onsite Total VMT/yr	Offsite Total VMT/yr	Total VMT/yr
			Gross	Empty	Average										
LDT1	Employee	8	3,750	3,750	3,750	Gasoline	312	2	4,992	0.00	15	15.00	0	74,880	74,880
LHD2	Delivery of Office Supplies	1	15,006	8,200	11,603	Diesel	312	2	624	0.20	15	15.20	125	9,360	9,485
T7 Tractor	Ship Raw Material	14	47,000	23,000	35,000	Diesel	312	2	8,736	0.20	5	5.20	1,747	43,680	45,427
T7 Tractor	Ship Finished Compost	3	63,000	23,000	43,000	Diesel	312	2	1,872	0.20	15	15.20	374	28,080	28,454

Assuming 12 cu yd per raw material truck, 20 cu yd per compost product truck

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Table 18: Onroad Mobile Sources Exhaust Emissions

Table 18a: Onroad Mobile Sources - Criteria Pollutant Exhaust Emissions

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)	Total Running Exhaust (lb/yr)	Total Idle (lb/yr)	Total Start (lb/yr)	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)	Onsite Emissions (lb/day)	Offsite Emissions (lb/day)
NOx	LDT1	0.266	0.000	0.420	43.86	0.00	4.62	48.47	0.00	48.47	0.16	0.00E+00	1.55E-01
	LHD2	0.742	1.641	0.000	15.51	1.13	0.00	16.63	0.22	16.42	0.05	7.01E-04	5.26E-02
	T7 Tractor	0.927	5.946	5.191	150.87	69.47	121.30	341.64	9.81	331.83	1.09	3.14E-02	1.06E+00
VOC	LDT1	0.073	0.000	0.660	12.03	0.00	7.26	19.28	0.00	19.28	0.06	0.00E+00	6.18E-02
	LHD2	0.102	0.120	0.000	2.13	0.08	0.00	2.21	0.03	2.18	0.01	9.33E-05	6.99E-03
	T7 Tractor	0.010	0.635	0.000	1.57	7.42	0.00	8.98	0.26	8.72	0.03	8.27E-04	2.80E-02
CO	LDT1	4.803	0.000	6.799	792.20	0.00	74.76	866.96	0.00	866.96	2.78	0.00E+00	2.78E+00
	LHD2	0.241	0.996	0.000	5.04	0.68	0.00	5.72	0.08	5.65	0.02	2.41E-04	1.81E-02
	T7 Tractor	0.075	9.364	0.000	12.17	109.40	0.00	121.56	3.49	118.07	0.39	1.12E-02	3.78E-01
SOx	LDT1	0.002	0.000	0.000	0.27	0.00	0.00	0.27	0.00	0.27	0.00	0.00E+00	8.70E-04
	LHD2	0.002	0.001	0.000	0.04	0.00	0.00	0.05	0.00	0.04	0.00	1.90E-06	1.43E-04
	T7 Tractor	0.005	0.005	0.000	0.84	0.06	0.00	0.90	0.03	0.87	0.00	8.28E-05	2.80E-03
PM10	LDT1	0.004	0.000	0.003	0.70	0.00	0.04	0.74	0.00	0.74	0.00	0.00E+00	2.36E-03
	LHD2	0.020	0.030	0.000	0.43	0.02	0.00	0.45	0.01	0.44	0.00	1.88E-05	1.41E-03
	T7 Tractor	0.009	0.003	0.000	1.41	0.03	0.00	1.44	0.04	1.40	0.00	1.33E-04	4.49E-03
PM2.5	LDT1	0.004	0.000	0.003	0.64	0.00	0.03	0.68	0.00	0.68	0.00	0.00E+00	2.17E-03
	LHD2	0.020	0.029	0.000	0.41	0.02	0.00	0.43	0.01	0.42	0.00	1.80E-05	1.35E-03
	T7 Tractor	0.008	0.002	0.000	1.35	0.03	0.00	1.38	0.04	1.34	0.00	1.27E-04	4.30E-03

Table 18b: Onroad Mobile Sources - Fugitive VOC Emissions

Pollutant	Vehicle Type	Hot Soak EF (g/trip)	Running Loss EF (g/mile)	Diurnal EF (g/veh/day)	Total Hot Soak (lb/yr)	Total Running Loss (lb/yr)	Total Diurnal (lb/yr)	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)
VOC	LDT1	0.37	0.68	4.24	4.0	112.7	23.3	140.01	0.00	140.01	0.45
	LHD2	-	-	-	-	-	-	-	-	-	-
	T7 Tractor	-	-	-	-	-	-	-	-	-	-

Table 18c: Onroad Mobile Sources - Fugitive PM Emissions

Pollutant	Vehicle Type	Tire Wear (g/mile)	Brake Wear (g/mile)	Total Tire Wear (lb/yr)	Total Brake Wear	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)
PM10	LDT1	0.0080	0.0085	1.32	1.40	2.72	0.00	2.72	0.009
	LHD2	0.0120	0.0910	0.25	1.90	2.15	0.03	2.12	0.007
	T7 Tractor	0.0360	0.0874	5.86	14.22	20.08	0.58	19.50	0.064
PM2.5	LDT1	0.0020	0.0030	0.33	0.49	0.82	0.00	0.82	0.003
	LHD2	0.0030	0.0319	0.06	0.67	0.73	0.01	0.72	0.002
	T7 Tractor	0.0090	0.0306	1.46	4.98	6.44	0.18	6.26	0.021

Table 18d: Summary of Criteria Pollutant Emissions from Onroad Operations Vehicles

Type	NO_x (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SO_x (lb/yr)	PM_{10} (lb/yr)	$PM_{2.5}$ (lb/yr)
Exhaust	406.75	30.48	994.24	1.22	2.62	2.48
Fugitive	---	140.01	---	---	24.94	7.99
Total (Lb/Yr)	406.75	170.49	994.24	1.22	27.57	10.47
Total (Lb/day)	1.30	0.55	3.19	0.00	0.09	0.03
Total (TPY)	0.20	0.09	0.50	0.001	0.01	0.01

Table 18e: Onroad Mobile Sources - Greenhouse Gas Exhaust Emissions

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)	Total Running Exhaust (MT/yr)	Total Idle (MT/yr)	Total Start (MT/yr)	Total Emissions (MT/yr)
CO2	LDT1	377.335	0.000	90.387	28.3	0.00E+00	4.51E-01	29
	LHD2	636.055	212.543	0.000	6.0	6.63E-02	0.00E+00	6.10
	T7 Tractor	1544.504	1410.663	0.000	114.1	7.48E+00	0.00E+00	122
CH4	LDT1	0.016	0.000	0.101	0.0	0.00E+00	5.03E-04	0
	LHD2	0.005	0.006	0.000	0.0	1.74E-06	0.00E+00	0.00
	T7 Tractor	0.000	0.029	0.000	0.0	1.56E-04	0.00E+00	0
N2O	LDT1	0.017	0.000	0.029	0.0	0.00E+00	1.47E-04	0
	LHD2	0.103	0.034	0.000	0.0	1.07E-05	0.00E+00	0.00
	T7 Tractor	0.400	0.227	0.000	0.0	1.21E-03	0.00E+00	0
HFC	LDT1	0.000	N/A	N/A	0.0	N/A	N/A	0
	LHD2	0.001	N/A	N/A	0.0	N/A	N/A	0.00
	T7 Tractor	0.001	N/A	N/A	0.0	N/A	N/A	0
CO2e	LDT1							29
	LHD2							6.48
	T7 Tractor							131
							Total	**166**

Table 18f: GHG Emissions from Onroad Mobile Source Activity

CO_2	CH_4	N_2O	Total CO_2e
(MT/Yr)	(Kg/Yr)	(Kg/Yr)	(MT/Yr)
156	1.93	33.18	166

Table 18g: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265
HFC[1]	12,400

1. Conservatively using GWP for HFC-23, the HFC with the highest GWP

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 19: Onroad Mobile Source Paved Road Dust

Table 19a: Paved Road PM_{10} Emission Factors[1]

Vehicle	Average Vehicle Weight (ton)	Pollutant	Freeway (lb/VMT)	Major (lb/VMT)	Collector (lb/VMT)	Local (lb/VMT)	Rural/Onsite (lb/VMT)
		sL $(g/m^2)^2$ -->	0.020	0.035	0.035	0.320	1.600
Fleet Average	2.40	PM10	1.48E-04	2.46E-04	2.46E-04	1.84E-03	7.97E-03
		PM2.5	3.70E-05	6.15E-05	6.15E-05	4.61E-04	1.99E-03

$E = k\ (sL)^{0.91} \times (W)^{1.02} * C_f$

Variable	Value	UOM
k (PM10)	1.00	g/VMT
k(PM2.5)	0.25	g/VMT
Rain Days[3]	49	day/yr
C_f	0.966	

Table 19b: Fraction of VMT by Functional Type of Roadway[2]

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 4

Table 19c: Summary of Onroad VMT by Phase and Road Type

EMFAC Vehicle Type	Activity	Unit of Measure	Freeway	Major	Collector	Local	Rural	Total Offsite	Onsite	Total VMT
LDT1	Employee	VMT/day	79.80	93.53	66.22	0.48	4.00	244	0	244
		VMT/Yr	24,898	29,181	20,659	150	1,248	74,880	0	74,880
LHD2	Delivery of Office Supplies	VMT/day	9.98	11.69	8.28	0.06	0.50	31	0.4	31
		VMT/Yr	3,112	3,648	2,582	19	156	9,360	125	9,485
T7 Tractor	Ship Raw Material	VMT/day	46.55	54.56	38.63	0.28	7.00	147	5.6	153
		VMT/Yr	14,524	17,022	12,051	87	2,184	43,680	1,747	45,427
T7 Tractor	Ship Finished Compost	VMT/day	29.93	35.07	24.83	0.18	1.50	92	1.2	93
		VMT/Yr	9,337	10,943	7,747	56	468	28,080	374	28,454

Table 19d: Entrained Road Dust Emissions from Travel on Paved Roads (lb/day)

EMFAC Vehicle	Activity	Pollutant	Freeway	Major	Collector	Local	Rural	Onsite	Total
LDT1	Employee	PM10	1.18E-02	2.30E-02	1.63E-02	8.85E-04	3.19E-02	0.00E+00	8.39E-02
		PM2.5	2.95E-03	5.75E-03	4.07E-03	2.21E-04	7.97E-03	0.00E+00	2.10E-02
LHD2	Delivery of Office Supplies	PM10	1.47E-03	2.88E-03	2.04E-03	1.11E-04	3.99E-03	3.19E-03	1.37E-02
		PM2.5	3.69E-04	7.19E-04	5.09E-04	2.77E-05	9.97E-04	7.97E-04	3.42E-03
T7 Tractor	Ship Raw Material	PM10	6.88E-03	1.34E-02	9.50E-03	5.16E-04	5.58E-02	4.47E-02	1.31E-01
		PM2.5	1.72E-03	3.36E-03	2.38E-03	1.29E-04	1.40E-02	1.12E-02	3.27E-02
T7 Tractor	Ship Finished Compost	PM10	4.42E-03	8.63E-03	6.11E-03	3.32E-04	1.20E-02	9.57E-03	4.10E-02
		PM2.5	1.11E-03	2.16E-03	1.53E-03	8.30E-05	2.99E-03	2.39E-03	1.03E-02
Total	All	PM10	0.02	0.05	0.03	0.00	0.10	0.06	0.27
		PM2.5	0.01	0.01	0.01	0.00	0.03	0.01	0.07

Table 19e: Entrained Road Dust Emissions from Travel on Paved Roads (lb/yr)

EMFAC Vehicle	Activity	Pollutant	Freeway	Major	Collector	Local	Rural	Onsite	Total
LDT1	Employee	PM10	3.68	7.18	5.08	0.28	9.95	0.00	26.17
		PM2.5	0.92	1.80	1.27	0.07	2.49	0.00	6.54
LHD2	Delivery of Office Supplies	PM10	0.46	0.90	0.64	0.03	1.24	1.00	4.27
		PM2.5	0.12	0.22	0.16	0.01	0.31	0.25	1.07
T7 Tractor	Ship Raw Material	PM10	2.15	4.19	2.97	0.16	17.42	13.93	40.81
		PM2.5	0.54	1.05	0.74	0.04	4.35	3.48	10.20
T7 Tractor	Ship Finished Compost	PM10	1.38	2.69	1.91	0.10	3.73	2.99	12.80
		PM2.5	0.35	0.67	0.48	0.03	0.93	0.75	3.20
Total	All	PM10	7.67	14.96	10.59	0.58	32.34	17.91	84.05
		PM2.5	1.92	3.74	2.65	0.14	8.09	4.48	21.01

Notes:

1. Methodology per AP-42, 13.2.1 Paved Roads
2. SJVAPCD, Appendix A: Comments and Responses Rule 9510 and 3180 December 15, 2005
3. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
4. Rural is assumed to be 0.25 miles per one-way trip.

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 20: Fugitive Dust From Travel on Unpaved Roads

Table 20a: Unpaved Road Emission Factors[1]

EMFAC Vehicle Type	Activity	PM Emission Factors[2,3] (lb/VMT)	
		PM10	PM2.5
LDT1	Employee	0.6895	0.0690
LHD2	Delivery of Office Supplies	1.1462	0.1146
T7 Tractor	Ship Raw Material	1.8839	0.1884
T7 Tractor	Ship Finished Compost	2.0667	0.2067

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[4]	24.3	day/year

Table 20b: Vehicle Miles Travelled for Transport of Personnel, Supplies, Materials and Product

EMFAC Vehicle Type	Activity	Vehicle Weight (ton)			No. of days	Veh/day	Trips/Day	Trips/Year	One-way Miles per Trip	Total VMT[5] (mi/day)	Total VMT[5] (mi/yr)
		Gross	Empty	Average							
LDT1	Employee	1.88	1.88	1.88	312	8	2	4,992	0.00	0	0
LHD2	Delivery of Office Supplies	7.50	4.10	5.80	312	1	2	624	0.20	0.4	125
T7 Tractor	Ship Raw Material	23.50	11.50	17.50	312	14	2	8,736	0.20	5.6	1,747
T7 Tractor	Ship Finished Compost	31.50	11.50	21.50	312	3	2	1,872	0.20	1.2	374

Table 20c: Entrained Road Dust from Unpaved Roads

EMFAC Vehicle Type	Activity	Uncontrolled (lb/day)		Controlled (lb/day)		Uncontrolled (lb/yr)		Controlled (lb/yr)	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
LDT1	Employee	0.00	0.00	0.00	0.00	0	0	0	0
LHD2	Delivery of Office Supplies	0.46	0.05	0.12	0.01	143	14	36	4
T7 Tractor	Ship Raw Material	10.55	1.05	2.66	0.27	3,292	329	829	83
T7 Tractor	Ship Finished Compost	2.48	0.25	0.62	0.06	774	77	195	19
Total		13.5	1.3	3.40	0.34	4,208	421	1,061	106
Total (ton/yr)						2.1	0.2	0.5	0.1

Overall Control Efficiency[6]	75%
Control for watering	55%
Control for vehicle speed	44%

Notes:

1. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
2. MISCELLANEOUS PROCESS METHODOLOGY 7.9 Entrained Road Travel, Paved Road Dust (Revised and updated, November 2016), https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2016.pdf
3. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
4. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
5. Assume onsite roads are unpaved, offsite roads are paved.
6. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

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Table 21: Offroad Equipment - Criteria Pollutant and GHG Emissions

Table 21a: Emission Factors[1]

Unit Count	Offroad Equipment	Typical Model (or Equivalent)	Engine Tier and Information		NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
			Tier	BHp									
1	Fuel Truck	Freightliner M2106	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Tractors	Massey Fergusen, 7619	4f	200	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Excavator	Caterpillar 326	4f	201	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
2	Loader	Caterpillar, 962K	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
0	Windrow Turner	Scarab	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Water Truck	International, 7400 6x4	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Sweeper Truck	Freightliner M2	4f	240	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083

Table 21b: Total Criteria Pollutant Emissions from Offroad Equipment

Unit	Offroad Equipment	Typical Model	Engine Characteristics			Criteria Pollutant Exhaust Emissions (lb/day)					
			BHp	Op Load	Hr/Day	NOx	VOC	CO	SOx	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	350	0.38	1.00	0.09	0.04	0.76	0.00	0.00	0.00
1	Tractors	Massey Fergusen, 7619	200	0.37	4.00	0.20	0.09	1.70	0.00	0.01	0.01
1	Excavator	Caterpillar 326	201	0.38	4.00	0.20	0.09	1.75	0.00	0.01	0.01
2	Loader	Caterpillar, 962K	250	0.36	4.00	0.48	0.22	4.13	0.01	0.02	0.02
0	Windrow Turner	Scarab	250	0.42	4.00	0.00	0.00	0.00	0.00	0.00	0.00
1	Water Truck	International, 7400 6x4	350	0.38	4.00	0.35	0.16	3.05	0.01	0.01	0.01
1	Sweeper Truck	Freightliner M2	240	0.46	4.00	0.29	0.14	2.53	0.00	0.01	0.01
Total Emissions from offroad equipment (lb/day)						1.61	0.75	13.92	0.03	0.05	0.05

Table 21c: Total Criteria Pollutant Emissions from Offroad Equipment

Unit	Offroad Equipment	Typical Model	Engine Characteristics			Criteria Pollutant Exhaust Emissions (lb/yr)					
			BHp	Op Load[1]	Hr/Yr	NOx	VOC	CO	SOx	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	350	0.38	312	27.44	12.81	237.85	0.45	0.91	0.91
1	Tractors	Massey Fergusen, 7619	200	0.37	1,248	61.08	28.50	529.35	1.00	2.04	2.04
1	Excavator	Caterpillar 326	201	0.38	1,248	63.04	29.42	546.38	1.03	2.10	2.10
2	Loader	Caterpillar, 962K	250	0.36	1,248	148.57	69.33	1,287.62	2.43	4.95	4.95
0	Windrow Turner	Scarab	250	0.42	1,248	0.00	0.00	0.00	0.00	0.00	0.00
1	Water Truck	International, 7400 6x4	350	0.38	1,248	109.78	51.23	951.41	1.79	3.66	3.66
1	Sweeper Truck	Freightliner M2	240	0.46	1,248	91.12	42.52	789.74	1.49	3.04	3.04
Total Emissions from offroad equipment (lb/yr)						501.04	233.82	4,342.35	8.19	16.70	16.70
Total Emissions from offroad equipment (TPY)						0.25	0.12	2.17	0.00	0.01	0.01

Table 21d: Offroad Equipment - GHG Emissions[2]

Unit Count	Offroad Equipment	Typical Model (or Equivalent)	Engine Information				Fuel (gal/yr)	CO2 (MT/yr)	CH4 (kg/yr)	N2O (kg/yr)	CO2e (MT/Yr)
			Tier	BHp	Hr/Yr	Op Load[1]					
1	Fuel Truck	Freightliner M2106	4f	350	312	0.38	2,120	22	0.88	0.18	22
1	Tractors	Massey Fergusen, 7619	4f	200	1,248	0.37	4,719	48	1.95	0.39	48
1	Excavator	Caterpillar 326	4f	201	1,248	0.38	4,870	50	2.02	0.40	50
2	Loader	Caterpillar, 962K	4f	250	1,248	0.36	11,478	117	4.75	0.95	118
0	Windrow Turner	Scarab	4f	250	1,248	0.42	0	0	0.00	0.00	0
1	Water Truck	International, 7400 6x4	4f	350	1,248	0.38	8,481	87	3.51	0.70	87
1	Sweeper Truck	Freightliner M2	4f	240	1,248	0.46	7,040	72	2.91	0.58	72
Total							38,708	395	16	3.21	396

Table 21e: Brake Specific Fuel Consumption (BSFC) Conversion

Parameter	Value	Unit of Measure	Basis
BSFC	7000	btu/hp-hr	Per EPA AP-42 Table 3,3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
BSFC	0.3602	lb/hp-hr	calculated

Table 21f: Global Warming Potentials, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

Data and Parameters

Operating Days	312	day/yr

Notes:

1. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12
2. Solid, gaseous, liquid and biomass fuels: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule , 30Oct09, 261 pp.
Tables C-1 and C-2 at FR pp. 56409-56410. Revised emission factors for selected fuels: Federal Register (2010) EPA; 40 CFR Part 98; Mandatory Reporting of Greenhouse Gases; Final Rule, 17Dec10, 81 pp.
With Amendments from Memo: Table of Final 2013 Revisions to the Greenhouse Gas Reporting Rule (PDF) to 40 CFR part 98, subpart C: Table C–1 to Subpart C—Default CO2 Emission Factors and High Heat Values for Various Types of Fuel and Table C–2 to Subpart C—Default CH4 and N2O Emission Factors for Various Types of Fuel.

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Table 22: Fugitive Dust From Offroad Equipment Travel on Unpaved Areas and Haul Roads[1]

Table 22a: EPA Predictive Emission Factors for Offroad Equipment[2]

No. of Units	Equipment	Typical	PM Emission Factors[3] (lb/VMT)	
			PM10	PM2.5
1	Fuel Truck	Freightliner M2106	2.1106	0.2111
1	Tractors	Massey Fergusen, 7619	2.1106	0.2111
1	Excavator	Caterpillar 326	2.1106	0.2111
2	Loader	Caterpillar, 962K	2.1106	0.2111
0	Windrow Turner	Scarab	2.1106	0.2111
1	Water Truck[4]	International, 7400 6x4	0.0000	0.0000
1	Sweeper Truck[4]	Freightliner M2	0.0000	0.0000

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[5]	24.3	day/year

Table 22b: Onsite Equipment Tonnage, Operating Hours, and VMT

No. of Units	Equipment Description and Use		GVW (tons)	Empty (tons)	Average (tons)	Operating Hours (hr/day)	Operating Hours (hr/yr)	Ave. Speed (MPH)	Total Travel (VMT/day)	Total Travel (VMT/yr)
1	Fuel Truck	Freightliner M2106	31.5	11.5	22.5	1.0	312	2.0	2.0	624
1	Tractors	Massey Fergusen, 7619	7.9	7.9	22.5	4.0	1,248	0.3	1.2	374
1	Excavator	Caterpillar 326	28.6	28.6	22.5	4.0	1,248	0.3	1.2	374
2	Loader	Caterpillar, 962K	22.5	22.5	22.5	4.0	1,248	0.3	2.4	749
0	Windrow Turner	Scarab	20.0	20.0	22.5	4.0	1,248	0.3	0.0	0
1	Water Truck[4]	International, 7400 6x4	31.5	11.5	22.5	4.0	1,248	3.0	12.0	3,744
1	Sweeper Truck[4]	Freightliner M2	16.5	16.5	22.5	4.0	1,248	3.0	12.0	3,744

Table 22c: Offroad Equipment Unpaved Road Dust Emissions

No. of	Equipment Description and Use		Uncontrolled (lb/day)		Controlled (lb/day)		Uncontrolled (lb/yr)		Controlled (lb/yr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	4.22	0.42	1.06	0.11	1,317	132	332	33
1	Tractors	Massey Fergusen, 7619	2.53	0.25	0.64	0.06	790	79	199	20
1	Excavator	Caterpillar 326	2.53	0.25	0.64	0.06	790	79	199	20
2	Loader	Caterpillar, 962K	5.07	0.51	1.28	0.13	1,580	158	398	40
0	Windrow Turner	Scarab	0.00	0.00	0.00	0.00	0	0	0	0
1	Water Truck[4]	International, 7400 6x4	0.00	0.00	0.00	0.00	0	0	0	0
1	Sweeper Truck[4]	Freightliner M2	0.00	0.00	0.00	0.00	0	0	0	0
Total Dust from Equip. On Unpaved Areas (Lb/Day or Lb/Year)			14.35	1.44	3.62	0.36	4,478	448	1,128	113
Total Dust from Equip. On Unpaved Areas (Ton/Year)			---	---	---	---	2.2	0.2	0.6	0.1

Overall Control Efficiency[6]	75%
Control for watering	55%
Control for vehicle speed	44%

Notes:

1. Although compost surfaces are paved, because the compost processing areas are expected to have compost residuals covering the active surfaces, the unpaved road calculations are used to esti
2. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
3. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
4. Entrained road dust is assumed to be negligible for the water truck due to watering and the sweeper truck due to watering and sweeping.
5. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
6. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2
7. Chow, Judith C., et. al., "Evaluation of Regenerative-air Vacuum Street Sweeping on Geological Contributions to PM10", Journal of the Air & Waste Management Association, published online 06

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Table 23: Summary of Emissions

Table 23a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
18. Onroad Vehicle Exhaust	1.30	0.55	3.19	0.00	0.09	0.03
19. Onroad Vehicle Paved Road Dust	---	---	---	---	0.27	0.07
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	3.40	0.34
21. Offroad Equipment Exhaust	1.61	0.75	13.92	0.03	0.05	0.05
22. Offroad Equipment Unpaved Dust	---	---	---	---	3.62	0.36
Total	2.91	1.30	17.10	0.03	7.43	0.86

Table 23b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
18. Onroad Vehicle Exhaust	407	170	994	1	28	10
19. Onroad Vehicle Paved Road Dust	---	---	---	---	84	21
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	1,061	106
21. Offroad Equipment Exhaust	501	234	4,342	8	17	17
22. Offroad Equipment Unpaved Dust	---	---	---	---	1,128	113
Total	908	404	5,337	9	2,317	267
Total (TPY)	0.45	0.20	2.67	0.00	1.16	0.13

Table 23c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	HFC (MT/yr)	CO2e (MT/Yr)
18. Onroad Vehicle Exhaust	156	0.0019	0.0332	0.0001	166
19. Onroad Vehicle Paved Road Dust	---	---	---	---	---
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	---
21. Offroad Equipment Exhaust	395	0.0160	0.0032	---	396
22. Offroad Equipment Unpaved Dust	---	---	---	---	---
Total	**551**	**0.0180**	**0.0364**	**0.0001**	**563**

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Table 24: Diesel and Gasoline Vehicle TAC Emissions

Table 24a: DPM Emissions

Vehicle	PM10 Emissions (lb/hr)		PM10 Emissions (lb/day)		PM10 Emissions (lb/yr)	
	Onsite Exhaust	Nearsite Exhaust[1,2]	Onsite Exhaust	Nearsite Exhaust[1,2]	Onsite Exhaust	Nearsite Exhaust[1,2]
LHD2	1.88E-05	2.36E-05	1.88E-05	2.36E-05	0.006	0.007
T7 Tractor	1.33E-05	2.24E-05	1.33E-04	2.24E-04	0.04	0.070
Fuel Truck	2.93E-03	0.00E+00	2.93E-03	0	0.91	0
Tractors	1.63E-03	0.00E+00	6.53E-03	0	2.04	0
Excavator	1.68E-03	0.00E+00	6.74E-03	0	2.10	0
Loader	3.97E-03	0.00E+00	1.59E-02	0	4.95	0
Windrow Turner	0.00E+00	0.00E+00	0.00E+00	0	0.00	0
Water Truck	2.93E-03	0.00E+00	1.17E-02	0	3.66	0
Sweeper Truck	2.43E-03	0.00E+00	9.74E-03	0	3.04	0
Total PM10 = DPM	1.56E-02	4.60E-05	5.37E-02	2.48E-04	16.75	0.077

Table 24b: Gasoline Vehicle Mileage and Fuel Consumption

Parameter	Onsite	Near-site[3]
VMT/Day	0.00	4.00
Fuel Consumption (gal/day)	0.000	0.247

Average Fuel Economy Light Truck[4] 16.20 MPG

Table 24c: TAC Emissions from Onroad Gasoline Vehicles

TAC	CAS#	Emission Factor[5] (lb/1000-gal)	Onsite (lb/day)	Near-site (lb/day)	Total (lb/day)	Onsite (lb/yr)	Near-site (lb/yr)	Total lb/yr)	Onsite (lb/hr)	Near-site (lb/hr)	Total (lb/hr)
1,2,4-Trimethylbenzene	95636	5.89E-01	0.000E+00	1.454E-04	1.45E-04	0.000E+00	4.537E-02	4.54E-02	0.00E+00	1.45E-04	1.45E-04
1,3-Butadiene	106990	3.24E-01	0.000E+00	8.000E-05	8.00E-05	0.000E+00	2.496E-02	2.50E-02	0.00E+00	8.00E-05	8.00E-05
Acetaldehyde	75070	1.47E-01	0.000E+00	3.630E-05	3.63E-05	0.000E+00	1.132E-02	1.13E-02	0.00E+00	3.63E-05	3.63E-05
Acrolein	107028	8.25E-02	0.000E+00	2.037E-05	2.04E-05	0.000E+00	6.356E-03	6.36E-03	0.00E+00	2.04E-05	2.04E-05
Benzene	71432	1.57E+00	0.000E+00	3.877E-04	3.88E-04	0.000E+00	1.209E-01	1.21E-01	0.00E+00	3.88E-04	3.88E-04
Chlorine	7782505	4.55E-01	0.000E+00	1.123E-04	1.12E-04	0.000E+00	3.505E-02	3.51E-02	0.00E+00	1.12E-04	1.12E-04
Copper	7440508	3.30E-03	0.000E+00	8.148E-07	8.15E-07	0.000E+00	2.542E-04	2.54E-04	0.00E+00	8.15E-07	8.15E-07
Ethylbenzene	100414	6.42E-01	0.000E+00	1.585E-04	1.59E-04	0.000E+00	4.946E-02	4.95E-02	0.00E+00	1.59E-04	1.59E-04
Formaldehyde	50000	1.01E+00	0.000E+00	2.494E-04	2.49E-04	0.000E+00	7.781E-02	7.78E-02	0.00E+00	2.49E-04	2.49E-04
Hexane	110543	9.42E-01	0.000E+00	2.326E-04	2.33E-04	0.000E+00	7.257E-02	7.26E-02	0.00E+00	2.33E-04	2.33E-04
Manganese	7439965	3.30E-03	0.000E+00	8.148E-07	8.15E-07	0.000E+00	2.542E-04	2.54E-04	0.00E+00	8.15E-07	8.15E-07
Methanol (Methylalcohol)	67561	2.42E-01	0.000E+00	5.975E-05	5.98E-05	0.000E+00	1.864E-02	1.86E-02	0.00E+00	5.98E-05	5.98E-05
Methyl Ethyl Ketone (2-butanone)	78933	1.18E-02	0.000E+00	2.914E-06	2.91E-06	0.000E+00	9.090E-04	9.09E-04	0.00E+00	2.91E-06	2.91E-06
Methyl tert-butyl ether	1634044	1.15E+00	0.000E+00	2.840E-04	2.84E-04	0.000E+00	8.859E-02	8.86E-02	0.00E+00	2.84E-04	2.84E-04
m-Xylene	108383	2.17E+00	0.000E+00	5.358E-04	5.36E-04	0.000E+00	1.672E-01	1.67E-01	0.00E+00	5.36E-04	5.36E-04
Naphthalene	91203	2.95E-02	0.000E+00	7.284E-06	7.28E-06	0.000E+00	2.273E-03	2.27E-03	0.00E+00	7.28E-06	7.28E-06
Nickel	7440020	3.30E-03	0.000E+00	8.148E-07	8.15E-07	0.000E+00	2.542E-04	2.54E-04	0.00E+00	8.15E-07	8.15E-07
o-Xylene	95476	7.54E-01	0.000E+00	1.862E-04	1.86E-04	0.000E+00	5.809E-02	5.81E-02	0.00E+00	1.86E-04	1.86E-04
Styrene	100425	7.07E-02	0.000E+00	1.746E-05	1.75E-05	0.000E+00	5.447E-03	5.45E-03	0.00E+00	1.75E-05	1.75E-05
Toluene	108883	3.50E+00	0.000E+00	8.642E-04	8.64E-04	0.000E+00	2.696E-01	2.70E-01	0.00E+00	8.64E-04	8.64E-04

Data and Parameters

Fuel Truck Hr/Day	1	
Offorad Diesel Vehicle Operating Hr/Day	4	assuming vehicles are running onsite for this many hours in a day
Haul Truck Operating Hr/Day	10	assuming vehicles are running onsite or within 1/4 mile for this many hours in a day
Employee/Business Vehicle Operating Hr/Day	1	assuming vehicles are running onsite or within 1/4 mile for this many hours in a day
Operating Days day/yr	312	

Notes:

1. Nearsite mileage is estimated based on the total offsite distance multipiled by a ratio of 0.25 miles divided by the one-way trip length.
2. Offroad equipment operates onsite only.
3. Near site mileage is calculated based on the total number of gasoline vehicle trips per year divided by the operating days per year, multiplied by 0.25 miles (one way) multiplied by 2 (two way trip).
4. https://en.wikipedia.org/wiki/Fuel_efficiency
5. SJVAPCD, AB 2588 “Hot Spots” Air Toxics Profiles, March 27, 2017, District Toxic Profile ID 176, Gasoline-Fired Portable Catalyst ICE

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Table 25: TAC from Paved Road Dust

Table 25a: Criteria Pollutant Information

Pollutant	Onsite (lb/hr)	Near-site[1] (lb/hr)	Onsite (lb/day)	Near-site[1] (lb/day)	Onsite (lb/yr)	Near-site[1] (lb/yr)
PM10	0.0057	0.0104	0.06	0.10	17.91	32.34
Total (Onsite & Near-site)		0.01611				50.26

Table 25b: TAC from Paved Road Dust

TAC	Wt.	Total TAC Emissions		Onsite TAC Emissions		Near-site TAC Emissions	
		lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
Arsenic	0.000013	2.09E-07	6.53E-04	7.46E-08	2.33E-04	1.35E-07	4.20E-04
Cadmium	0.000003	4.83E-08	1.51E-04	1.72E-08	5.37E-05	3.11E-08	9.70E-05
Hexavalent Chromium	0.00000085	1.37E-08	4.27E-05	4.88E-09	1.52E-05	8.81E-09	2.75E-05
Cobalt	0.000023	3.70E-07	1.16E-03	1.32E-07	4.12E-04	2.38E-07	7.44E-04
Copper	0.000148	2.38E-06	7.44E-03	8.50E-07	2.65E-03	1.53E-06	4.79E-03
Lead	0.000124	2.00E-06	6.23E-03	7.12E-07	2.22E-03	1.29E-06	4.01E-03
Manganese	0.0008	1.29E-05	4.02E-02	4.59E-06	1.43E-02	8.29E-06	2.59E-02
Nickel	0.000012	1.93E-07	6.03E-04	6.89E-08	2.15E-04	1.24E-07	3.88E-04
Mercury	0.000009	1.45E-07	4.52E-04	5.17E-08	1.61E-04	9.33E-08	2.91E-04
Selenium	0.000002	3.22E-08	1.01E-04	1.15E-08	3.58E-05	2.07E-08	6.47E-05
Vanadium (Fume Or Dust)	0.000071	1.14E-06	3.57E-03	4.08E-07	1.27E-03	7.36E-07	2.30E-03

Data and Parameters

Operating Hr/Day	10	assuming vehicles are running for this many hours in a day
Operating Days	312	day/yr

Notes:

1. Nearsite emissions include emissions up to 1/4 mile offsite. Nearsite PM10 emissions are calculated in Table 4 as "Rural" emissions.
2. CARB speciation profile for Paved Roads (#471):
https://ww2.arb.ca.gov/speciation-profiles-used-carb-modeling
3. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

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Table 26: TAC from Offroad Vehicles Operation on Unpaved Surfaces

Table 26a: Offroad Equipment Entrained Dust Emissions, PM10

Source	lb/hr	lb/day	lb/yr
Unpaved Road Dust from Onroad Vehicles	0.34	3.40	1,061
Unpaved Road Dust from Offroad Vehicles	0.36	3.62	1,128
Total PM10	0.70	7.02	2,189

Table 26b: TAC from Vehicle/Equipment Travel on Unpaved Surfaces

TAC	Concentration[1]	Total TAC Emissions		Onroad Vehicle TAC Emissions		Offroad Vehicle TAC Emissions	
		(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)
Arsenic	6.20E-06	4.35E-06	1.36E-02	2.11E-06	6.58E-03	2.24E-06	7.00E-03
Cadmium	2.00E-06	1.40E-06	4.38E-03	6.80E-07	2.12E-03	7.23E-07	2.26E-03
Hexavalent Chromium	2.45E-06	1.72E-06	5.36E-03	8.33E-07	2.60E-03	8.86E-07	2.76E-03
Cobalt	8.80E-06	6.17E-06	1.93E-02	2.99E-06	9.33E-03	3.18E-06	9.93E-03
Copper	6.90E-05	4.84E-05	1.51E-01	2.35E-05	7.32E-02	2.50E-05	7.79E-02
Lead	2.00E-04	1.40E-04	4.38E-01	6.80E-05	2.12E-01	7.23E-05	2.26E-01
Manganese	4.40E-04	3.09E-04	9.63E-01	1.50E-04	4.67E-01	1.59E-04	4.97E-01
Nickel	9.50E-05	6.66E-05	2.08E-01	3.23E-05	1.01E-01	3.44E-05	1.07E-01
Mercury	1.00E-06	7.02E-07	2.19E-03	3.40E-07	1.06E-03	3.62E-07	1.13E-03
Selenium	1.00E-06	7.02E-07	2.19E-03	3.40E-07	1.06E-03	3.62E-07	1.13E-03

Data and Parameters

Operating Hr/Day	10	assuming vehicles are running for this many hours in a day, including fuel truck
Operating Days	312	day/yr

Notes:

1. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm

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Table 27: Summary of TAC Emissions from Mobile Sources

Table 27a: Summary of TAC Emissions from Mobile Sources, lb/yr

Activity	CAS No.	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total
Diesel PM	9901	4.73E-02	7.74E-02	1.67E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E+01
1,2,4-Trimethylbenzene	95636	0.00E+00	4.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.54E-02
1,3-Butadiene	106990	0.00E+00	2.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-02
Acetaldehyde	75070	0.00E+00	1.13E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-02
Acrolein	107028	0.00E+00	6.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.36E-03
Benzene	71432	0.00E+00	1.21E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-01
Chlorine	7782505	0.00E+00	3.51E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E-02
Copper	7440508	0.00E+00	2.54E-04	0.00E+00	2.65E-03	4.79E-03	7.32E-02	7.79E-02	1.59E-01
Ethylbenzene	100414	0.00E+00	4.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.95E-02
Formaldehyde	50000	0.00E+00	7.78E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.78E-02
Hexane	110543	0.00E+00	7.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.26E-02
Manganese	7439965	0.00E+00	2.54E-04	0.00E+00	1.43E-02	2.59E-02	4.67E-01	4.97E-01	1.00E+00
Methanol (Methylalcohol)	67561	0.00E+00	1.86E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-02
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	9.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.09E-04
Methyl tert-butyl ether	1634044	0.00E+00	8.86E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E-02
m-Xylene	108383	0.00E+00	1.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-01
Naphthalene	91203	0.00E+00	2.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E-03
Nickel	7440020	0.00E+00	2.54E-04	0.00E+00	2.15E-04	3.88E-04	1.01E-01	1.07E-01	2.09E-01
o-Xylene	95476	0.00E+00	5.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.81E-02
Styrene	100425	0.00E+00	5.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.45E-03
Toluene	108883	0.00E+00	2.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-01
Arsenic	7440382	0.00E+00	0.00E+00	0.00E+00	2.33E-04	4.20E-04	6.58E-03	7.00E-03	1.42E-02
Cadmium	7440439	0.00E+00	0.00E+00	0.00E+00	5.37E-05	9.70E-05	2.12E-03	2.26E-03	4.53E-03
Hexavalent Chromium	18540299	0.00E+00	0.00E+00	0.00E+00	1.52E-05	2.75E-05	2.60E-03	2.76E-03	5.41E-03
Cobalt	7440484	0.00E+00	0.00E+00	0.00E+00	4.12E-04	7.44E-04	9.33E-03	9.93E-03	2.04E-02
Lead	7439921	0.00E+00	0.00E+00	0.00E+00	2.22E-03	4.01E-03	2.12E-01	2.26E-01	4.44E-01
Mercury	7439976	0.00E+00	0.00E+00	0.00E+00	1.61E-04	2.91E-04	1.06E-03	1.13E-03	2.64E-03
Selenium	7782492	0.00E+00	0.00E+00	0.00E+00	3.58E-05	6.47E-05	1.06E-03	1.13E-03	2.29E-03
Vanadium (Fume Or Dust)	7440622	0.00E+00	0.00E+00	0.00E+00	1.27E-03	2.30E-03	0.00E+00	0.00E+00	3.57E-03

Table 27b: Summary of TAC Emissions from Mobile Sources, lb/hr

Activity	CAS No.	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total
Diesel PM	9901	3.21E-05	4.60E-05	1.56E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-02
1,2,4-Trimethylbenzene	95636	0.00E+00	1.45E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-04
1,3-Butadiene	106990	0.00E+00	8.00E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E-05
Acetaldehyde	75070	0.00E+00	3.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.63E-05
Acrolein	107028	0.00E+00	2.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-05
Benzene	71432	0.00E+00	3.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.88E-04
Chlorine	7782505	0.00E+00	1.12E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-04
Copper	7440508	0.00E+00	8.15E-07	0.00E+00	8.50E-07	1.53E-06	2.35E-05	2.50E-05	5.16E-05
Ethylbenzene	100414	0.00E+00	1.59E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-04
Formaldehyde	50000	0.00E+00	2.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-04
Hexane	110543	0.00E+00	2.33E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-04
Manganese	7439965	0.00E+00	8.15E-07	0.00E+00	4.59E-06	8.29E-06	1.50E-04	1.59E-04	3.22E-04
Methanol (Methylalcohol)	67561	0.00E+00	5.98E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.98E-05
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	2.91E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.91E-06
Methyl tert-butyl ether	1634044	0.00E+00	2.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-04
m-Xylene	108383	0.00E+00	5.36E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.36E-04
Naphthalene	91203	0.00E+00	7.28E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.28E-06
Nickel	7440020	0.00E+00	8.15E-07	0.00E+00	6.89E-08	1.24E-07	3.23E-05	3.44E-05	6.77E-05
o-Xylene	95476	0.00E+00	1.86E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-04
Styrene	100425	0.00E+00	1.75E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-05
Toluene	108883	0.00E+00	8.64E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.64E-04
Arsenic	7440382	0.00E+00	0.00E+00	0.00E+00	7.46E-08	1.35E-07	2.11E-06	2.24E-06	4.56E-06
Cadmium	7440439	0.00E+00	0.00E+00	0.00E+00	1.72E-08	3.11E-08	6.80E-07	7.23E-07	1.45E-06
Hexavalent Chromium	18540299	0.00E+00	0.00E+00	0.00E+00	4.88E-09	8.81E-09	8.33E-07	8.86E-07	1.73E-06
Cobalt	7440484	0.00E+00	0.00E+00	0.00E+00	1.32E-07	2.38E-07	2.99E-06	3.18E-06	6.54E-06
Lead	7439921	0.00E+00	0.00E+00	0.00E+00	7.12E-07	1.29E-06	6.80E-05	7.23E-05	1.42E-04
Mercury	7439976	0.00E+00	0.00E+00	0.00E+00	5.17E-08	9.33E-08	3.40E-07	3.62E-07	8.47E-07
Selenium	7782492	0.00E+00	0.00E+00	0.00E+00	1.15E-08	2.07E-08	3.40E-07	3.62E-07	7.34E-07
Vanadium (Fume Or Dust)	7440622	0.00E+00	0.00E+00	0.00E+00	4.08E-07	7.36E-07	0.00E+00	0.00E+00	1.14E-06

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Table 28: Summary of Criteria Pollutant and GHG Emissions

Table 28a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
11. Composting Criteria and GHG	4.84	22.83	13.66	0.02	0.87	0.43
23. Mobile Criteria and GHG	2.91	1.30	17.10	0.03	7.43	0.86
Total	7.75	24.12	30.76	0.05	8.30	1.28

Table 28b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
11. Composting Criteria and GHG	622	7,929	3,337	5	244	93
23. Mobile Criteria and GHG	908	404	5,337	9	2,317	267
Total	1,530	8,333	8,674	14	2,561	360
Total (TPY)	0.77	4.17	4.34	0.01	1.28	0.18

Table 28c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	HFC (MT/yr)	CO2e (MT/Yr)
11. Composting Criteria and GHG	220	36.30	2.72	N/A	1,957
23. Mobile Criteria and GHG	551	0.0180	0.0364	0.0001	563
Total	**772**	**36.31**	**2.76**	**0.0001**	**2,520**

Table 29: Summary of TAC Emissions

Table 29a: Summary of TAC Emissions, lb/yr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine
Arsenic	7440382	4.13E-04	1.39E-04	7.75E-04	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
Cadmium	7440439	1.33E-04	4.47E-05	2.50E-04	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
Hexavalent Chromium	18540299	1.63E-04	5.48E-05	3.06E-04	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
Cobalt	7440484	5.86E-04	1.97E-04	1.10E-03	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
Copper	7440508	4.60E-03	1.54E-03	8.62E-03	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
Lead	7439921	1.33E-02	4.47E-03	2.50E-02	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
Manganese	7439965	2.93E-02	9.83E-03	5.50E-02	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
Mercury	7439976	6.66E-05	2.23E-05	1.25E-04	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
Nickel	7440020	6.33E-03	2.12E-03	1.19E-02	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
Selenium	7782492	6.66E-05	2.23E-05	1.25E-04	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
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	3.30E+01	2.33E+02	3.87E+01	7.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	1.68E+00	7.15E-01	2.18E-01	5.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	4.52E+00	8.34E-01	2.64E-01	2.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	3.58E+02	1.38E+02	1.01E+01	2.98E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	8.76E-01	3.48E-01	3.13E-01	2.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	8.96E-01	5.16E-01	1.94E-01	3.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	8.72E-01	1.21E+00	4.65E-01	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	7.40E-01	2.67E-01	9.59E-02	2.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	1.37E+00	5.25E-01	1.79E-01	4.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	1.22E+00	1.13E+00	2.89E-01	4.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	1.14E+00	1.73E+00	2.07E-01	3.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	3.14E+01	1.02E+00	2.30E-01	3.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	3.87E+02	1.57E+02	1.10E+01	1.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	2.14E+02	2.52E+02	1.35E+01	2.80E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	1.12E+00	2.30E+00	4.01E-01	4.98E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	3.78E-01	1.90E+01	1.15E+01	1.10E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	1.19E+00	1.14E+00	2.27E-01	4.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	1.06E+00	2.03E+00	9.09E-01	1.11E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	5.80E+01	9.70E+00	2.75E-01	3.34E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	1.26E+00	1.40E+00	4.44E-01	8.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	4.00E+02	1.40E+03	1.56E+02	3.04E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E+00	2.61E+00	2.61E+00	0.00E+00
1,2,4-Trimethylbenzene	95636	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	0.00E+00	0.00E+00	0.00E+00
1,3-Butadiene	106990	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	0.00E+00	0.00E+00	0.00E+00
Acrolein	107028	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	0.00E+00	0.00E+00	0.00E+00
Chlorine	7782505	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	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	50000	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	0.00E+00	0.00E+00	0.00E+00
Methyl tert-butyl ether	1634044	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	0.00E+00	0.00E+00	0.00E+00
m-Xylene	108383	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	0.00E+00	0.00E+00	0.00E+00
o-Xylene	95476	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	0.00E+00	0.00E+00	0.00E+00
Vanadium (Fume Or Dust)	7440622	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	0.00E+00	0.00E+00	0.00E+00

Table 29b: Summary of TAC Emissions, lb/hr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine
Arsenic	7440382	1.32E-07	4.44E-08	8.84E-08	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
Cadmium	7440439	4.27E-08	1.43E-08	2.85E-08	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
Hexavalent Chromium	18540299	5.23E-08	1.75E-08	3.49E-08	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
Cobalt	7440484	1.88E-07	6.30E-08	1.26E-07	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
Copper	7440508	1.47E-06	4.94E-07	9.84E-07	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
Lead	7439921	4.27E-06	1.43E-06	2.85E-06	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
Manganese	7439965	9.39E-06	3.15E-06	6.28E-06	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
Mercury	7439976	2.13E-08	7.16E-09	1.43E-08	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
Nickel	7440020	2.03E-06	6.80E-07	1.35E-06	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
Selenium	7782492	2.13E-08	7.16E-09	1.43E-08	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
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	3.77E-03	2.66E-02	4.41E-03	8.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	1.92E-04	8.17E-05	2.49E-05	6.50E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	5.16E-04	9.53E-05	3.01E-05	2.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	4.09E-02	1.58E-02	1.16E-03	3.40E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	1.00E-04	3.97E-05	3.58E-05	3.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	1.02E-04	5.88E-05	2.22E-05	3.45E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	9.95E-05	1.38E-04	5.31E-05	1.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	8.45E-05	3.05E-05	1.10E-05	2.85E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	1.56E-04	6.00E-05	2.04E-05	5.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	1.39E-04	1.29E-04	3.29E-05	4.69E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	1.30E-04	1.98E-04	2.36E-05	4.38E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	3.59E-03	1.17E-04	2.62E-05	3.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	4.42E-02	1.79E-02	1.25E-03	1.42E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	2.45E-02	2.88E-02	1.54E-03	3.20E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	1.28E-04	2.63E-04	4.58E-05	5.68E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	4.32E-05	2.17E-03	1.31E-03	1.25E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	1.36E-04	1.30E-04	2.59E-05	4.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	1.21E-04	2.32E-04	1.04E-04	1.27E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	6.62E-03	1.11E-03	3.13E-05	3.82E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	1.44E-04	1.60E-04	5.07E-05	9.41E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	4.57E-02	1.60E-01	1.78E-02	3.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-03	2.09E-03	2.09E-03	0.00E+00
1,2,4-Trimethylbenzene	95636	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	0.00E+00	0.00E+00	0.00E+00
1,3-Butadiene	106990	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	0.00E+00	0.00E+00	0.00E+00
Acrolein	107028	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	0.00E+00	0.00E+00	0.00E+00
Chlorine	7782505	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	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	50000	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	0.00E+00	0.00E+00	0.00E+00
Methyl tert-butyl ether	1634044	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	0.00E+00	0.00E+00	0.00E+00
m-Xylene	108383	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	0.00E+00	0.00E+00	0.00E+00
o-Xylene	95476	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	0.00E+00	0.00E+00	0.00E+00
Vanadium (Fume Or Dust)	7440622	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	0.00E+00	0.00E+00	0.00E+00

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Table 29: Summary of TAC Emissions

Table 29a: Summary of TAC Emissions, lb

Activity	Emergency Generator	Fire Pump	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total, Stationary Sources	Total, Mobile Sources	Total
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.33E-04	4.20E-04	6.58E-03	7.00E-03	1.33E-03	1.42E-02	1.56E-02
Cadmium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.37E-05	9.70E-05	2.12E-03	2.26E-03	4.28E-04	4.53E-03	4.96E-03
Hexavalent Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-05	2.75E-05	2.60E-03	2.76E-03	5.24E-04	5.41E-03	5.93E-03
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E-04	7.44E-04	9.33E-03	9.93E-03	1.88E-03	2.04E-02	2.23E-02
Copper	0.00E+00	0.00E+00	0.00E+00	2.54E-04	0.00E+00	2.65E-03	4.79E-03	7.32E-02	7.79E-02	1.48E-02	1.59E-01	1.73E-01
Lead	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-03	4.01E-03	2.12E-01	2.26E-01	4.28E-02	4.44E-01	4.87E-01
Manganese	0.00E+00	0.00E+00	0.00E+00	2.54E-04	0.00E+00	1.43E-02	2.59E-02	4.67E-01	4.97E-01	9.41E-02	1.00E+00	1.10E+00
Mercury	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-04	2.91E-04	1.06E-03	1.13E-03	2.14E-04	2.64E-03	2.86E-03
Nickel	0.00E+00	0.00E+00	0.00E+00	2.54E-04	0.00E+00	2.15E-04	3.88E-04	1.01E-01	1.07E-01	2.03E-02	2.09E-01	2.29E-01
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.58E-05	6.47E-05	1.06E-03	1.13E-03	2.14E-04	2.29E-03	2.50E-03
Acetone	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	3.12E+02	0.00E+00	3.12E+02
1,4-Dichlorobenzene	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	3.19E+00	0.00E+00	3.19E+00
2-Propanol (Isopropylalcohol, IPA)	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	5.85E+00	0.00E+00	5.85E+00
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	1.13E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E+02	1.13E-02	5.10E+02
Allyl Chloride (3-Chloropropene)	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	1.83E+00	0.00E+00	1.83E+00
Benzene	0.00E+00	0.00E+00	0.00E+00	1.21E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E+00	1.21E-01	2.03E+00
Carbondisulfide	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	3.78E+00	0.00E+00	3.78E+00
Chloroethane	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	1.35E+00	0.00E+00	1.35E+00
Chloroform	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	2.53E+00	0.00E+00	2.53E+00
Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	4.95E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E+00	4.95E-02	3.09E+00
Ethylene Dichloride (1,2-dichloroethane)	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	3.46E+00	0.00E+00	3.46E+00
Hexane	0.00E+00	0.00E+00	0.00E+00	7.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E+01	7.26E-02	3.31E+01
Methanol (Methylalcohol)	0.00E+00	0.00E+00	0.00E+00	1.86E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E+02	1.86E-02	5.56E+02
Methyl Ethyl Ketone (2-butanone)	0.00E+00	0.00E+00	0.00E+00	9.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E+02	9.09E-04	4.80E+02
Naphthalene	0.00E+00	0.00E+00	0.00E+00	2.27E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.32E+00	2.27E-03	4.33E+00
Propene (Propylene)	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	4.18E+01	0.00E+00	4.18E+01
Styrene	0.00E+00	0.00E+00	0.00E+00	5.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.96E+00	5.45E-03	2.97E+00
Toluene	0.00E+00	0.00E+00	0.00E+00	2.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.11E+00	2.70E-01	5.38E+00
Vinyl acetate	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	6.83E+01	0.00E+00	6.83E+01
Xylenes	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	3.93E+00	0.00E+00	3.93E+00
Ammonia	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	1.96E+03	0.00E+00	1.96E+03
Diesel PM	7.34E+00	1.47E+01	4.73E-02	7.74E-02	1.67E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.99E+01	1.68E+01	4.67E+01
1,2,4-Trimethylbenzene	0.00E+00	0.00E+00	0.00E+00	4.54E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.54E-02	4.54E-02
1,3-Butadiene	0.00E+00	0.00E+00	0.00E+00	2.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-02	2.50E-02
Acrolein	0.00E+00	0.00E+00	0.00E+00	6.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.36E-03	6.36E-03
Chlorine	0.00E+00	0.00E+00	0.00E+00	3.51E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.51E-02	3.51E-02
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	7.78E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.78E-02	7.78E-02
Methyl tert-butyl ether	0.00E+00	0.00E+00	0.00E+00	8.86E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.86E-02	8.86E-02
m-Xylene	0.00E+00	0.00E+00	0.00E+00	1.67E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-01	1.67E-01
o-Xylene	0.00E+00	0.00E+00	0.00E+00	5.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.81E-02	5.81E-02
Vanadium (Fume Or Dust)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-03	2.30E-03	0.00E+00	0.00E+00	0.00E+00	3.57E-03	3.57E-03

Table 29b: Summary of TAC Emissions, lb

Activity	Emergency Generator	Fire Pump	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total, Stationary Sources	Total, Mobile Sources	Total
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.46E-08	1.35E-07	2.11E-06	2.24E-06	2.65E-07	4.56E-06	4.82E-06
Cadmium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.72E-08	3.11E-08	6.80E-07	7.23E-07	8.55E-08	1.45E-06	1.54E-06
Hexavalent Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.88E-09	8.81E-09	8.33E-07	8.86E-07	1.05E-07	1.73E-06	1.84E-06
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-07	2.38E-07	2.99E-06	3.18E-06	3.76E-07	6.54E-06	6.92E-06
Copper	0.00E+00	0.00E+00	0.00E+00	8.15E-07	0.00E+00	8.50E-07	1.53E-06	2.35E-05	2.50E-05	2.95E-06	5.16E-05	5.46E-05
Lead	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.12E-07	1.29E-06	6.80E-05	7.23E-05	8.55E-06	1.42E-04	1.51E-04
Manganese	0.00E+00	0.00E+00	0.00E+00	8.15E-07	0.00E+00	4.59E-06	8.29E-06	1.50E-04	1.59E-04	1.88E-05	3.22E-04	3.41E-04
Mercury	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.17E-08	9.33E-08	3.40E-07	3.62E-07	4.28E-08	8.47E-07	8.89E-07
Nickel	0.00E+00	0.00E+00	0.00E+00	8.15E-07	0.00E+00	6.89E-08	1.24E-07	3.23E-05	3.44E-05	4.06E-06	6.77E-05	7.17E-05
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-08	2.07E-08	3.40E-07	3.62E-07	4.28E-08	7.34E-07	7.77E-07
Acetone	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	3.57E-02	0.00E+00	3.57E-02
1,4-Dichlorobenzene	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	3.64E-04	0.00E+00	3.64E-04
2-Propanol (Isopropylalcohol, IPA)	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	6.68E-04	0.00E+00	6.68E-04
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	3.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.82E-02	3.63E-05	5.82E-02
Allyl Chloride (3-Chloropropene)	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	2.09E-04	0.00E+00	2.09E-04
Benzene	0.00E+00	0.00E+00	0.00E+00	3.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-04	3.88E-04	6.05E-04
Carbondisulfide	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	4.32E-04	0.00E+00	4.32E-04
Chloroethane	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	1.54E-04	0.00E+00	1.54E-04
Chloroform	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	2.89E-04	0.00E+00	2.89E-04
Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	1.59E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.47E-04	1.59E-04	5.06E-04
Ethylene Dichloride (1,2-dichloroethane)	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	3.95E-04	0.00E+00	3.95E-04
Hexane	0.00E+00	0.00E+00	0.00E+00	2.33E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-03	2.33E-04	4.00E-03
Methanol (Methylalcohol)	0.00E+00	0.00E+00	0.00E+00	5.98E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.34E-02	5.98E-05	6.35E-02
Methyl Ethyl Ketone (2-butanone)	0.00E+00	0.00E+00	0.00E+00	2.91E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.48E-02	2.91E-06	5.48E-02
Naphthalene	0.00E+00	0.00E+00	0.00E+00	7.28E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.94E-04	7.28E-06	5.01E-04
Propene (Propylene)	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	4.78E-03	0.00E+00	4.78E-03
Styrene	0.00E+00	0.00E+00	0.00E+00	1.75E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-04	1.75E-05	3.55E-04
Toluene	0.00E+00	0.00E+00	0.00E+00	8.64E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.83E-04	8.64E-04	1.45E-03
Vinyl acetate	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	7.80E-03	0.00E+00	7.80E-03
Xylenes	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	4.49E-04	0.00E+00	4.49E-04
Ammonia	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	2.24E-01	0.00E+00	2.24E-01
Diesel PM	3.67E-02	7.34E-02	3.21E-05	4.60E-05	1.56E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E-01	1.57E-02	1.32E-01
1,2,4-Trimethylbenzene	0.00E+00	0.00E+00	0.00E+00	1.45E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-04	1.45E-04
1,3-Butadiene	0.00E+00	0.00E+00	0.00E+00	8.00E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E-05	8.00E-05
Acrolein	0.00E+00	0.00E+00	0.00E+00	2.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-05	2.04E-05
Chlorine	0.00E+00	0.00E+00	0.00E+00	1.12E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-04	1.12E-04
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	2.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-04	2.49E-04
Methyl tert-butyl ether	0.00E+00	0.00E+00	0.00E+00	2.84E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-04	2.84E-04
m-Xylene	0.00E+00	0.00E+00	0.00E+00	5.36E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.36E-04	5.36E-04
o-Xylene	0.00E+00	0.00E+00	0.00E+00	1.86E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E-04	1.86E-04
Vanadium (Fume Or Dust)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.08E-07	7.36E-07	0.00E+00	0.00E+00	0.00E+00	1.14E-06	1.14E-06

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CalRecycle Small and Medium Compost Facilities PEIR

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Facility Address:

Facility ID:

Author: Harry Wilfong
Peer Reviewer: Russ Kingsley
Date: 7/21/2026

Other Notes:

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Table 30: Reduction from Baseline

Table 30: GHG Emissions Reduction from Baseline

Annual Throughput (ton/yr)	Compost Emission Reduction Factor (MT CO2e/ton feed)[1]	GHG Emissions Reduction (MT CO2e)
10,000	0.44	4,400

1. CARB, Method for Estimating Greenhouse Gas Emission Reductions From Diversion of Organic Waste From Landfills to Compost Facilities, 2017

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Scenario 3

Operational Emissions

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Operational Emissions

Scenarios Summary

Scenario	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Facility Type	Small	Small	Small	Medium	Medium	Medium
Composting Technology	Windrows	Positive CASP	Negative ASP w Filter	Windrows	Positive CASP	Negative ASP w Filter

Air District Offsets Thresholds

Air District	NOx	VOC	CO	SOx	PM10	PM2.5
Bay Area Air District[1]	10.00	10.00	N/A	100.00	100.00	100.00
SJVAPCD[2]	10.00	10.00	100.00	27.30	14.60	70.00
SCAQMD[3,4]	4.00	4.00	29.00	4.00	4.00	10.00
SDAPCD	25.00	25.00	N/A	N/A	N/A	N/A

1. Bay Area Air District NOx and VOC offset purchases not needed until PTE is greater than 35 tpy; PTE between 10-35 tpy are covered by Bay Area Air District's Small Facility Bank.
2. PM2.5 threshold is from Rule 2201-4.5.4 and 2201-3.28.1
3. PM2.5 threshold is from Rule 1325(b)(13)
4. Windrows are not permitted sources in SCAQMD, so a project would not be subject to New Source Review. Windrow projects are assumed to not require offsets.

Source: EMFAC2025 (v2.1.1) Emission Rates
Region Type: Statewide
Region: California
Calendar Year: 2026
Season: Annual
Vehicle Classification: EMFAC202Y Categories
Units: miles/day for Total VMT, Combustion VMT, and Electric VMT, trips/day for Trips, g/mile for RUN

Region	Calendar Ye	Vehicle Cat	Model Year	Speed	Fuel	Population	Total VMT	CVMT
Statewide	2026	LDT1	Aggregate	Aggregate	Gasoline	1240136	34359823	34359823
Statewide	2026	LHD2 Othe	Aggregate	Aggregate	Diesel	214795.3	9039992	9039992
Statewide	2026	T7 Utility C	Aggregate	Aggregate	Diesel	1346.658	57399.13	57399.13

EX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN

EVMT	Trips	g/mile NOx_RUNE	g/veh/day NOx_IDLEX	g/trip NOx_STREX	g/mile PM2.5_RUNE	g/veh/day PM2.5_IDLEX	g/trip PM2.5_STREX
0	4968684	0.265905	0	0.419833	0.00389688	0	0.00317195
0	2959386	0.742211	1.64134	0	0.01950634	0.028960046	0
0	17237.22	0.927086	5.94636	5.191356	0.00830735	0.002393047	0

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g/mile PM2.5_PMTW	g/mile PM2.5_PMBW	g/mile PM10_RUNEX	g/veh/day PM10_IDLE	g/trip PM10_STR	g/mile PM10_PMTW	g/mile PM10_PMBW	g/mile CO2_RUNE
0.002	0.00296192	0.004231632	0	0.003447	0.008000002	0.008462631	377.3354
0.003	0.03185001	0.020388333	0.030269	0	0.012000003	0.091000026	636.0554
0.009	0.03057923	0.00868297	0.002501	0	0.03600001	0.087369225	1544.504

g/veh/day	g/trip	g/mile	g/veh/day	g/trip	g/mile	g/veh/day	g/trip	g/mile
CO2_IDLEX	CO2_STREX	CH4_RUNE	CH4_IDLEX	CH4_STREX	N2O_RUNE	N2O_IDLEX	N2O_STREX	ROG_RUNE
0	90.38742	0.015881	0	0.100767	0.017405	0	0.029356	0.07292
212.5433	0	0.004732	0.005584	0	0.102563	0.034272	0	0.101886
1410.663	0	0.000447	0.029481	0	0.399839	0.227468	0	0.009619

g/veh/day	g/trip	g/trip	g/mile	g/veh/day	g/mile	g/veh/day	g/trip	g/trip
ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNL	ROG_DIUR	TOG_RUNE	TOG_IDLEX	TOG_STREX	TOG_HOTS
0	0.66	0.368276	0.683028	4.239811	0.100178	0	0.722555	0.368276
0.120222	0	0	0	0	0.115991	0.136864	0	0
0.634718	0	0	0	0	0.01095	0.722578	0	0

g/mile TOG_RUNL	g/veh/day TOG_DIURN	g/mile NH3_RUNE	g/mile CO_RUNEX	g/veh/day CO_IDLEX	g/trip CO_STREX	g/mile SOx_RUNEX	g/veh/day SOx_IDLEX	g/trip SOx_STREX
0.683028	4.239811	0.034431	4.803146	0	6.798632	0.001621	0	0.000388
0	0	0.201185	0.241085	0.996459	0	0.002138	0.000715	0
0	0	0.219916	0.074777	9.363795	0	0.005189	0.00474	0

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Table 1: Compost Facility Operations Assumptions- Scenario 4

Assumption	Scenario 4
Facility Size	Medium
Facility Capacity (cu yd)	12,500
Facility Size (acres)	11
Throughput (tpy)	25,000
Operating Schedule (hr/day)	10
Operating Schedule (wk/year)	52
Operating Schedule (day/year)	312
Feedstock	Green Waste (includes vegetative food material) + Food Waste
Feedstock Storage Time (days)	2
Feedstock Storage Building	Only as a BMP for facilities near receptors. No separate calculations.
Active Technology	Windrows
VOC Control Efficiency	0%
NH3 Control	0%
Curing	Yes
Mulch Colorizer Tons per Hour	50
Diesel Grinders	1
Diesel Screens	1
Diesel Stackers	1
Diesel Colorizer	1
Diesel Emergency Generator	1
Diesel Emergency Fire Pump	1
Employee and Commercial Light Duty Gasoline Vehicle Round Trips Per Day	12
Employee and Commercial Light Duty Diesel Vehicle Round Trips Per Day	1
Employee Mileage (one-way)	15
Tractor Trailers for Raw Materials Round Trips Per Day	35
Tractor Trailers for Product Round Trips Per Day	7
Feedstock Haul Truck Mileage (one-way)	20
Compost Product Haul Truck Mileage (one-way)	15
Baseline Feedstock Haul Truck Mileage (one-way)	15
Fuel Truck	1
Tractors	1
Excavator	1
Loader	3
Windrow Turner	1
Water Truck	1
Sweeper Truck	1
Fuel Truck Hours per Day	2
Other Off-road Engine (mobile and non-emergency stationary) Hours per Day	10

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Table 2: Additional Datasets and Assumptions

Table 2a: Colorizer Data and Assumptions

Parameter	Value	Unit of Measure	Notes
Bulk density - mulch	600	lb/cy	Average per Google AI
Conversion	2000	lb/ton	Constant
Throughput	21.37	cy/hr	Calculated from annual finished product throughput, assuming all is colorized
Annual Hours of Operation	3,120	hr/yr	Assumption
Application rate	6.5	lbs/cy	Google AI, max of listed range
Ammonia Concentration	0.5%	by weight	SDS

Table 2b: Stationary Engine Information[1]

Equipment	Number of Engines	Engine Tier and Information			
		Fuel[2]	Tier[2]	BHp[2]	Op Load[3]
Diesel Grinders	1	Diesel	4	100	95%
Diesel Screens	1	Diesel	4	100	95%
Diesel Stackers	1	Diesel	4	100	95%
Diesel Colorizer	1	Diesel	4	100	95%
Diesel Emergency Generator	1	Diesel	3	150	74%
Diesel Emergency Fire Pump	1	Diesel	3	300	74%

1. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
2. Engineering estimate based on projected throughput and machine capacity.
3. Engineering estimate based on projected throughput and machine capacity except for emergency engines, which are from User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12

Table 2c: Emergency Engine Operation Assumptions

Parameter	Value	Unit of Measure
Emergency Engine Operating Hours	2	hours/day, assumption
Emergency Engine Operating Days	100	day/yr, for 200 hours per year, assumption

Table 2d: Raw Material and Product Truck Loads

Parameter	Value	Unit of Measure
Raw Material quantity per truck	12	tons/truck
Compost quantity per truck	20	tons/truck

Table 2e: Onroad Vehicle Information and Mileage

Vehicle Type	Vehicle Use	Number of Vehicles	Vehicle Weight (lb)			Fuel	One-way Onsite Trip Mileage	One-way Offsite Trip Mileage[4]	Hours of Op Onsite and within
			Gross	Empty	Average				
LDT1	Employee	12	3,750	3,750	3,750	Gasoline	0.00	15	1
LHD2	Delivery of Office Supplies	1	15,006	8,200	11,603	Diesel	0.20	15	1
T7 Tractor	Ship Raw Material	35	47,000	23,000	35,000	Diesel	0.20	5	10
T7 Tractor	Ship Finished Compost	7	63,000	23,000	43,000	Diesel	0.20	15	10

4. Feedstock haul truck mileage is the mileage to the compost facility minus the baseline mileage to a landfill. Mileages are assumptions for representative facilities.

Table 2f: Fraction of Onroad Vehicle VMT by Functional Type of Roadway[5]

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 6

5. SJVAPCD, Appendix A: Comments
6. Rural is assumed to be 0.25 miles per

Table 2g: Onroad Vehicle VMT-weighted Average Vehicle Weight

Parameter	Value	Unit of Measure
Average Vehicle Weight	12.2	ton/vehicle

Table 2h: Offroad Vehicle Information

Offroad Equipment	Typical Model	Fuel	Engine Information		Op Load[7]	Hours per Day
			Tier	BHp		
Fuel Truck	Freightliner M2106	Diesel	4f	350	38%	2
Tractors	Massey Fergusen, 7619	Diesel	4f	200	37%	10
Excavator	Caterpillar 326	Diesel	4f	201	38%	10
Loader	Caterpillar, 962K	Diesel	4f	250	36%	10
Windrow Turner	Scarab	Diesel	4f	250	42%	10
Water Truck	International, 7400 6x4	Diesel	4f	350	38%	10
Sweeper Truck	Freightliner M2	Diesel	4f	240	46%	10

7. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12. Windrow turner using "Other Construction Equipment"

Table 2i: Offsite Mileage Included with Onsite Calculations

Parameter	Value	Unit of Measure
Offsite Mileage Included with Onsite Calculations	0.25	mile/trip

Table 2j: Gasoline Vehicle Mileage and Fuel Consumption

Parameter	Onsite	Near-site[8]
VMT/Day	0.00	6.00
Fuel Consumption (gal/day)	0.000	0.370

Average Fuel Economy Light Truck[9] 16.20 MPG

8. Near site mileage is calculated based on the total number of gasoline vehicle trips per day, multiplied by 0.25 miles (one way) multiplied by 2 (two way trip).
9. https://en.wikipedia.org/wiki/Fuel_efficiency

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Table 3: Emission Factors

Table 3a: Composting Emission Factors

Pollutant	Phase	Emission Factor	Note
VOC	Feedstock Storage	0.2 lb/wet ton/day	1
VOC (uncontrolled)	Composting + Curing	3.58 lb/ton	2
VOC control efficiency	Composting + Curing	0%	---
VOC (controlled)	Composting + Curing	3.58 lb/ton	calculated
VOC (controlled)	Composting (=90%)	3.22 lb/ton	2
VOC (controlled)	Curing (=10%)	0.36 lb/ton	2
VOC	Storage	0.02 lb/ton	3
NH_3	Feedstock Storage	0.02 lb/ton/day	1
NH3 (uncontrolled)	Composting + curing	0.78 lb/ton	4
NH3 control efficiency	Composting + curing	0%	---
NH_3 (controlled)	Composting + curing	0.78 lb/ton	calculated
NH_3	Storage	0.00038 lb/ton	5
GHG - CO2	Composting	0.44 kg/kg	6
GHG - CH4	Composting	0.004 kg/kg	6
GHG - N2O	Composting	0.0003 kg/kg	6

1. SJVAPCD Compost Emission Factor Report, Originally Published September 15, 2010, Revised March 21, 2023, Table 7.
2. SJVAPCD Compost Emission Factor Report Originally Published September 15, 2010 Revised March 21, 2023, Tables 3 and 4
3. Storage EF from SJVAPCD Compost ROG Emission Factors, Sept 15, 2010, App C, Table 4.3 which is based on 15 days storage.
4. SJVAPCD Compost Emission Factor Report, Originally Published September 15, 2010, Revised March 21, 2023, Table 6.
5. SJVAPCD Compost VOC Emission Factors, Sept 15, 2010, App C, Table 4.3 which is based on 15 days storage.
6. Greenhouse Gas Emissions Estimation Methodologies for Biogenic Emissions from Selected Source Categories: Measurement Policy Group, December 14, 2010 Solid Waste Disposal Wastewater Treatment Ethanol Fermentation Submitted to: U.S. Environmental Protection Agency Sector Policies and Programs Division

Table 3b: Uncontrolled Grinding and Screening PM Emission Factors

Process Operation	Emission Factor		Note
	PM10 (lb/ton)	PM2.5 (lb/ton)	
Grinding	0.0144	0.00216	7
Screening	0.0144	0.00216	8
Control Efficiency from Watering	75%		9

7. BAAQMD, Title V Permit Evaluation, Guadalupe Rubbish Disposal Co., Site A3294. BAAQMD references AP-42 for log debarking. Assume 15% fraction of PM2.5.
8. AP-42 section 10.3 Plywood Veneer and Layout Operations Table 10.3-1 (4th Edition) for log debarking, assuming 60% of emissions are PM10 with a 15% fraction of PM2.5.
9. Mojave Desert Air Quality Management District, "Emissions Inventory Guidance, Mineral Handling and Processing Industries", Section G, Wind Erosion from Storage Piles, April 2000.

Table 3c: Material Handling PM Emission Factors

Variable	Emission Factor		Note
	PM10	PM2.5	
Particle Size Multiplier (dimensionless)	0.35	0.053	10
Mean Wind Speed (MPH)	3.25	3.25	11
Material Moisture Content (%)	4.80	4.80	10
Emission Factor (lb/ton/drop point)	1.88E-04	2.84E-05	calculated

10. AP-42, Chapter 13.2.4 Aggregate Handling and Storage Piles. Moisture content used is the maximum allowed by the method. Actual moisture content will be higher, thus these emission factors are conservative.
11. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-1, Average of Los Angeles Airport and San Jose Airport.

Table 3d: Wind Erosion PM Emission Factors[11]

Variable	PM10	PM2.5	Note
Particulate aerodynamic factor	0.50	0.20	12
Average silt loading of storage pile in percent (%),	0.50	0.50	Assumed
Average number of days during the year with at least 0.01 inches of precipitation	24.30	24.30	13
Percentage of time with unobstructed wind speed >12 mph in percent (%)	10.00	10.00	Assumed
Wind Erosion EF (lb/acre/day)	2.74E-01	1.10E-01	Calculated
Control Efficiency from Watering	75%		12

12. Mojave Desert Air Quality Management District, "Emissions Inventory Guidance, Mineral Handling and Processing Industries", Section G, Wind Erosion from Storage Piles, April 2000.
13. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Table 3e: Compost Dust TAC Concentration

TAC	CAS	Concentration (lb/lb Dust)	Note
Arsenic	7440-38-2	6.20E-06	14
Cadmium	7440-43-9	2.00E-06	14
Hexavalent Chromium	18540-29-9	2.45E-06	14, 15
Cobalt	7440-48-4	8.80E-06	14
Copper	7440-50-8	6.90E-05	14
Lead	7439-92-1	2.00E-04	14
Manganese	7439-96-5	4.40E-04	14
Mercury	7439-97-6	1.00E-06	14
Nickel	7440-02-0	9.50E-05	14
Selenium	7782-49-2	1.00E-06	14

14. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm
15. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

Table 3f: Compost Organic TAC Emission Factors (lb TAC/lb VOC)[16]

TAC	Feedstock Storage	Composting	Curing	Finished Compost Storage
Acetone	8.25E-03	7.23E-02	1.08E-01	4.86E-02
1,4-Dichlorobenzene	4.21E-04	2.22E-04	6.10E-04	3.56E-03
2-Propanol (Isopropylalcohol, IPA)	1.13E-03	2.59E-04	7.37E-04	1.46E-03
Acetaldehyde	8.96E-02	4.29E-02	2.83E-02	1.86E-02
Allyl Chloride (3-Chloropropene)	2.19E-04	1.08E-04	8.75E-04	1.86E-03
Benzene	2.24E-04	1.60E-04	5.42E-04	1.89E-03
Carbondisulfide	2.18E-04	3.74E-04	1.30E-03	7.75E-03
Chloroethane	1.85E-04	8.30E-05	2.68E-04	1.56E-03
Chloroform	3.42E-04	1.63E-04	4.99E-04	2.89E-03
Ethylbenzene	3.04E-04	3.50E-04	8.06E-04	2.57E-03
Ethylene Dichloride (1,2-dichloroethane)	2.84E-04	5.37E-04	5.78E-04	2.40E-03
Hexane	7.86E-03	3.18E-04	6.42E-04	2.09E-03
Methanol (Methylalcohol)	9.68E-02	4.88E-02	3.07E-02	7.77E-04
Methyl Ethyl Ketone (2-butanone)	5.36E-02	7.82E-02	3.77E-02	1.75E-03
Naphthalene	2.81E-04	7.14E-04	1.12E-03	3.11E-03
Propene (Propylene)	9.45E-05	5.89E-03	3.21E-02	6.87E-02
Styrene	2.98E-04	3.53E-04	6.34E-04	2.53E-03
Toluene	2.64E-04	6.30E-04	2.54E-03	6.96E-03
Vinyl acetate	1.45E-02	3.01E-03	7.67E-04	2.09E-03
Xylenes	3.15E-04	4.36E-04	1.24E-03	5.15E-03

16. Speciation profile from BAAQMD Permit Handbook, Section 11.15

Table 3g: Stationary Engine Emission Factors[17]

Equipment	Fuel[18]	Tier[17]	NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
Diesel Grinders	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Screens	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Stackers	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Colorizer	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Emergency Generator	Diesel	3	2.85	1.02	3.7	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05
Diesel Emergency Fire Pump	Diesel	3	2.85	1.02	2.6	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05

17. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
18. Project description

Table 3h: Engine GHG Emission Factors[19]

Fuel	HHV (MMBtu/gal)	Default CO2 EF (kg CO2/MMBtu)	CO2 EF (kg/gal)	Default CH4 EF (kg CH4/MMBtu)	CH4 EF (kg/gal)	Default N2O EF (kg N2O/MMBtu)	N2O EF (kg/gal)
Diesel	0.138	73.96	10.20648	3.00E-03	4.14E-04	6.00E-04	8.28E-05

19. 40 CFR 98, Subpart C, Tables C-1 and C-2

Table 3i: Brake Specific Fuel Consumption (BSFC) Conversion - Diesel

Parameter	Value	Unit of Measure	Basis
Brake Specific Fuel Consumption	7,000	btu/hp-hr	Per EPA AP-42 Table 3.3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
Brake Specific Fuel Consumption	0.3602	lb/hp-hr	calculated

Table 3j: Onroad Mobile Sources - Criteria Pollutant Exhaust Emission Factors[20]

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)
NOx	LDT1	0.266	0.000	0.420
	LHD2	0.742	1.641	0.000
	T7 Tractor	0.927	5.946	5.191
VOC	LDT1	0.073	0.000	0.660
	LHD2	0.102	0.120	0.000
	T7 Tractor	0.010	0.635	0.000
CO	LDT1	4.803	0.000	6.799
	LHD2	0.241	0.996	0.000
	T7 Tractor	0.075	9.364	0.000
SOx	LDT1	0.002	0.000	0.000
	LHD2	0.002	0.001	0.000
	T7 Tractor	0.005	0.005	0.000
PM10	LDT1	0.004	0.000	0.003
	LHD2	0.020	0.030	0.000
	T7 Tractor	0.009	0.003	0.000
PM2.5	LDT1	0.004	0.000	0.003
	LHD2	0.020	0.029	0.000
	T7 Tractor	0.008	0.002	0.000

20. Emission factors are from EMFAC2025

Table 3k: Onroad Mobile Sources - Fugitive VOC Emission Factors[21]

Pollutant	Vehicle Type	Hot Soak EF (g/trip)	Running Loss EF (g/mile)	Diurnal EF (g/veh/day)
VOC	LDT1	0.37	0.68	4.24
	LHD2	-	-	-
	T7 Tractor	-	-	-

21. Emission factors are from EMFAC2025

Table 3l: Onroad Mobile Sources - Fugitive PM Emission Factors[22]

Pollutant	Vehicle Type	Tire Wear (g/mile)	Brake Wear (g/mile)
PM10	LDT1	0.0080	0.0085
	LHD2	0.0120	0.0910
	T7 Tractor	0.0360	0.0874
PM2.5	LDT1	0.0020	0.0030
	LHD2	0.0030	0.0319
	T7 Tractor	0.0090	0.0306

22. Emission factors are from EMFAC2025

Table 3m: Onroad Mobile Sources - GHG Exhaust Emission Factors[23,24]

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)
CO2	LDT1	377.335	0.000	90.387
	LHD2	636.055	212.543	0.000
	T7 Tractor	1544.504	1410.663	0.000
CH4	LDT1	0.016	0.000	0.101
	LHD2	0.005	0.006	0.000
	T7 Tractor	0.000	0.029	0.000
N2O	LDT1	0.017	0.000	0.029
	LHD2	0.103	0.034	0.000
	T7 Tractor	0.400	0.227	0.000
HFC	LDT1	0.000	N/A	N/A
	LHD2	0.001	N/A	N/A
	T7 Tractor	0.001	N/A	N/A

23. Emission factors are from EMFAC2025
24. Refrigerant R emission factor is from CalEEMod software

Table 3n: Paved Road PM10 Emission Factors[25]

Vehicle	Average Vehicle Weight (ton)	Pollutant	Freeway (lb/VMT)	Major (lb/VMT)	Collector (lb/VMT)	Local (lb/VMT)	Rural/Onsite (lb/VMT)
		sL (g/m^2)[26] -->	0.020	0.035	0.035	0.320	1.600
Fleet Average	12.20	PM10	7.90E-04	1.31E-03	1.31E-03	9.85E-03	4.26E-02
		PM2.5	1.97E-04	3.29E-04	3.29E-04	2.46E-03	1.06E-02

$E = k\ (sL)^{0.91} \times (W)^{1.02} * C_f$

Variable	Value	UOM
k (PM10)	1.00	g/VMT
k(PM2.5)	0.25	g/VMT
Rain Days[27]	24.30	day/yr
C_f	0.983	

25. Methodology per AP-42, 13.2.1 Paved Roads
26. SJVAPCD, Appendix A: Comments and Responses Rule 9510 and 3180 December 15, 2005
27. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Table 3o: Onroad Equipment Unpaved Road Emission Factors[28]

EMFAC Vehicle Type	Activity	PM Emission Factors[29,30] (lb/VMT)	
		PM10	PM2.5
LDT1	Employee	0.6895	0.0690
LHD2	Delivery of Office Supplies	1.1462	0.1146
T7 Tractor	Ship Raw Material	1.8839	0.1884
T7 Tractor	Ship Finished Compost	2.0667	0.2067

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[31]	24.3	day/year

Overall Control Efficiency[30]	75%	
Control for watering	55%	Ref 32
Control for vehicle speed	44%	Ref 32

28. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
29. MISCELLANEOUS PROCESS METHODOLOGY 7.9 Entrained Road Travel, Paved Road Dust (Revised and updated, November 2016), https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2016.pdf
30. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
31. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
32. Assumes twice daily watering and limiting travel speed to 25 mph; http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

Table 3p: Offroad Equipment Emission Factors[33]

Offroad Equipment	Typical Model	Fuel	Engine Tier and Information		NOx	VOC	CO	SOx	PM10	PM2.5	CO2	CH4	N2O
			Tier	BHp									
Fuel Truck	Freightliner M2106	Diesel	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Tractors	Massey Fergusen, 7619	Diesel	4f	200	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Excavator	Caterpillar 326	Diesel	4f	201	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Loader	Caterpillar, 962K	Diesel	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Windrow Turner	Scarab	Diesel	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Water Truck	International, 7400 6x4	Diesel	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Sweeper Truck	Freightliner M2	Diesel	4f	240	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083

33. From User Guide for CalEEMod Version 2022.1, Appendix G, Table G-13

Table 3q: Emission Factors for Dust Entrainment from Unpaved Roads for Offroad Equipment[34]

Equipment Description and Use		GVW	Empty	Average	PM Emission	
					PM10	PM2.5
Fuel Truck	Freightliner M2106	31.5	11.5	22.5	2.1106	0.2111
Tractors	Massey Fergusen, 7619	7.9	7.9	22.5	2.1106	0.2111
Excavator	Caterpillar 326	28.6	28.6	22.5	2.1106	0.2111
Loader	Caterpillar, 962K	22.5	22.5	22.5	2.1106	0.2111
Windrow Turner	Scarab	20.0	20.0	22.5	2.1106	0.2111
Water Truck[37]	International, 7400 6x4	31.5	11.5	22.5	0.0000	0.0000
Sweeper Truck[37]	Freightliner M2	16.5	16.5	22.5	0.0000	0.0000

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[38]	24.3	day/year

34. Although compost surfaces are paved, because the compost processing areas are expected to have compost residuals covering the active surfaces, the unpaved road calculations are used to estimate emissions.
35. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
36. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
37. Entrained road dust is assumed to be negligible for the water truck due to watering and the sweeper truck due to watering and sweeping.
38. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Overall Control Efficiency[37]	75%	
Control for watering	55%	Ref 39
Control for vehicle speed	44%	Ref 39

39. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

Table 3r: TAC Emissions from Onroad Gasoline Vehicles

TAC	CAS#	Emission Factor[40] (lb/1000-gal)
1,2,4-Trimethylbenzene	95636	5.89E-01
1,3-Butadiene	106990	3.24E-01
Acetaldehyde	75070	1.47E-01
Acrolein	107028	8.25E-02
Benzene	71432	1.57E+00
Chlorine	7782505	4.55E-01
Copper	7440508	3.30E-03
Ethylbenzene	100414	6.42E-01
Formaldehyde	50000	1.01E+00
Hexane	110543	9.42E-01
Manganese	7439965	3.30E-03
Methanol (Methylalcohol)	67561	2.42E-01
Methyl Ethyl Ketone (2-butanone)	78933	1.18E-02
Methyl tert-butyl ether	1634044	1.15E+00
m-Xylene	108383	2.17E+00
Naphthalene	91203	2.95E-02
Nickel	7440020	3.30E-03
o-Xylene	95476	7.54E-01
Styrene	100425	7.07E-02
Toluene	108883	3.50E+00

40. SJVAPCD, AB 2588 "Hot Spots" Air Toxics Profiles, March 27, 2017, District Toxic Profile ID 176, Gasoline-Fired Portable Catalyst ICE

Table 3s: TAC from Paved Road Dust

TAC	Wt. Fraction[41, 42]
Arsenic	0.000013
Cadmium	0.000003
Hexavalent Chromium	0.00000085
Cobalt	0.000023
Copper	0.000148
Lead	0.000124
Manganese	0.0008
Nickel	0.000012
Mercury	0.000009
Selenium	0.000002
Vanadium (Fume Or Dust)	0.000071

41. CARB speciation profile for Paved Roads

42. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

Table 3t: TAC from Vehicle/Equipment Travel on Unpaved Surfaces

TAC	Concentration[43]
Arsenic	6.20E-06
Cadmium	2.00E-06
Hexavalent Chromium	2.45E-06
Cobalt	8.80E-06
Copper	6.90E-05
Lead	2.00E-04
Manganese	4.40E-04
Nickel	9.50E-05
Mercury	1.00E-06
Selenium	1.00E-06

43. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm

Table 3u: Emissions Reduction from Baseline[44]

Waste Type	Compost Emission Reduction Factor (MT CO2e/ton feedstock)
Food Waste	0.62
Green Waste (includes vegetative food material)	0.44
Green Waste (includes vegetative food material) + Food Waste	0.56
Compost Emission Reduction Factor for Scenario 4	**0.56**

44. CARB, Method for Estimating Greenhouse Gas Emission Reductions From Diversion of Organic Waste From Landfills to Compost Facilities, 2017

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Table 4: Process Throughputs

Table 4: Process Throughput Calculations

Processing Step	Loss based on Initial Charge	Loss based on Previous Step	Proposed Project (TPY)	Proposed Project (TPD)
Initial Charge	---	---	25,000	80
Loss Upon Composting	10.0%	90.0%	2,500	8
Initial Charge to Curing	---	---	22,500	72
Loss Upon Curing	5.0%	5.6%	1,250	4
Initial Charge to Screening	---	---	21,250	68
Loss Upon Screening	5.0%	5.9%	1,250	4
Finished Product	---	---	20,000	64

Data and Parameters

Daily Operating Hours	10	hours/day
Annual Operating Days	312	Day/year

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Table 5: Grinding and Screening PM Emissions

Table 5a: Emission Factors

Process Operation	PM10	PM2.5
Grinding	0.0144	0.00216
Screening	0.0144	0.00216

Table 5b: Grinding and Screening PM Emissions

Operation	Annual Throughput (ton/yr)	Peak Daily Throughput (ton/day)	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Grinding	25,000	80	90.00	13.50	0.29	0.04	0.03	0.00
Screening	21,250	68	76.50	11.48	0.25	0.04	0.02	0.00
		Total	166.50	24.98	0.53	0.08	0.05	0.01
		Total (TPY)	0.05	0.007				

Data and Parameters

Operating Hours	10	hrs/day
Control Efficiency for Watering	75%	

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Table 6: Material Handling PM Emissions

Table 6: Material Handling PM Emissions

Process Step	Annual Throughput (ton/yr)	Average Daily Throughput (ton/day)	No. of Drop Points	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
				PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Feedstock	25,000	80	1	4.70	0.71	0.0150	0.0023	0.00150	0.00023
Grinding[1]	25,000	80	4	18.78	2.84	0.0602	0.0091	0.00602	0.00091
Composting	25,000	80	1	4.70	0.71	0.0150	0.0023	0.00150	0.00023
Curing	22,500	72	1	4.23	0.64	0.0135	0.0021	0.00135	0.00021
Screening[2]	21,250	68	4	15.96	2.42	0.0512	0.0077	0.00512	0.00077
Finished Compost Storage	20,000	64	1	3.76	0.57	0.0120	0.0018	0.00120	0.00018
Truck Loadout	20,000	64	1	3.76	0.57	0.0120	0.0018	0.00120	0.00018
			Total (lb/yr)	55.87	8.46	0.1791	0.0271	0.01791	0.00271
			Total (TPY)	0.028	0.0042				

Data and Parameters

Operating Schedule	10	hr/day
Days per year	312	day/yr
PM10 EF	1.88E-04	lb/ton/drop
PM2.5 EF	2.84E-05	lb/ton/drop

Notes

1. Four drop points are assumed for the grinding: 1) load hopper, 2) hopper to grinder, 3) grinder to conveyor, 4) conveyor to storage pile
2. Four drop points are assumed for the screens: 1) load hopper, 2) hopper to screen, 3) screen to conveyor, 4) conveyor to storage pile

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Table 7: Wind Erosion PM Emissions

Table 7a: Wind Erosion Dimensions/Area

Area	Acres
Composting Facility	11

Table 7b: Wind Erosion PM Emission Factors

Variable	PM10 lb/acre/day	PM2.5 lb/acre/day
Inactive Day Wind Erosion EF	2.74E-01	1.10E-01

Table 7c: Wind Erosion PM Emissions

Area	Acres	Days per Year	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Composting Facility	11.00	365	274.88	109.95	0.75	0.30	0.031	0.013
		Total (TPY)	0.137	0.055				

Data and Parameters			Notes:
1. Control by watering per MDAQMD Mineral Guidance	75%		All piles are watered for dust suppression or moisture control, or both.
Weeks per year	52	weeks/yr	Constant
Days per year	365	day/yr	Constant
Hours per day	24	hr/day	Constant
Conversion	43,560	ft^2/acre	Constant

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Table 8: Composting VOC Emissions

Table 8: Composting VOC Emissions

Process Unit	Annual Throughput (ton/yr)	Emission Factor	Annual Emissions (lb/yr)	Average Daily Emissions (lb/day)	Average Hourly Emissions (lb/hr)
Feedstock Storage	25,000	0.2 lb/wet ton/day	10,000	27.40	1.14
Composting	25,000	3.22 lb/ton	80,550	220.68	9.20
Curing[1]	25,000	0.36 lb/ton	8,950	24.52	1.02
Finished Compost Storage	20,000	0.02 lb/ton	400	1.10	0.05
1. EF developed for composting throughput		Total (lb/yr)	99,900	273.70	11.40
		Total (TPY)	49.95		

Data and Parameters			Notes
Daily Hours of Emissions	24	hr/day	Constant
Feedstock Storage Duration	2	days	Assumption
Days per year	365	days per year	

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Table 9: Composting GHG Emissions

Table 9a: Composting GHG Emissions[1]

Process Unit	Annual Throughput (ton/yr)	CH4 Emission Factor	N2O Emission Factor	CH4 (MT/yr)	N2O (MT/yr)	CO2e (MT/Yr)
Composting	25,000	0.004 kg/kg	0.0003 kg/kg	91	6.80	4,343

Data and Parameters

Conversion	454	gram/lb
Conversion	1,000	Kg/MT
Conversion	1,000	gram/Kg

Table 9b: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

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Table 10: Stationary Engines - Criteria Pollutant and GHG Emissions

Table 10a: Engine Emission Factors

Equipment	Number of Engines	Engine Tier and Information			NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
		Fuel	Tier	BHp									
Diesel Grinders	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Screens	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Stackers	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Colorizer	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Emergency Generator	1	Diesel	3	150	2.85	1.02	3.7	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05
Diesel Emergency Fire Pump	1	Diesel	3	300	2.85	1.02	2.6	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05

Table 10b: Total Daily Criteria Pollutant Emissions from Stationary Engine

Function	Number of Engines	Engine Characteristics		Hr/Day	Criteria Pollutant Exhaust Emissions (lb/day)					
		BHp	Op Load		NOx	VOC	CO	SOx	PM10	PM2.5
Diesel Grinders	1	100	95%	10	0.54	0.10	7.75	0.01	0.02	0.02
Diesel Screens	1	100	95%	10	0.54	0.10	7.75	0.01	0.02	0.02
Diesel Stackers	1	100	95%	10	0.54	0.10	7.75	0.01	0.02	0.02
Diesel Colorizer	1	100	95%	10	0.54	0.10	7.75	0.01	0.02	0.02
Diesel Emergency Generator	1	150	74%	2	1.39	0.50	1.81	0.00	0.07	0.07
Diesel Emergency Fire Pump	1	300	74%	2	2.79	1.00	2.55	0.00	0.15	0.15

Table 10c: Total Annual Criteria Pollutant Emissions from Stationary Engine

Function	Number of Engines	Engine Characteristics		Hr/Yr	Criteria Pollutant Exhaust Emissions (lb/yr)					
		BHp	Op Load		NOx	VOC	CO	SOx	PM10	PM2.5
Diesel Grinders	1	100	95%	3,120	169.90	32.7	2,418	3.20	6.53	6.53
Diesel Screens	1	100	95%	3,120	169.90	32.7	2,418	3.20	6.53	6.53
Diesel Stackers	1	100	95%	3,120	169.90	32.7	2,418	3.20	6.53	6.53
Diesel Colorizer	1	100	95%	3,120	169.90	33	2,418	3.20	6.53	6.53
Diesel Emergency Generator	1	150	74%	200	139.49	50	181	0.24	7.34	7.34
Diesel Emergency Fire Pump	1	300	74%	200	278.97	100	255	0.48	14.7	14.7

Table 10d: Stationary Engine - GHG Emissions

Function	Number of Engines	Engine Characteristics		Hr/Yr	Fuel (gal/yr)	CO2 (MT/yr)	CH4 (kg/yr)	N2O (kg/yr)	CO2e (MT/Yr)
		BHp	Op Load						
Diesel Grinders	1	100	95%	3,120	15,145	154.6	0.0063	0.0013	154.6
Diesel Screens	1	100	95%	3,120	15,145	154.6	0.0063	0.0013	154.6
Diesel Stackers	1	100	95%	3,120	15,145	154.6	0.0063	0.0013	154.6
Diesel Colorizer	1	100	95%	3,120	15,145	154.6	0.0063	0.0013	154.6
Diesel Emergency Generator	1	150	74%	200	1,134	11.6	0.0005	0.0001	11.6
Diesel Emergency Fire Pump	1	300	74%	200	2,269	23.2	0.0009	0.0002	23.2

Table 10e: Brake Specific Fuel Consumption (BSFC) Conversion - Diesel

Parameter	Value	Unit of Measure	Basis
Brake Specific Fuel Consumption	7,000	btu/hp-hr	Per EPA AP-42 Table 3.3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
Brake Specific Fuel Consumption	0.3602	lb/hp-hr	calculated

Table 10f: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

Table 10g: CO2 Emission Factors[2]

Fuel	HHV (MMBtu/gal)	Default CO2 EF	CO2 EF (kg/gal)	Default CH4 EF	CH4 EF (kg/gal)	Default N2O EF	N2O EF (kg/gal)
Diesel	0.138	73.96	10.20648	3.00E-03	4.14E-04	6.00E-04	8.28E-05

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr
Emergency Engine Operating Hours	2	hours/day
Emergency Engine Operating Days	100	day/yr
Conversion	454	gram/lb
Conversion	1,000,000	gm/MT
Conversion	1,000	Kg/MT
Conversion	1,000	gram/Kg

Notes:

1. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
2. Ref: 40 CFR 98, Subpart C, Tables C-1 and C-2

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Table 11: Summary of Criteria Pollutant and GHG Emissions from Composting Activities

Table 11a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
5. Grinding and Screening	---	---	---	---	0.53	0.08
6. Material Handling	---	---	---	---	0.18	0.03
7. Wind Erosion	---	---	---	---	0.75	0.30
8. Composting VOC	---	273.70	---	---	---	---
10. Stationary Engines	6.36	1.92	35.35	0.05	0.30	0.30
Total	6.36	275.62	35.35	0.05	1.77	0.71

Table 11b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
5. Grinding and Screening	---	---	---	---	166.5	24.98
6. Material Handling	---	---	---	---	55.9	8.46
7. Wind Erosion	---	---	---	---	275	110.0
8. Composting VOC	---	99,900	---	---	---	---
10. Stationary Engines	1,098	280	10,107	13.5	48.2	48.2
Total (lb/yr)	1,098	100,180	10,107	13.5	545	192
Total (TPY)	0.55	50.09	5.05	0.0068	0.27	0.096

Table 11c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	CO2e (MT/Yr)
9. Composting GHG	N/A	91	6.80	4,343
10. Stationary Engines	653	0.0265	0.0053	653
Total (MT/yr)	653	91	6.81	4,996

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Table 12: TAC from Composting Dust

Table 12a: Material Handling and Wind Erosion Dust Emissions (PM10)

Source	lb/hr	lb/yr
5. Grinding and Screening	0.05	166.50
6. Material Handling	0.02	55.87
7. Wind Erosion	0.03	274.88
Total PM10	0.10	497.25

Table 12b: TAC from Material Handling and Wind Erosion

TAC	CAS	Concentration[1, 2] (lb/lb Dust)	Total TAC Emissions		Grinding and Screening TAC Emissions		Material Handling TAC Emissions		Wind Erosion TAC Emissions	
			(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)
Arsenic	7440-38-2	6.20E-06	6.36E-07	3.08E-03	3.31E-07	1.03E-03	1.11E-07	3.46E-04	1.95E-07	1.70E-03
Cadmium	7440-43-9	2.00E-06	2.05E-07	9.94E-04	1.07E-07	3.33E-04	3.58E-08	1.12E-04	6.28E-08	5.50E-04
Hexavalent Chromium	18540-29-9	2.45E-06	2.51E-07	1.22E-03	1.31E-07	4.08E-04	4.39E-08	1.37E-04	7.69E-08	6.73E-04
Cobalt	7440-48-4	8.80E-06	9.03E-07	4.38E-03	4.70E-07	1.47E-03	1.58E-07	4.92E-04	2.76E-07	2.42E-03
Copper	7440-50-8	6.90E-05	7.08E-06	3.43E-02	3.68E-06	1.15E-02	1.24E-06	3.86E-03	2.17E-06	1.90E-02
Lead	7439-92-1	2.00E-04	2.05E-05	9.94E-02	1.07E-05	3.33E-02	3.58E-06	1.12E-02	6.28E-06	5.50E-02
Manganese	7439-96-5	4.40E-04	4.52E-05	2.19E-01	2.35E-05	7.33E-02	7.88E-06	2.46E-02	1.38E-05	1.21E-01
Mercury	7439-97-6	1.00E-06	1.03E-07	4.97E-04	5.34E-08	1.67E-04	1.79E-08	5.59E-05	3.14E-08	2.75E-04
Nickel	7440-02-0	9.50E-05	9.75E-06	4.72E-02	5.07E-06	1.58E-02	1.70E-06	5.31E-03	2.98E-06	2.61E-02
Selenium	7782-49-2	1.00E-06	1.03E-07	4.97E-04	5.34E-08	1.67E-04	1.79E-08	5.59E-05	3.14E-08	2.75E-04
			Annual Total	0.410	Annual Total	0.137	Annual Total	0.046	Annual Total	0.227

Notes:

1. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm
2. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

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Table 13: Organic TAC Emissions

Table 13a: Organic Storage VOC Emissions

Process Description	(lb/hr)	(lb/yr)
Feedstock Storage	1.14	10,000
Composting	9.20	80,550
Curing	1.02	8,950
Finished Compost Storage	0.05	400

Table 13b: Feedstock Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	8.25E-03	9.42E-03	82.50
1,4-Dichlorobenzene	4.21E-04	4.81E-04	4.21
2-Propanol (Isopropylalcohol, IPA)	1.13E-03	1.29E-03	11.30
Acetaldehyde	8.96E-02	1.02E-01	896.00
Allyl Chloride (3-Chloropropene)	2.19E-04	2.50E-04	2.19
Benzene	2.24E-04	2.56E-04	2.24
Carbondisulfide	2.18E-04	2.49E-04	2.18
Chloroethane	1.85E-04	2.11E-04	1.85
Chloroform	3.42E-04	3.90E-04	3.42
Ethylbenzene	3.04E-04	3.47E-04	3.04
Ethylene Dichloride (1,2-dichloroethane)	2.84E-04	3.24E-04	2.84
Hexane	7.86E-03	8.97E-03	78.60
Methanol (Methylalcohol)	9.68E-02	1.11E-01	968.00
Methyl Ethyl Ketone (2-butanone)	5.36E-02	6.12E-02	536.00
Naphthalene	2.81E-04	3.21E-04	2.81
Propene (Propylene)	9.45E-05	1.08E-04	0.95
Styrene	2.98E-04	3.40E-04	2.98
Toluene	2.64E-04	3.01E-04	2.64
Vinyl acetate	1.45E-02	1.66E-02	145.00
Xylenes	3.15E-04	3.60E-04	3.15

Table 13c: Composting TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	7.23E-02	6.65E-01	5823.77
1,4-Dichlorobenzene	2.22E-04	2.04E-03	17.88
2-Propanol (Isopropylalcohol, IPA)	2.59E-04	2.38E-03	20.86
Acetaldehyde	4.29E-02	3.94E-01	3455.60
Allyl Chloride (3-Chloropropene)	1.08E-04	9.93E-04	8.70
Benzene	1.60E-04	1.47E-03	12.89
Carbondisulfide	3.74E-04	3.44E-03	30.13
Chloroethane	8.30E-05	7.63E-04	6.69
Chloroform	1.63E-04	1.50E-03	13.13
Ethylbenzene	3.50E-04	3.22E-03	28.19
Ethylene Dichloride (1,2-dichloroethane)	5.37E-04	4.94E-03	43.26
Hexane	3.18E-04	2.92E-03	25.61
Methanol (Methylalcohol)	4.88E-02	4.49E-01	3930.84
Methyl Ethyl Ketone (2-butanone)	7.82E-02	7.19E-01	6299.01
Naphthalene	7.14E-04	6.57E-03	57.51
Propene (Propylene)	5.89E-03	5.42E-02	474.44
Styrene	3.53E-04	3.25E-03	28.43
Toluene	6.30E-04	5.79E-03	50.75
Vinyl acetate	3.01E-03	2.77E-02	242.46
Xylenes	4.36E-04	4.01E-03	35.12

Table 13d: Curing TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	1.08E-01	1.10E-01	966.60
1,4-Dichlorobenzene	6.10E-04	6.23E-04	5.46
2-Propanol (Isopropylalcohol, IPA)	7.37E-04	7.53E-04	6.60
Acetaldehyde	2.83E-02	2.89E-02	253.29
Allyl Chloride (3-Chloropropene)	8.75E-04	8.94E-04	7.83
Benzene	5.42E-04	5.54E-04	4.85
Carbondisulfide	1.30E-03	1.33E-03	11.64
Chloroethane	2.68E-04	2.74E-04	2.40
Chloroform	4.99E-04	5.10E-04	4.47
Ethylbenzene	8.06E-04	8.23E-04	7.21
Ethylene Dichloride (1,2-dichloroethane)	5.78E-04	5.91E-04	5.17
Hexane	6.42E-04	6.56E-04	5.75
Methanol (Methylalcohol)	3.07E-02	3.14E-02	274.77
Methyl Ethyl Ketone (2-butanone)	3.77E-02	3.85E-02	337.42
Naphthalene	1.12E-03	1.14E-03	10.02
Propene (Propylene)	3.21E-02	3.28E-02	287.30
Styrene	6.34E-04	6.48E-04	5.67
Toluene	2.54E-03	2.60E-03	22.73
Vinyl acetate	7.67E-04	7.84E-04	6.86
Xylenes	1.24E-03	1.27E-03	11.10

Table 13e: Finished Compost Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	4.86E-02	2.22E-03	19.44
1,4-Dichlorobenzene	3.56E-03	1.63E-04	1.42
2-Propanol (Isopropylalcohol, IPA)	1.46E-03	6.67E-05	0.58
Acetaldehyde	1.86E-02	8.49E-04	7.44
Allyl Chloride (3-Chloropropene)	1.86E-03	8.49E-05	0.74
Benzene	1.89E-03	8.63E-05	0.76
Carbondisulfide	7.75E-03	3.54E-04	3.10
Chloroethane	1.56E-03	7.12E-05	0.62
Chloroform	2.89E-03	1.32E-04	1.16
Ethylbenzene	2.57E-03	1.17E-04	1.03
Ethylene Dichloride (1,2-dichloroethane)	2.40E-03	1.10E-04	0.96
Hexane	2.09E-03	9.54E-05	0.84
Methanol (Methylalcohol)	7.77E-04	3.55E-05	0.31
Methyl Ethyl Ketone (2-butanone)	1.75E-03	7.99E-05	0.70
Naphthalene	3.11E-03	1.42E-04	1.24
Propene (Propylene)	6.87E-02	3.14E-03	27.48
Styrene	2.53E-03	1.16E-04	1.01
Toluene	6.96E-03	3.18E-04	2.78
Vinyl acetate	2.09E-03	9.54E-05	0.84
Xylenes	5.15E-03	2.35E-04	2.06

Notes:

1. Speciation profile from BAAQMD Permit Handbook, Section 11.15

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Table 14: NH3 Emissions

Table 14a: NH3 Emissions

Process Unit	Annual Throughput (ton/yr)	Daily Throughput (ton/day)	Emission Factor (lb/ton)	Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Feedstock Storage	25,000	80	0.020 lb/ton/day	0.11	1,000
Composting + Curing	25,000	80	0.78 lb/ton	2.23	19,500
Finished Compost Storage	20,000	64	0.0004 lb/ton	0.0009	8

Assumed Percentage of Composting + Curing to Composting:	90%	Assumed same as percent of VOC emissions

Table 14b: Colorant Application Ammonia Emissions[1]

Equipment	Annual Throughput (ton/yr)	Hourly Throughput (ton/hr)	Ammonia Emissions (lb/hr)	Ammonia Emissions (lb/yr)
Colorizer	1,250	50.0	5.42	135

	lb/hr	lb/yr
Total Ammonia Emissions:	**7.7577**	**20,643**

1. Ammonia emissions may occur at the colorizer or from the storage piles. No attempt has been made to determine the actual emission point.

Data and Parameters

Daily Hours of Emissions	24	hr/day	
Days of feedstock storage	2	days	
Annual hours of operation	8,760	hr/yr	
Bulk density - mulch	600	lb/cy	Average per Google AI
Conversion	2000	lb/ton	Constant
Application rate	6.5	lbs/cy	Google AI, max of listed range
Ammonia Concentration	0.5%	by weight	SDS

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Table 15: Stationary Diesel Engine TAC Emissions

Table 15: Stationary Diesel Engine TAC Emissions

Vehicle	PM10 Emissions (lb/hr)	PM10 Emissions (lb/day)	PM10 Emissions (lb/yr)
Diesel Grinders	0.002	2.09E-02	6.53
Diesel Screens	0.002	2.09E-02	6.53
Diesel Stackers	0.002	2.09E-02	6.53
Diesel Colorizer	0.002	2.09E-02	6.53
Diesel Emergency Generator	0.037	7.34E-02	7.34
Diesel Emergency Fire Pump	0.073	1.47E-01	14.68
Total PM10 = DPM	**0.118**	**3.04E-01**	**48.16**

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr
Emergency Engine Operating Hours	2	hours/day
Emergency Engine Operating Days	100	day/yr

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Table 16: Summary of TAC Emissions from Composting Activities

Table 16a: Summary of TAC Emissions from Composting Activities, lb/yr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine	Emergency Generator	Fire Pump	Total
Arsenic	7440382	1.03E-03	3.46E-04	1.70E-03	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	0.00E+00	0.00E+00	3.08E-03
Cadmium	7440439	3.33E-04	1.12E-04	5.50E-04	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	0.00E+00	0.00E+00	9.94E-04
Hexavalent Chromium	18540299	4.08E-04	1.37E-04	6.73E-04	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	0.00E+00	0.00E+00	1.22E-03
Cobalt	7440484	1.47E-03	4.92E-04	2.42E-03	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	0.00E+00	0.00E+00	4.38E-03
Copper	7440508	1.15E-02	3.86E-03	1.90E-02	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	0.00E+00	0.00E+00	3.43E-02
Lead	7439921	3.33E-02	1.12E-02	5.50E-02	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	0.00E+00	0.00E+00	9.94E-02
Manganese	7439965	7.33E-02	2.46E-02	1.21E-01	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	0.00E+00	0.00E+00	2.19E-01
Mercury	7439976	1.67E-04	5.59E-05	2.75E-04	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	0.00E+00	0.00E+00	4.97E-04
Nickel	7440020	1.58E-02	5.31E-03	2.61E-02	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	0.00E+00	0.00E+00	4.72E-02
Selenium	7782492	1.67E-04	5.59E-05	2.75E-04	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	0.00E+00	0.00E+00	4.97E-04
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	8.25E+01	5.82E+03	9.67E+02	1.94E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.89E+03
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	4.21E+00	1.79E+01	5.46E+00	1.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.90E+01
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	1.13E+01	2.09E+01	6.60E+00	5.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.93E+01
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	8.96E+02	3.46E+03	2.53E+02	7.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.61E+03
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	2.19E+00	8.70E+00	7.83E+00	7.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E+01
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	2.24E+00	1.29E+01	4.85E+00	7.56E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E+01
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	2.18E+00	3.01E+01	1.16E+01	3.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.70E+01
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	1.85E+00	6.69E+00	2.40E+00	6.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.16E+01
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	3.42E+00	1.31E+01	4.47E+00	1.16E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E+01
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	3.04E+00	2.82E+01	7.21E+00	1.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E+01
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	2.84E+00	4.33E+01	5.17E+00	9.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.22E+01
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	7.86E+01	2.56E+01	5.75E+00	8.36E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+02
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	9.68E+02	3.93E+03	2.75E+02	3.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.17E+03
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	5.36E+02	6.30E+03	3.37E+02	7.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.17E+03
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	2.81E+00	5.75E+01	1.00E+01	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.16E+01
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	9.45E-01	4.74E+02	2.87E+02	2.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.90E+02
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	2.98E+00	2.84E+01	5.67E+00	1.01E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E+01
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	2.64E+00	5.07E+01	2.27E+01	2.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.89E+01
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	1.45E+02	2.42E+02	6.86E+00	8.36E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E+02
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	3.15E+00	3.51E+01	1.11E+01	2.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.14E+01
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	1.00E+03	1.76E+04	1.95E+03	7.60E+00	1.35E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.06E+04
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.53E+00	6.53E+00	6.53E+00	6.53E+00	7.34E+00	1.47E+01	4.82E+01

Table 16b: Summary of TAC Emissions from Composting Activities, lb/hr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine	Emergency Generator	Fire Pump	Total
Arsenic	7440382	3.31E-07	1.11E-07	1.95E-07	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	0.00E+00	0.00E+00	6.36E-07
Cadmium	7440439	1.07E-07	3.58E-08	6.28E-08	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	0.00E+00	0.00E+00	2.05E-07
Hexavalent Chromium	18540299	1.31E-07	4.39E-08	7.69E-08	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	0.00E+00	0.00E+00	2.51E-07
Cobalt	7440484	4.70E-07	1.58E-07	2.76E-07	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	0.00E+00	0.00E+00	9.03E-07
Copper	7440508	3.68E-06	1.24E-06	2.17E-06	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	0.00E+00	0.00E+00	7.08E-06
Lead	7439921	1.07E-05	3.58E-06	6.28E-06	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	0.00E+00	0.00E+00	2.05E-05
Manganese	7439965	2.35E-05	7.88E-06	1.38E-05	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	0.00E+00	0.00E+00	4.52E-05
Mercury	7439976	5.34E-08	1.79E-08	3.14E-08	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	0.00E+00	0.00E+00	1.03E-07
Nickel	7440020	5.07E-06	1.70E-06	2.98E-06	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	0.00E+00	0.00E+00	9.75E-06
Selenium	7782492	5.34E-08	1.79E-08	3.14E-08	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	0.00E+00	0.00E+00	1.03E-07
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	9.42E-03	6.65E-01	1.10E-01	2.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.87E-01
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	4.81E-04	2.04E-03	6.23E-04	1.63E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.31E-03
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	1.29E-03	2.38E-03	7.53E-04	6.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.49E-03
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	1.02E-01	3.94E-01	2.89E-02	8.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.27E-01
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	2.50E-04	9.93E-04	8.94E-04	8.49E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-03
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	2.56E-04	1.47E-03	5.54E-04	8.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-03
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	2.49E-04	3.44E-03	1.33E-03	3.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.37E-03
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	2.11E-04	7.63E-04	2.74E-04	7.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-03
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	3.90E-04	1.50E-03	5.10E-04	1.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-03
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	3.47E-04	3.22E-03	8.23E-04	1.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.51E-03
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	3.24E-04	4.94E-03	5.91E-04	1.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.96E-03
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	8.97E-03	2.92E-03	6.56E-04	9.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-02
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	1.11E-01	4.49E-01	3.14E-02	3.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.91E-01
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	6.12E-02	7.19E-01	3.85E-02	7.99E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.19E-01
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	3.21E-04	6.57E-03	1.14E-03	1.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.17E-03
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	1.08E-04	5.42E-02	3.28E-02	3.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.02E-02
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	3.40E-04	3.25E-03	6.48E-04	1.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.35E-03
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	3.01E-04	5.79E-03	2.60E-03	3.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.01E-03
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	1.66E-02	2.77E-02	7.84E-04	9.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.51E-02
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	3.60E-04	4.01E-03	1.27E-03	2.35E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.87E-03
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	1.14E-01	2.00E+00	2.23E-01	8.68E-04	5.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.76E+00
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-03	2.09E-03	2.09E-03	2.09E-03	3.67E-02	7.34E-02	1.18E-01

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Table 17: Onroad Mobile Sources - Vehicle Information

Table 17: Vehicle Information and Mileage Calculation

Vehicle Type	Vehicle Use	Number of Vehicles per Day	Vehicle Weight (lb)			Fuel	Days	One-way Trips per Vehicle per Day	One-way Trips per Year	One-way Onsite Trip Mileage	One-way Offsite Trip Mileage	Total One-way Trip Mileage	Onsite Total VMT/yr	Offsite Total VMT/yr	Total VMT/yr
			Gross	Empty	Average										
LDT1	Employee	12	3,750	3,750	3,750	Gasoline	312	2	7,488	0.00	15	15.00	0	112,320	112,320
LHD2	Delivery of Office Supplies	1	15,006	8,200	11,603	Diesel	312	2	624	0.20	15	15.20	125	9,360	9,485
T7 Tractor	Ship Raw Material	35	47,000	23,000	35,000	Diesel	312	2	21,840	0.20	5	5.20	4,368	109,200	113,568
T7 Tractor	Ship Finished Compost	7	63,000	23,000	43,000	Diesel	312	2	4,368	0.20	15	15.20	874	65,520	66,394

Assuming 12 cu yd per raw material truck, 20 cu yd per compost product truck

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Table 18: Onroad Mobile Sources Exhaust Emissions

Table 18a: Onroad Mobile Sources - Criteria Pollutant Exhaust Emissions

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)	Total Running Exhaust (lb/yr)	Total Idle (lb/yr)	Total Start (lb/yr)	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)	Onsite Emissions (lb/day)	Offsite Emissions (lb/day)
NOx	LDT1	0.266	0.000	0.420	65.79	0.00	6.92	72.71	0.00	72.71	0.23	0.00E+00	2.33E-01
	LHD2	0.742	1.641	0.000	15.51	1.13	0.00	16.63	0.22	16.42	0.05	7.01E-04	5.26E-02
	T7 Tractor	0.927	5.946	5.191	367.49	171.63	299.68	838.80	24.43	814.37	2.69	7.83E-02	2.61E+00
VOC	LDT1	0.073	0.000	0.660	18.04	0.00	10.89	28.93	0.00	28.93	0.09	0.00E+00	9.27E-02
	LHD2	0.102	0.120	0.000	2.13	0.08	0.00	2.21	0.03	2.18	0.01	9.33E-05	6.99E-03
	T7 Tractor	0.010	0.635	0.000	3.81	18.32	0.00	22.13	0.64	21.49	0.07	2.07E-03	6.89E-02
CO	LDT1	4.803	0.000	6.799	1,188.30	0.00	112.13	1,300.44	0.00	1,300.44	4.17	0.00E+00	4.17E+00
	LHD2	0.241	0.996	0.000	5.04	0.68	0.00	5.72	0.08	5.65	0.02	2.41E-04	1.81E-02
	T7 Tractor	0.075	9.364	0.000	29.64	270.27	0.00	299.91	8.74	291.18	0.96	2.80E-02	9.33E-01
SOx	LDT1	0.002	0.000	0.000	0.40	0.00	0.01	0.41	0.00	0.41	0.00	0.00E+00	1.31E-03
	LHD2	0.002	0.001	0.000	0.04	0.00	0.00	0.05	0.00	0.04	0.00	1.90E-06	1.43E-04
	T7 Tractor	0.005	0.005	0.000	2.06	0.14	0.00	2.19	0.06	2.13	0.01	2.05E-04	6.83E-03
PM10	LDT1	0.004	0.000	0.003	1.05	0.00	0.06	1.10	0.00	1.10	0.00	0.00E+00	3.54E-03
	LHD2	0.020	0.030	0.000	0.43	0.02	0.00	0.45	0.01	0.44	0.00	1.88E-05	1.41E-03
	T7 Tractor	0.009	0.003	0.000	3.44	0.07	0.00	3.51	0.10	3.41	0.01	3.28E-04	1.09E-02
PM2.5	LDT1	0.004	0.000	0.003	0.96	0.00	0.05	1.02	0.00	1.02	0.00	0.00E+00	3.26E-03
	LHD2	0.020	0.029	0.000	0.41	0.02	0.00	0.43	0.01	0.42	0.00	1.80E-05	1.35E-03
	T7 Tractor	0.008	0.002	0.000	3.29	0.07	0.00	3.36	0.10	3.26	0.01	3.14E-04	1.05E-02

Table 18b: Onroad Mobile Sources - Fugitive VOC Emissions

Pollutant	Vehicle Type	Hot Soak EF (g/trip)	Running Loss EF (g/mile)	Diurnal EF (g/veh/day)	Total Hot Soak (lb/yr)	Total Running Loss (lb/yr)	Total Diurnal (lb/yr)	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)
VOC	LDT1	0.37	0.68	4.24	6.1	169.0	35.0	210.02	0.00	210.02	0.67
	LHD2	-	-	-	-	-	-	-	-	-	-
	T7 Tractor	-	-	-	-	-	-	-	-	-	-

Table 18c: Onroad Mobile Sources - Fugitive PM Emissions

Pollutant	Vehicle Type	Tire Wear (g/mile)	Brake Wear (g/mile)	Total Tire Wear (lb/yr)	Total Brake Wear	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)
PM10	LDT1	0.0080	0.0085	1.98	2.09	4.07	0.00	4.07	0.013
	LHD2	0.0120	0.0910	0.25	1.90	2.15	0.03	2.12	0.007
	T7 Tractor	0.0360	0.0874	14.27	34.63	48.90	1.42	47.48	0.157
PM2.5	LDT1	0.0020	0.0030	0.49	0.73	1.23	0.00	1.23	0.004
	LHD2	0.0030	0.0319	0.06	0.67	0.73	0.01	0.72	0.002
	T7 Tractor	0.0090	0.0306	3.57	12.12	15.69	0.46	15.23	0.050

Table 18d: Summary of Criteria Pollutant Emissions from Onroad Operations Vehicles

Type	NO_x (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SO_x (lb/yr)	PM_{10} (lb/yr)	$PM_{2.5}$ (lb/yr)
Exhaust	928.15	53.27	1606.07	2.65	5.06	4.81
Fugitive	---	210.02	---	---	55.13	17.64
Total (Lb/Yr)	928.15	263.29	1606.07	2.65	60.19	22.45
Total (Lb/day)	2.97	0.84	5.15	0.01	0.19	0.07
Total (TPY)	0.46	0.13	0.80	0.001	0.03	0.01

Table 18e: Onroad Mobile Sources - Greenhouse Gas Exhaust Emissions

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)	Total Running Exhaust (MT/yr)	Total Idle (MT/yr)	Total Start (MT/yr)	Total Emissions (MT/yr)
CO2	LDT1	377.335	0.000	90.387	42.4	0.00E+00	6.77E-01	43
	LHD2	636.055	212.543	0.000	6.0	6.63E-02	0.00E+00	6.10
	T7 Tractor	1544.504	1410.663	0.000	278.0	1.85E+01	0.00E+00	296
CH4	LDT1	0.016	0.000	0.101	0.0	0.00E+00	7.55E-04	0
	LHD2	0.005	0.006	0.000	0.0	1.74E-06	0.00E+00	0.00
	T7 Tractor	0.000	0.029	0.000	0.0	3.86E-04	0.00E+00	0
N2O	LDT1	0.017	0.000	0.029	0.0	0.00E+00	2.20E-04	0
	LHD2	0.103	0.034	0.000	0.0	1.07E-05	0.00E+00	0.00
	T7 Tractor	0.400	0.227	0.000	0.1	2.98E-03	0.00E+00	0
HFC	LDT1	0.000	N/A	N/A	0.0	N/A	N/A	0
	LHD2	0.001	N/A	N/A	0.0	N/A	N/A	0.00
	T7 Tractor	0.001	N/A	N/A	0.0	N/A	N/A	0
CO2e	LDT1							44
	LHD2							6.48
	T7 Tractor							319
							Total	**369**

Table 18f: GHG Emissions from Onroad Mobile Source Activity

CO_2	CH_4	N_2O	Total CO_2e
(MT/Yr)	(Kg/Yr)	(Kg/Yr)	(MT/Yr)
346	3.05	78.09	369

Table 18g: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265
HFC[1]	12,400

1. Conservatively using GWP for HFC-23, the HFC with the highest GWP

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 19: Onroad Mobile Source Paved Road Dust

Table 19a: Paved Road PM_{10} Emission Factors[1]

Vehicle	Average Vehicle Weight (ton)	Pollutant	Freeway (lb/VMT)	Major (lb/VMT)	Collector (lb/VMT)	Local (lb/VMT)	Rural/Onsite (lb/VMT)
		sL (g/m^2)^2 -->	0.020	0.035	0.035	0.320	1.600
Fleet Average	2.40	PM10	1.48E-04	2.46E-04	2.46E-04	1.84E-03	7.97E-03
		PM2.5	3.70E-05	6.15E-05	6.15E-05	4.61E-04	1.99E-03

$E = k\ (sL)^{0.91} \times (W)^{1.02} * C_f$

Variable	Value	UOM
k (PM10)	1.00	g/VMT
k(PM2.5)	0.25	g/VMT
Rain Days[3]	49	day/yr
C_f	0.966	

Table 19b: Fraction of VMT by Functional Type of Roadway[2]

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 4

Table 19c: Summary of Onroad VMT by Phase and Road Type

EMFAC Vehicle Type	Activity	Unit of Measure	Freeway	Major	Collector	Local	Rural	Total Offsite	Onsite	Total VMT
LDT1	Employee	VMT/day	119.70	140.29	99.32	0.72	6.00	366	0	366
		VMT/Yr	37,346	43,771	30,989	225	1,872	112,320	0	112,320
LHD2	Delivery of Office Supplies	VMT/day	9.98	11.69	8.28	0.06	0.50	31	0.4	31
		VMT/Yr	3,112	3,648	2,582	19	156	9,360	125	9,485
T7 Tractor	Ship Raw Material	VMT/day	116.38	136.40	96.57	0.70	17.50	368	14	382
		VMT/Yr	36,309	42,555	30,128	218	5,460	109,200	4,368	113,568
T7 Tractor	Ship Finished Compost	VMT/day	69.83	81.84	57.94	0.42	3.50	214	2.8	216
		VMT/Yr	21,785	25,533	18,077	131	1,092	65,520	874	66,394

Table 19d: Entrained Road Dust Emissions from Travel on Paved Roads (lb/day)

EMFAC Vehicle	Activity	Pollutant	Freeway	Major	Collector	Local	Rural	Onsite	Total
LDT1	Employee	PM10	1.77E-02	3.45E-02	2.44E-02	1.33E-03	4.78E-02	0.00E+00	1.26E-01
		PM2.5	4.42E-03	8.63E-03	6.11E-03	3.32E-04	1.20E-02	0.00E+00	3.15E-02
LHD2	Delivery of Office Supplies	PM10	1.47E-03	2.88E-03	2.04E-03	1.11E-04	3.99E-03	3.19E-03	1.37E-02
		PM2.5	3.69E-04	7.19E-04	5.09E-04	2.77E-05	9.97E-04	7.97E-04	3.42E-03
T7 Tractor	Ship Raw Material	PM10	1.72E-02	3.36E-02	2.38E-02	1.29E-03	1.40E-01	1.12E-01	3.27E-01
		PM2.5	4.30E-03	8.39E-03	5.94E-03	3.23E-04	3.49E-02	2.79E-02	8.18E-02
T7 Tractor	Ship Finished Compost	PM10	1.03E-02	2.01E-02	1.43E-02	7.74E-04	2.79E-02	2.23E-02	9.57E-02
		PM2.5	2.58E-03	5.03E-03	3.56E-03	1.94E-04	6.98E-03	5.58E-03	2.39E-02
Total	All	PM10	0.05	0.09	0.06	0.00	0.22	0.14	0.56
		PM2.5	0.01	0.02	0.02	0.00	0.05	0.03	0.14

Table 19e: Entrained Road Dust Emissions from Travel on Paved Roads (lb/yr)

EMFAC Vehicle	Activity	Pollutant	Freeway	Major	Collector	Local	Rural	Onsite	Total
LDT1	Employee	PM10	5.52	10.77	7.63	0.41	14.93	0.00	39.26
		PM2.5	1.38	2.69	1.91	0.10	3.73	0.00	9.81
LHD2	Delivery of Office Supplies	PM10	0.46	0.90	0.64	0.03	1.24	1.00	4.27
		PM2.5	0.12	0.22	0.16	0.01	0.31	0.25	1.07
T7 Tractor	Ship Raw Material	PM10	5.37	10.47	7.41	0.40	43.54	34.83	102.03
		PM2.5	1.34	2.62	1.85	0.10	10.88	8.71	25.51
T7 Tractor	Ship Finished Compost	PM10	3.22	6.28	4.45	0.24	8.71	6.97	29.87
		PM2.5	0.81	1.57	1.11	0.06	2.18	1.74	7.47
Total	All	PM10	14.57	28.42	20.12	1.09	68.42	42.79	175.42
		PM2.5	3.64	7.11	5.03	0.27	17.10	10.70	43.85

Notes:

1. Methodology per AP-42, 13.2.1 Paved Roads
2. SJVAPCD, Appendix A: Comments and Responses Rule 9510 and 3180 December 15, 2005
3. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
4. Rural is assumed to be 0.25 miles per one-way trip.

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 20: Fugitive Dust From Travel on Unpaved Roads

Table 20a: Unpaved Road Emission Factors[1]

EMFAC Vehicle Type	Activity	PM Emission Factors[2,3] (lb/VMT)	
		PM10	PM2.5
LDT1	Employee	0.6895	0.0690
LHD2	Delivery of Office Supplies	1.1462	0.1146
T7 Tractor	Ship Raw Material	1.8839	0.1884
T7 Tractor	Ship Finished Compost	2.0667	0.2067

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[4]	24.3	day/year

Table 20b: Vehicle Miles Travelled for Transport of Personnel, Supplies, Materials and Product

EMFAC Vehicle Type	Activity	Vehicle Weight (ton)			No. of days	Veh/day	Trips/Day	Trips/Year	One-way Miles per Trip	Total VMT[5] (mi/day)	Total VMT[5] (mi/yr)
		Gross	Empty	Average							
LDT1	Employee	1.88	1.88	1.88	312	12	2	7,488	0.00	0	0
LHD2	Delivery of Office Supplies	7.50	4.10	5.80	312	1	2	624	0.20	0.4	125
T7 Tractor	Ship Raw Material	23.50	11.50	17.50	312	35	2	21,840	0.20	14.0	4,368
T7 Tractor	Ship Finished Compost	31.50	11.50	21.50	312	7	2	4,368	0.20	2.8	874

Table 20c: Entrained Road Dust from Unpaved Roads

EMFAC Vehicle Type	Activity	Uncontrolled (lb/day)		Controlled (lb/day)		Uncontrolled (lb/yr)		Controlled (lb/yr)	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
LDT1	Employee	0.00	0.00	0.00	0.00	0	0	0	0
LHD2	Delivery of Office Supplies	0.46	0.05	0.12	0.01	143	14	36	4
T7 Tractor	Ship Raw Material	26.37	2.64	6.65	0.66	8,229	823	2,074	207
T7 Tractor	Ship Finished Compost	5.79	0.58	1.46	0.15	1,805	181	455	45
Total		32.6	3.3	8.22	0.82	10,177	1,018	2,565	256
Total (ton/yr)						5.1	0.5	1.3	0.1

Overall Control Efficiency[6]	75%
Control for watering	55%
Control for vehicle speed	44%

Notes:

1. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
2. MISCELLANEOUS PROCESS METHODOLOGY 7.9 Entrained Road Travel, Paved Road Dust (Revised and updated, November 2016), https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2016.pdf
3. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
4. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
5. Assume onsite roads are unpaved, offsite roads are paved.
6. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

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Table 21: Offroad Equipment - Criteria Pollutant and GHG Emissions

Table 21a: Emission Factors[1]

Unit Count	Offroad Equipment	Typical Model (or Equivalent)	Engine Tier and Information		NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
			Tier	BHp									
1	Fuel Truck	Freightliner M2106	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Tractors	Massey Fergusen, 7619	4f	200	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Excavator	Caterpillar 326	4f	201	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
3	Loader	Caterpillar, 962K	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Windrow Turner	Scarab	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Water Truck	International, 7400 6x4	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Sweeper Truck	Freightliner M2	4f	240	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083

Table 21b: Total Criteria Pollutant Emissions from Offroad Equipment

Unit	Offroad Equipment	Typical Model	Engine Characteristics			Criteria Pollutant Exhaust Emissions (lb/day)					
			BHp	Op Load	Hr/Day	NOx	VOC	CO	SOx	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	350	0.38	2.00	0.18	0.08	1.52	0.00	0.01	0.01
1	Tractors	Massey Fergusen, 7619	200	0.37	10.00	0.49	0.23	4.24	0.01	0.02	0.02
1	Excavator	Caterpillar 326	201	0.38	10.00	0.51	0.24	4.38	0.01	0.02	0.02
3	Loader	Caterpillar, 962K	250	0.36	10.00	1.79	0.83	15.48	0.03	0.06	0.06
1	Windrow Turner	Scarab	250	0.42	10.00	0.69	0.32	6.02	0.01	0.02	0.02
1	Water Truck	International, 7400 6x4	350	0.38	10.00	0.88	0.41	7.62	0.01	0.03	0.03
1	Sweeper Truck	Freightliner M2	240	0.46	10.00	0.73	0.34	6.33	0.01	0.02	0.02
Total Emissions from offroad equipment (lb/day)						5.26	2.45	45.59	0.09	0.18	0.18

Table 21c: Total Criteria Pollutant Emissions from Offroad Equipment

Unit	Offroad Equipment	Typical Model	Engine Characteristics			Criteria Pollutant Exhaust Emissions (lb/yr)					
			BHp	Op Load[1]	Hr/Yr	NOx	VOC	CO	SOx	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	350	0.38	624	54.89	25.61	475.70	0.90	1.83	1.83
1	Tractors	Massey Fergusen, 7619	200	0.37	3,120	152.70	71.26	1,323.39	2.50	5.09	5.09
1	Excavator	Caterpillar 326	201	0.38	3,120	157.61	73.55	1,365.95	2.58	5.25	5.25
3	Loader	Caterpillar, 962K	250	0.36	3,120	557.14	260.00	4,828.57	9.10	18.57	18.57
1	Windrow Turner	Scarab	250	0.42	3,120	216.67	101.11	1,877.78	3.54	7.22	7.22
1	Water Truck	International, 7400 6x4	350	0.38	3,120	274.44	128.07	2,378.52	4.48	9.15	9.15
1	Sweeper Truck	Freightliner M2	240	0.46	3,120	227.81	106.31	1,974.35	3.72	7.59	7.59
Total Emissions from offroad equipment (lb/yr)						1,641.26	765.92	14,224.26	26.82	54.71	54.71
Total Emissions from offroad equipment (TPY)						0.82	0.38	7.11	0.01	0.03	0.03

Table 21d: Offroad Equipment - GHG Emissions[2]

Unit Count	Offroad Equipment	Typical Model (or Equivalent)	Engine Information				Fuel (gal/yr)	CO2 (MT/yr)	CH4 (kg/yr)	N2O (kg/yr)	CO2e (MT/Yr)
			Tier	BHp	Hr/Yr	Op Load[1]					
1	Fuel Truck	Freightliner M2106	4f	350	624	0.38	4,240	43	1.76	0.35	43
1	Tractors	Massey Fergusen, 7619	4f	200	3,120	0.37	11,797	120	4.88	0.98	121
1	Excavator	Caterpillar 326	4f	201	3,120	0.38	12,176	124	5.04	1.01	125
3	Loader	Caterpillar, 962K	4f	250	3,120	0.36	43,042	439	17.82	3.56	441
1	Windrow Turner	Scarab	4f	250	3,120	0.42	16,739	171	6.93	1.39	171
1	Water Truck	International, 7400 6x4	4f	350	3,120	0.38	21,202	216	8.78	1.76	217
1	Sweeper Truck	Freightliner M2	4f	240	3,120	0.46	17,600	180	7.29	1.46	180
Total							126,796	1,294	52	10.50	1,298

Table 21e: Brake Specific Fuel Consumption (BSFC) Conversion

Parameter	Value	Unit of Measure	Basis
BSFC	7000	btu/hp-hr	Per EPA AP-42 Table 3,3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
BSFC	0.3602	lb/hp-hr	calculated

Table 21f: Global Warming Potentials, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

Data and Parameters

Operating Days	312	day/yr

Notes:

1. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12
2. Solid, gaseous, liquid and biomass fuels: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule , 30Oct09, 261 pp.
Tables C-1 and C-2 at FR pp. 56409-56410. Revised emission factors for selected fuels: Federal Register (2010) EPA; 40 CFR Part 98; Mandatory Reporting of Greenhouse Gases; Final Rule, 17Dec10, 81 pp.
With Amendments from Memo: Table of Final 2013 Revisions to the Greenhouse Gas Reporting Rule (PDF) to 40 CFR part 98, subpart C: Table C–1 to Subpart C—Default CO2 Emission Factors and High Heat Values for Various Types of Fuel and Table C–2 to Subpart C—Default CH4 and N2O Emission Factors for Various Types of Fuel.

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Table 22: Fugitive Dust From Offroad Equipment Travel on Unpaved Areas and Haul Roads[1]

Table 22a: EPA Predictive Emission Factors for Offroad Equipment[2]

No. of Units	Equipment	Typical	PM Emission Factors[3] (lb/VMT)	
			PM10	PM2.5
1	Fuel Truck	Freightliner M2106	2.1106	0.2111
1	Tractors	Massey Fergusen, 7619	2.1106	0.2111
1	Excavator	Caterpillar 326	2.1106	0.2111
3	Loader	Caterpillar, 962K	2.1106	0.2111
1	Windrow Turner	Scarab	2.1106	0.2111
1	Water Truck[4]	International, 7400 6x4	0.0000	0.0000
1	Sweeper Truck[4]	Freightliner M2	0.0000	0.0000

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[5]	24.3	day/year

Table 22b: Onsite Equipment Tonnage, Operating Hours, and VMT

No. of Units	Equipment Description and Use		GVW (tons)	Empty (tons)	Average (tons)	Operating Hours (hr/day)	Operating Hours (hr/yr)	Ave. Speed (MPH)	Total Travel (VMT/day)	Total Travel (VMT/yr)
1	Fuel Truck	Freightliner M2106	31.5	11.5	22.5	2.0	624	2.0	4.0	1,248
1	Tractors	Massey Fergusen, 7619	7.9	7.9	22.5	10.0	3,120	0.3	3.0	936
1	Excavator	Caterpillar 326	28.6	28.6	22.5	10.0	3,120	0.3	3.0	936
3	Loader	Caterpillar, 962K	22.5	22.5	22.5	10.0	3,120	0.3	9.0	2,808
1	Windrow Turner	Scarab	20.0	20.0	22.5	10.0	3,120	0.3	3.0	936
1	Water Truck[4]	International, 7400 6x4	31.5	11.5	22.5	10.0	3,120	3.0	30.0	9,360
1	Sweeper Truck[4]	Freightliner M2	16.5	16.5	22.5	10.0	3,120	3.0	30.0	9,360

Table 22c: Offroad Equipment Unpaved Road Dust Emissions

No. of	Equipment Description and Use		Uncontrolled (lb/day)		Controlled (lb/day)		Uncontrolled (lb/yr)		Controlled (lb/yr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	8.44	0.84	2.13	0.21	2,634	263	664	66
1	Tractors	Massey Fergusen, 7619	6.33	0.63	1.60	0.16	1,976	198	498	50
1	Excavator	Caterpillar 326	6.33	0.63	1.60	0.16	1,976	198	498	50
3	Loader	Caterpillar, 962K	19.00	1.90	4.79	0.48	5,927	593	1,493	149
1	Windrow Turner	Scarab	6.33	0.63	1.60	0.16	1,976	198	498	50
1	Water Truck[4]	International, 7400 6x4	0.00	0.00	0.00	0.00	0	0	0	0
1	Sweeper Truck[4]	Freightliner M2	0.00	0.00	0.00	0.00	0	0	0	0
Total Dust from Equip. On Unpaved Areas (Lb/Day or Lb/Year)			46.43	4.64	11.70	1.17	14,487	1,449	3,651	365
Total Dust from Equip. On Unpaved Areas (Ton/Year)			---	---	---	---	7.2	0.7	1.8	0.2

Overall Control Efficiency[6]	75%
Control for watering	55%
Control for vehicle speed	44%

Notes:

1. Although compost surfaces are paved, because the compost processing areas are expected to have compost residuals covering the active surfaces, the unpaved road calculations are used to esti
2. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
3. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
4. Entrained road dust is assumed to be negligible for the water truck due to watering and the sweeper truck due to watering and sweeping.
5. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
6. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2
7. Chow, Judith C., et. al., "Evaluation of Regenerative-air Vacuum Street Sweeping on Geological Contributions to PM10", Journal of the Air & Waste Management Association, published online 06

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Table 23: Summary of Emissions

Table 23a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
18. Onroad Vehicle Exhaust	2.97	0.84	5.15	0.01	0.19	0.07
19. Onroad Vehicle Paved Road Dust	---	---	---	---	0.56	0.14
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	8.22	0.82
21. Offroad Equipment Exhaust	5.26	2.45	45.59	0.09	0.18	0.18
22. Offroad Equipment Unpaved Dust	---	---	---	---	11.70	1.17
Total	8.24	3.30	50.74	0.09	20.85	2.38

Table 23b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
18. Onroad Vehicle Exhaust	928	263	1606	3	60	22
19. Onroad Vehicle Paved Road Dust	---	---	---	---	175	44
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	2,565	256
21. Offroad Equipment Exhaust	1,641	766	14,224	27	55	55
22. Offroad Equipment Unpaved Dust	---	---	---	---	3,651	365
Total	2,569	1029	15,830	29	6,506	743
Total (TPY)	1.28	0.51	7.92	0.01	3.25	0.37

Table 23c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	HFC (MT/yr)	CO2e (MT/Yr)
18. Onroad Vehicle Exhaust	346	0.0031	0.0781	0.0002	369
19. Onroad Vehicle Paved Road Dust	---	---	---	---	---
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	---
21. Offroad Equipment Exhaust	1294	0.0525	0.0105	---	1298
22. Offroad Equipment Unpaved Dust	---	---	---	---	---
Total	**1640**	**0.0555**	**0.0886**	**0.0002**	**1,667**

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Table 24: Diesel and Gasoline Vehicle TAC Emissions

Table 24a: DPM Emissions

Vehicle	PM10 Emissions (lb/hr)		PM10 Emissions (lb/day)		PM10 Emissions (lb/yr)	
	Onsite Exhaust	Nearsite Exhaust[1,2]	Onsite Exhaust	Nearsite Exhaust[1,2]	Onsite Exhaust	Nearsite Exhaust[1,2]
LHD2	1.88E-05	2.36E-05	1.88E-05	2.36E-05	0.006	0.007
T7 Tractor	3.28E-05	5.47E-05	3.28E-04	5.47E-04	0.10	0.171
Fuel Truck	2.93E-03	0.00E+00	5.86E-03	0	1.83	0
Tractors	1.63E-03	0.00E+00	1.63E-02	0	5.09	0
Excavator	1.68E-03	0.00E+00	1.68E-02	0	5.25	0
Loader	5.95E-03	0.00E+00	5.95E-02	0	18.57	0
Windrow Turner	2.31E-03	0.00E+00	2.31E-02	0	7.22	0
Water Truck	2.93E-03	0.00E+00	2.93E-02	0	9.15	0
Sweeper Truck	2.43E-03	0.00E+00	2.43E-02	0	7.59	0
Total PM10 = DPM	1.99E-02	7.82E-05	1.76E-01	5.70E-04	54.82	0.178

Table 24b: Gasoline Vehicle Mileage and Fuel Consumption

Parameter	Onsite	Near-site[3]
VMT/Day	0.00	6.00
Fuel Consumption (gal/day)	0.000	0.370

Average Fuel Economy Light Truck[4] 16.20 MPG

Table 24c: TAC Emissions from Onroad Gasoline Vehicles

TAC	CAS#	Emission Factor[5] (lb/1000-gal)	Onsite (lb/day)	Near-site (lb/day)	Total (lb/day)	Onsite (lb/yr)	Near-site (lb/yr)	Total lb/yr)	Onsite (lb/hr)	Near-site (lb/hr)	Total (lb/hr)
1,2,4-Trimethylbenzene	95636	5.89E-01	0.000E+00	2.181E-04	2.18E-04	0.000E+00	6.806E-02	6.81E-02	0.00E+00	2.18E-04	2.18E-04
1,3-Butadiene	106990	3.24E-01	0.000E+00	1.200E-04	1.20E-04	0.000E+00	3.744E-02	3.74E-02	0.00E+00	1.20E-04	1.20E-04
Acetaldehyde	75070	1.47E-01	0.000E+00	5.444E-05	5.44E-05	0.000E+00	1.699E-02	1.70E-02	0.00E+00	5.44E-05	5.44E-05
Acrolein	107028	8.25E-02	0.000E+00	3.056E-05	3.06E-05	0.000E+00	9.533E-03	9.53E-03	0.00E+00	3.06E-05	3.06E-05
Benzene	71432	1.57E+00	0.000E+00	5.815E-04	5.81E-04	0.000E+00	1.814E-01	1.81E-01	0.00E+00	5.81E-04	5.81E-04
Chlorine	7782505	4.55E-01	0.000E+00	1.685E-04	1.69E-04	0.000E+00	5.258E-02	5.26E-02	0.00E+00	1.69E-04	1.69E-04
Copper	7440508	3.30E-03	0.000E+00	1.222E-06	1.22E-06	0.000E+00	3.813E-04	3.81E-04	0.00E+00	1.22E-06	1.22E-06
Ethylbenzene	100414	6.42E-01	0.000E+00	2.378E-04	2.38E-04	0.000E+00	7.419E-02	7.42E-02	0.00E+00	2.38E-04	2.38E-04
Formaldehyde	50000	1.01E+00	0.000E+00	3.741E-04	3.74E-04	0.000E+00	1.167E-01	1.17E-01	0.00E+00	3.74E-04	3.74E-04
Hexane	110543	9.42E-01	0.000E+00	3.489E-04	3.49E-04	0.000E+00	1.089E-01	1.09E-01	0.00E+00	3.49E-04	3.49E-04
Manganese	7439965	3.30E-03	0.000E+00	1.222E-06	1.22E-06	0.000E+00	3.813E-04	3.81E-04	0.00E+00	1.22E-06	1.22E-06
Methanol (Methylalcohol)	67561	2.42E-01	0.000E+00	8.963E-05	8.96E-05	0.000E+00	2.796E-02	2.80E-02	0.00E+00	8.96E-05	8.96E-05
Methyl Ethyl Ketone (2-butanone)	78933	1.18E-02	0.000E+00	4.370E-06	4.37E-06	0.000E+00	1.364E-03	1.36E-03	0.00E+00	4.37E-06	4.37E-06
Methyl tert-butyl ether	1634044	1.15E+00	0.000E+00	4.259E-04	4.26E-04	0.000E+00	1.329E-01	1.33E-01	0.00E+00	4.26E-04	4.26E-04
m-Xylene	108383	2.17E+00	0.000E+00	8.037E-04	8.04E-04	0.000E+00	2.508E-01	2.51E-01	0.00E+00	8.04E-04	8.04E-04
Naphthalene	91203	2.95E-02	0.000E+00	1.093E-05	1.09E-05	0.000E+00	3.409E-03	3.41E-03	0.00E+00	1.09E-05	1.09E-05
Nickel	7440020	3.30E-03	0.000E+00	1.222E-06	1.22E-06	0.000E+00	3.813E-04	3.81E-04	0.00E+00	1.22E-06	1.22E-06
o-Xylene	95476	7.54E-01	0.000E+00	2.793E-04	2.79E-04	0.000E+00	8.713E-02	8.71E-02	0.00E+00	2.79E-04	2.79E-04
Styrene	100425	7.07E-02	0.000E+00	2.619E-05	2.62E-05	0.000E+00	8.170E-03	8.17E-03	0.00E+00	2.62E-05	2.62E-05
Toluene	108883	3.50E+00	0.000E+00	1.296E-03	1.30E-03	0.000E+00	4.044E-01	4.04E-01	0.00E+00	1.30E-03	1.30E-03

Data and Parameters

Fuel Truck Hr/Day	2	
Offorad Diesel Vehicle Operating Hr/Day	10	assuming vehicles are running onsite for this many hours in a day
Haul Truck Operating Hr/Day	10	assuming vehicles are running onsite or within 1/4 mile for this many hours in a day
Employee/Business Vehicle Operating Hr/Day	1	assuming vehicles are running onsite or within 1/4 mile for this many hours in a day
Operating Days day/yr	312	

Notes:

1. Nearsite mileage is estimated based on the total offsite distance multipiled by a ratio of 0.25 miles divided by the one-way trip length.
2. Offroad equipment operates onsite only.
3. Near site mileage is calculated based on the total number of gasoline vehicle trips per year divided by the operating days per year, multiplied by 0.25 miles (one way) multiplied by 2 (two way trip).
4. https://en.wikipedia.org/wiki/Fuel_efficiency
5. SJVAPCD, AB 2588 “Hot Spots” Air Toxics Profiles, March 27, 2017, District Toxic Profile ID 176, Gasoline-Fired Portable Catalyst ICE

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Table 25: TAC from Paved Road Dust

Table 25a: Criteria Pollutant Information

Pollutant	Onsite (lb/hr)	Near-site[1] (lb/hr)	Onsite (lb/day)	Near-site[1] (lb/day)	Onsite (lb/yr)	Near-site[1] (lb/yr)
PM10	0.0137	0.0219	0.14	0.22	42.79	68.42
Total (Onsite & Near-site)		0.03564				111.21

Table 25b: TAC from Paved Road Dust

TAC	Wt.	Total TAC Emissions		Onsite TAC Emissions		Near-site TAC Emissions	
		lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
Arsenic	0.000013	4.63E-07	1.45E-03	1.78E-07	5.56E-04	2.85E-07	8.89E-04
Cadmium	0.000003	1.07E-07	3.34E-04	4.11E-08	1.28E-04	6.58E-08	2.05E-04
Hexavalent Chromium	0.00000085	3.03E-08	9.45E-05	1.17E-08	3.64E-05	1.86E-08	5.82E-05
Cobalt	0.000023	8.20E-07	2.56E-03	3.15E-07	9.84E-04	5.04E-07	1.57E-03
Copper	0.000148	5.28E-06	1.65E-02	2.03E-06	6.33E-03	3.25E-06	1.01E-02
Lead	0.000124	4.42E-06	1.38E-02	1.70E-06	5.31E-03	2.72E-06	8.48E-03
Manganese	0.0008	2.85E-05	8.90E-02	1.10E-05	3.42E-02	1.75E-05	5.47E-02
Nickel	0.000012	4.28E-07	1.33E-03	1.65E-07	5.14E-04	2.63E-07	8.21E-04
Mercury	0.000009	3.21E-07	1.00E-03	1.23E-07	3.85E-04	1.97E-07	6.16E-04
Selenium	0.000002	7.13E-08	2.22E-04	2.74E-08	8.56E-05	4.39E-08	1.37E-04
Vanadium (Fume Or Dust)	0.000071	2.53E-06	7.90E-03	9.74E-07	3.04E-03	1.56E-06	4.86E-03

Data and Parameters

Operating Hr/Day	10	assuming vehicles are running for this many hours in a day
Operating Days	312	day/yr

Notes:

1. Nearsite emissions include emissions up to 1/4 mile offsite. Nearsite PM10 emissions are calculated in Table 4 as "Rural" emissions.
2. CARB speciation profile for Paved Roads (#471):
https://ww2.arb.ca.gov/speciation-profiles-used-carb-modeling
3. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

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Table 26: TAC from Offroad Vehicles Operation on Unpaved Surfaces

Table 26a: Offroad Equipment Entrained Dust Emissions, PM10

Source	lb/hr	lb/day	lb/yr
Unpaved Road Dust from Onroad Vehicles	0.82	8.22	2,565
Unpaved Road Dust from Offroad Vehicles	1.17	11.70	3,651
Total PM10	1.99	19.92	6,215

Table 26b: TAC from Vehicle/Equipment Travel on Unpaved Surfaces

TAC	Concentration[1]	Total TAC Emissions		Onroad Vehicle TAC Emissions		Offroad Vehicle TAC Emissions	
		(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)
Arsenic	6.20E-06	1.24E-05	3.85E-02	5.10E-06	1.59E-02	7.25E-06	2.26E-02
Cadmium	2.00E-06	3.98E-06	1.24E-02	1.64E-06	5.13E-03	2.34E-06	7.30E-03
Hexavalent Chromium	2.45E-06	4.88E-06	1.52E-02	2.01E-06	6.28E-03	2.87E-06	8.94E-03
Cobalt	8.80E-06	1.75E-05	5.47E-02	7.23E-06	2.26E-02	1.03E-05	3.21E-02
Copper	6.90E-05	1.37E-04	4.29E-01	5.67E-05	1.77E-01	8.07E-05	2.52E-01
Lead	2.00E-04	3.98E-04	1.24E+00	1.64E-04	5.13E-01	2.34E-04	7.30E-01
Manganese	4.40E-04	8.77E-04	2.73E+00	3.62E-04	1.13E+00	5.15E-04	1.61E+00
Nickel	9.50E-05	1.89E-04	5.90E-01	7.81E-05	2.44E-01	1.11E-04	3.47E-01
Mercury	1.00E-06	1.99E-06	6.22E-03	8.22E-07	2.56E-03	1.17E-06	3.65E-03
Selenium	1.00E-06	1.99E-06	6.22E-03	8.22E-07	2.56E-03	1.17E-06	3.65E-03

Data and Parameters

Operating Hr/Day	10	assuming vehicles are running for this many hours in a day, including fuel truck
Operating Days	312	day/yr

Notes:

1. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm

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Table 27: Summary of TAC Emissions from Mobile Sources

Table 27a: Summary of TAC Emissions from Mobile Sources, lb/yr

Activity	CAS No.	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total
Diesel PM	9901	1.08E-01	1.78E-01	5.47E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E+01
1,2,4-Trimethylbenzene	95636	0.00E+00	6.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.81E-02
1,3-Butadiene	106990	0.00E+00	3.74E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-02
Acetaldehyde	75070	0.00E+00	1.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-02
Acrolein	107028	0.00E+00	9.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.53E-03
Benzene	71432	0.00E+00	1.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-01
Chlorine	7782505	0.00E+00	5.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.26E-02
Copper	7440508	0.00E+00	3.81E-04	0.00E+00	6.33E-03	1.01E-02	1.77E-01	2.52E-01	4.46E-01
Ethylbenzene	100414	0.00E+00	7.42E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.42E-02
Formaldehyde	50000	0.00E+00	1.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-01
Hexane	110543	0.00E+00	1.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-01
Manganese	7439965	0.00E+00	3.81E-04	0.00E+00	3.42E-02	5.47E-02	1.13E+00	1.61E+00	2.82E+00
Methanol (Methylalcohol)	67561	0.00E+00	2.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-02
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	1.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-03
Methyl tert-butyl ether	1634044	0.00E+00	1.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-01
m-Xylene	108383	0.00E+00	2.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-01
Naphthalene	91203	0.00E+00	3.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.41E-03
Nickel	7440020	0.00E+00	3.81E-04	0.00E+00	5.14E-04	8.21E-04	2.44E-01	3.47E-01	5.92E-01
o-Xylene	95476	0.00E+00	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.71E-02
Styrene	100425	0.00E+00	8.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.17E-03
Toluene	108883	0.00E+00	4.04E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.04E-01
Arsenic	7440382	0.00E+00	0.00E+00	0.00E+00	5.56E-04	8.89E-04	1.59E-02	2.26E-02	4.00E-02
Cadmium	7440439	0.00E+00	0.00E+00	0.00E+00	1.28E-04	2.05E-04	5.13E-03	7.30E-03	1.28E-02
Hexavalent Chromium	18540299	0.00E+00	0.00E+00	0.00E+00	3.64E-05	5.82E-05	6.28E-03	8.94E-03	1.53E-02
Cobalt	7440484	0.00E+00	0.00E+00	0.00E+00	9.84E-04	1.57E-03	2.26E-02	3.21E-02	5.73E-02
Lead	7439921	0.00E+00	0.00E+00	0.00E+00	5.31E-03	8.48E-03	5.13E-01	7.30E-01	1.26E+00
Mercury	7439976	0.00E+00	0.00E+00	0.00E+00	3.85E-04	6.16E-04	2.56E-03	3.65E-03	7.22E-03
Selenium	7782492	0.00E+00	0.00E+00	0.00E+00	8.56E-05	1.37E-04	2.56E-03	3.65E-03	6.44E-03
Vanadium (Fume Or Dust)	7440622	0.00E+00	0.00E+00	0.00E+00	3.04E-03	4.86E-03	0.00E+00	0.00E+00	7.90E-03

Table 27b: Summary of TAC Emissions from Mobile Sources, lb/hr

Activity	CAS No.	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total
Diesel PM	9901	5.16E-05	7.82E-05	1.99E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-02
1,2,4-Trimethylbenzene	95636	0.00E+00	2.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-04
1,3-Butadiene	106990	0.00E+00	1.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-04
Acetaldehyde	75070	0.00E+00	5.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E-05
Acrolein	107028	0.00E+00	3.06E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-05
Benzene	71432	0.00E+00	5.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.81E-04
Chlorine	7782505	0.00E+00	1.69E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-04
Copper	7440508	0.00E+00	1.22E-06	0.00E+00	2.03E-06	3.25E-06	5.67E-05	8.07E-05	1.44E-04
Ethylbenzene	100414	0.00E+00	2.38E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-04
Formaldehyde	50000	0.00E+00	3.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-04
Hexane	110543	0.00E+00	3.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.49E-04
Manganese	7439965	0.00E+00	1.22E-06	0.00E+00	1.10E-05	1.75E-05	3.62E-04	5.15E-04	9.06E-04
Methanol (Methylalcohol)	67561	0.00E+00	8.96E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.96E-05
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	4.37E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E-06
Methyl tert-butyl ether	1634044	0.00E+00	4.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-04
m-Xylene	108383	0.00E+00	8.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.04E-04
Naphthalene	91203	0.00E+00	1.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05
Nickel	7440020	0.00E+00	1.22E-06	0.00E+00	1.65E-07	2.63E-07	7.81E-05	1.11E-04	1.91E-04
o-Xylene	95476	0.00E+00	2.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-04
Styrene	100425	0.00E+00	2.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-05
Toluene	108883	0.00E+00	1.30E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-03
Arsenic	7440382	0.00E+00	0.00E+00	0.00E+00	1.78E-07	2.85E-07	5.10E-06	7.25E-06	1.28E-05
Cadmium	7440439	0.00E+00	0.00E+00	0.00E+00	4.11E-08	6.58E-08	1.64E-06	2.34E-06	4.09E-06
Hexavalent Chromium	18540299	0.00E+00	0.00E+00	0.00E+00	1.17E-08	1.86E-08	2.01E-06	2.87E-06	4.91E-06
Cobalt	7440484	0.00E+00	0.00E+00	0.00E+00	3.15E-07	5.04E-07	7.23E-06	1.03E-05	1.84E-05
Lead	7439921	0.00E+00	0.00E+00	0.00E+00	1.70E-06	2.72E-06	1.64E-04	2.34E-04	4.03E-04
Mercury	7439976	0.00E+00	0.00E+00	0.00E+00	1.23E-07	1.97E-07	8.22E-07	1.17E-06	2.31E-06
Selenium	7782492	0.00E+00	0.00E+00	0.00E+00	2.74E-08	4.39E-08	8.22E-07	1.17E-06	2.06E-06
Vanadium (Fume Or Dust)	7440622	0.00E+00	0.00E+00	0.00E+00	9.74E-07	1.56E-06	0.00E+00	0.00E+00	2.53E-06

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Table 28: Summary of Criteria Pollutant and GHG Emissions

Table 28a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
11. Composting Criteria and GHG	6.36	275.62	35.35	0.05	1.77	0.71
23. Mobile Criteria and GHG	8.24	3.30	50.74	0.09	20.85	2.38
Total	14.60	278.91	86.09	0.14	22.62	3.09

Table 28b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
11. Composting Criteria and GHG	1,098	100,180	10,107	14	545	192
23. Mobile Criteria and GHG	2,569	1,029	15,830	29	6,506	743
Total	3,667	101,210	25,937	43	7,051	934
Total (TPY)	1.83	50.60	12.97	0.02	3.53	0.47

Table 28c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	HFC (MT/yr)	CO2e (MT/Yr)
11. Composting Criteria and GHG	653	90.74	6.81	N/A	4,996
23. Mobile Criteria and GHG	1,640	0.0555	0.0886	0.0002	1,667
Total	**2,293**	**90.80**	**6.90**	**0.0002**	**6,663**

Table 29: Summary of TAC Emissions

Table 29a: Summary of TAC Emissions, lb/yr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine
Arsenic	7440382	1.03E-03	3.46E-04	1.70E-03	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
Cadmium	7440439	3.33E-04	1.12E-04	5.50E-04	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
Hexavalent Chromium	18540299	4.08E-04	1.37E-04	6.73E-04	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
Cobalt	7440484	1.47E-03	4.92E-04	2.42E-03	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
Copper	7440508	1.15E-02	3.86E-03	1.90E-02	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
Lead	7439921	3.33E-02	1.12E-02	5.50E-02	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
Manganese	7439965	7.33E-02	2.46E-02	1.21E-01	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
Mercury	7439976	1.67E-04	5.59E-05	2.75E-04	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
Nickel	7440020	1.58E-02	5.31E-03	2.61E-02	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
Selenium	7782492	1.67E-04	5.59E-05	2.75E-04	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
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	8.25E+01	5.82E+03	9.67E+02	1.94E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	4.21E+00	1.79E+01	5.46E+00	1.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	1.13E+01	2.09E+01	6.60E+00	5.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	8.96E+02	3.46E+03	2.53E+02	7.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	2.19E+00	8.70E+00	7.83E+00	7.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	2.24E+00	1.29E+01	4.85E+00	7.56E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	2.18E+00	3.01E+01	1.16E+01	3.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	1.85E+00	6.69E+00	2.40E+00	6.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	3.42E+00	1.31E+01	4.47E+00	1.16E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	3.04E+00	2.82E+01	7.21E+00	1.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	2.84E+00	4.33E+01	5.17E+00	9.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	7.86E+01	2.56E+01	5.75E+00	8.36E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	9.68E+02	3.93E+03	2.75E+02	3.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	5.36E+02	6.30E+03	3.37E+02	7.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	2.81E+00	5.75E+01	1.00E+01	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	9.45E-01	4.74E+02	2.87E+02	2.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	2.98E+00	2.84E+01	5.67E+00	1.01E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	2.64E+00	5.07E+01	2.27E+01	2.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	1.45E+02	2.42E+02	6.86E+00	8.36E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	3.15E+00	3.51E+01	1.11E+01	2.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	1.00E+03	1.76E+04	1.95E+03	7.60E+00	1.35E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.53E+00	6.53E+00	6.53E+00	6.53E+00
1,2,4-Trimethylbenzene	95636	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	0.00E+00	0.00E+00	0.00E+00
1,3-Butadiene	106990	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	0.00E+00	0.00E+00	0.00E+00
Acrolein	107028	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	0.00E+00	0.00E+00	0.00E+00
Chlorine	7782505	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	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	50000	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	0.00E+00	0.00E+00	0.00E+00
Methyl tert-butyl ether	1634044	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	0.00E+00	0.00E+00	0.00E+00
m-Xylene	108383	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	0.00E+00	0.00E+00	0.00E+00
o-Xylene	95476	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	0.00E+00	0.00E+00	0.00E+00
Vanadium (Fume Or Dust)	7440622	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	0.00E+00	0.00E+00	0.00E+00

Table 29b: Summary of TAC Emissions, lb/hr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine
Arsenic	7440382	3.31E-07	1.11E-07	1.95E-07	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
Cadmium	7440439	1.07E-07	3.58E-08	6.28E-08	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
Hexavalent Chromium	18540299	1.31E-07	4.39E-08	7.69E-08	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
Cobalt	7440484	4.70E-07	1.58E-07	2.76E-07	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
Copper	7440508	3.68E-06	1.24E-06	2.17E-06	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
Lead	7439921	1.07E-05	3.58E-06	6.28E-06	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
Manganese	7439965	2.35E-05	7.88E-06	1.38E-05	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
Mercury	7439976	5.34E-08	1.79E-08	3.14E-08	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
Nickel	7440020	5.07E-06	1.70E-06	2.98E-06	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
Selenium	7782492	5.34E-08	1.79E-08	3.14E-08	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
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	9.42E-03	6.65E-01	1.10E-01	2.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	4.81E-04	2.04E-03	6.23E-04	1.63E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	1.29E-03	2.38E-03	7.53E-04	6.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	1.02E-01	3.94E-01	2.89E-02	8.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	2.50E-04	9.93E-04	8.94E-04	8.49E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	2.56E-04	1.47E-03	5.54E-04	8.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	2.49E-04	3.44E-03	1.33E-03	3.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	2.11E-04	7.63E-04	2.74E-04	7.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	3.90E-04	1.50E-03	5.10E-04	1.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	3.47E-04	3.22E-03	8.23E-04	1.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	3.24E-04	4.94E-03	5.91E-04	1.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	8.97E-03	2.92E-03	6.56E-04	9.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	1.11E-01	4.49E-01	3.14E-02	3.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	6.12E-02	7.19E-01	3.85E-02	7.99E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	3.21E-04	6.57E-03	1.14E-03	1.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	1.08E-04	5.42E-02	3.28E-02	3.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	3.40E-04	3.25E-03	6.48E-04	1.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	3.01E-04	5.79E-03	2.60E-03	3.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	1.66E-02	2.77E-02	7.84E-04	9.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	3.60E-04	4.01E-03	1.27E-03	2.35E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	1.14E-01	2.00E+00	2.23E-01	8.68E-04	5.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-03	2.09E-03	2.09E-03	2.09E-03
1,2,4-Trimethylbenzene	95636	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	0.00E+00	0.00E+00	0.00E+00
1,3-Butadiene	106990	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	0.00E+00	0.00E+00	0.00E+00
Acrolein	107028	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	0.00E+00	0.00E+00	0.00E+00
Chlorine	7782505	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	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	50000	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	0.00E+00	0.00E+00	0.00E+00
Methyl tert-butyl ether	1634044	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	0.00E+00	0.00E+00	0.00E+00
m-Xylene	108383	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	0.00E+00	0.00E+00	0.00E+00
o-Xylene	95476	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	0.00E+00	0.00E+00	0.00E+00
Vanadium (Fume Or Dust)	7440622	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	0.00E+00	0.00E+00	0.00E+00

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Table 29: Summary of TAC Emissions

Table 29a: Summary of TAC Emissions, lb

Activity	Emergency Generator	Fire Pump	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total, Stationary Sources	Total, Mobile Sources	Total
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E-04	8.89E-04	1.59E-02	2.26E-02	3.08E-03	4.00E-02	4.31E-02
Cadmium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-04	2.05E-04	5.13E-03	7.30E-03	9.94E-04	1.28E-02	1.38E-02
Hexavalent Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E-05	5.82E-05	6.28E-03	8.94E-03	1.22E-03	1.53E-02	1.65E-02
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.84E-04	1.57E-03	2.26E-02	3.21E-02	4.38E-03	5.73E-02	6.16E-02
Copper	0.00E+00	0.00E+00	0.00E+00	3.81E-04	0.00E+00	6.33E-03	1.01E-02	1.77E-01	2.52E-01	3.43E-02	4.46E-01	4.80E-01
Lead	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.31E-03	8.48E-03	5.13E-01	7.30E-01	9.94E-02	1.26E+00	1.36E+00
Manganese	0.00E+00	0.00E+00	0.00E+00	3.81E-04	0.00E+00	3.42E-02	5.47E-02	1.13E+00	1.61E+00	2.19E-01	2.82E+00	3.04E+00
Mercury	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.85E-04	6.16E-04	2.56E-03	3.65E-03	4.97E-04	7.22E-03	7.71E-03
Nickel	0.00E+00	0.00E+00	0.00E+00	3.81E-04	0.00E+00	5.14E-04	8.21E-04	2.44E-01	3.47E-01	4.72E-02	5.92E-01	6.39E-01
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.56E-05	1.37E-04	2.56E-03	3.65E-03	4.97E-04	6.44E-03	6.94E-03
Acetone	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	6.89E+03	0.00E+00	6.89E+03
1,4-Dichlorobenzene	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	2.90E+01	0.00E+00	2.90E+01
2-Propanol (Isopropylalcohol, IPA)	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	3.93E+01	0.00E+00	3.93E+01
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	1.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.61E+03	1.70E-02	4.61E+03
Allyl Chloride (3-Chloropropene)	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	1.95E+01	0.00E+00	1.95E+01
Benzene	0.00E+00	0.00E+00	0.00E+00	1.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E+01	1.81E-01	2.09E+01
Carbondisulfide	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	4.70E+01	0.00E+00	4.70E+01
Chloroethane	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	1.16E+01	0.00E+00	1.16E+01
Chloroform	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	2.22E+01	0.00E+00	2.22E+01
Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	7.42E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E+01	7.42E-02	3.95E+01
Ethylene Dichloride (1,2-dichloroethane)	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	5.22E+01	0.00E+00	5.22E+01
Hexane	0.00E+00	0.00E+00	0.00E+00	1.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+02	1.09E-01	1.11E+02
Methanol (Methylalcohol)	0.00E+00	0.00E+00	0.00E+00	2.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.17E+03	2.80E-02	5.17E+03
Methyl Ethyl Ketone (2-butanone)	0.00E+00	0.00E+00	0.00E+00	1.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.17E+03	1.36E-03	7.17E+03
Naphthalene	0.00E+00	0.00E+00	0.00E+00	3.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.16E+01	3.41E-03	7.16E+01
Propene (Propylene)	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	7.90E+02	0.00E+00	7.90E+02
Styrene	0.00E+00	0.00E+00	0.00E+00	8.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.81E+01	8.17E-03	3.81E+01
Toluene	0.00E+00	0.00E+00	0.00E+00	4.04E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.89E+01	4.04E-01	7.93E+01
Vinyl acetate	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	3.95E+02	0.00E+00	3.95E+02
Xylenes	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	5.14E+01	0.00E+00	5.14E+01
Ammonia	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	2.06E+04	0.00E+00	2.06E+04
Diesel PM	7.34E+00	1.47E+01	1.08E-01	1.78E-01	5.47E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.82E+01	5.50E+01	1.03E+02
1,2,4-Trimethylbenzene	0.00E+00	0.00E+00	0.00E+00	6.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.81E-02	6.81E-02
1,3-Butadiene	0.00E+00	0.00E+00	0.00E+00	3.74E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-02	3.74E-02
Acrolein	0.00E+00	0.00E+00	0.00E+00	9.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.53E-03	9.53E-03
Chlorine	0.00E+00	0.00E+00	0.00E+00	5.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.26E-02	5.26E-02
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	1.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-01	1.17E-01
Methyl tert-butyl ether	0.00E+00	0.00E+00	0.00E+00	1.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-01	1.33E-01
m-Xylene	0.00E+00	0.00E+00	0.00E+00	2.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-01	2.51E-01
o-Xylene	0.00E+00	0.00E+00	0.00E+00	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.71E-02	8.71E-02
Vanadium (Fume Or Dust)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-03	4.86E-03	0.00E+00	0.00E+00	0.00E+00	7.90E-03	7.90E-03

Table 29b: Summary of TAC Emissions, lb

Activity	Emergency Generator	Fire Pump	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total, Stationary Sources	Total, Mobile Sources	Total
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-07	2.85E-07	5.10E-06	7.25E-06	6.36E-07	1.28E-05	1.35E-05
Cadmium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E-08	6.58E-08	1.64E-06	2.34E-06	2.05E-07	4.09E-06	4.30E-06
Hexavalent Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-08	1.86E-08	2.01E-06	2.87E-06	2.51E-07	4.91E-06	5.16E-06
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-07	5.04E-07	7.23E-06	1.03E-05	9.03E-07	1.84E-05	1.93E-05
Copper	0.00E+00	0.00E+00	0.00E+00	1.22E-06	0.00E+00	2.03E-06	3.25E-06	5.67E-05	8.07E-05	7.08E-06	1.44E-04	1.51E-04
Lead	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-06	2.72E-06	1.64E-04	2.34E-04	2.05E-05	4.03E-04	4.23E-04
Manganese	0.00E+00	0.00E+00	0.00E+00	1.22E-06	0.00E+00	1.10E-05	1.75E-05	3.62E-04	5.15E-04	4.52E-05	9.06E-04	9.51E-04
Mercury	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-07	1.97E-07	8.22E-07	1.17E-06	1.03E-07	2.31E-06	2.42E-06
Nickel	0.00E+00	0.00E+00	0.00E+00	1.22E-06	0.00E+00	1.65E-07	2.63E-07	7.81E-05	1.11E-04	9.75E-06	1.91E-04	2.01E-04
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-08	4.39E-08	8.22E-07	1.17E-06	1.03E-07	2.06E-06	2.17E-06
Acetone	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	7.87E-01	0.00E+00	7.87E-01
1,4-Dichlorobenzene	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	3.31E-03	0.00E+00	3.31E-03
2-Propanol (Isopropylalcohol, IPA)	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	4.49E-03	0.00E+00	4.49E-03
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	5.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.27E-01	5.44E-05	5.27E-01
Allyl Chloride (3-Chloropropene)	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	2.22E-03	0.00E+00	2.22E-03
Benzene	0.00E+00	0.00E+00	0.00E+00	5.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-03	5.81E-04	2.95E-03
Carbondisulfide	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	5.37E-03	0.00E+00	5.37E-03
Chloroethane	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	1.32E-03	0.00E+00	1.32E-03
Chloroform	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	2.53E-03	0.00E+00	2.53E-03
Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	2.38E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.51E-03	2.38E-04	4.74E-03
Ethylene Dichloride (1,2-dichloroethane)	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	5.96E-03	0.00E+00	5.96E-03
Hexane	0.00E+00	0.00E+00	0.00E+00	3.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-02	3.49E-04	1.30E-02
Methanol (Methylalcohol)	0.00E+00	0.00E+00	0.00E+00	8.96E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.91E-01	8.96E-05	5.91E-01
Methyl Ethyl Ketone (2-butanone)	0.00E+00	0.00E+00	0.00E+00	4.37E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.19E-01	4.37E-06	8.19E-01
Naphthalene	0.00E+00	0.00E+00	0.00E+00	1.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.17E-03	1.09E-05	8.18E-03
Propene (Propylene)	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	9.02E-02	0.00E+00	9.02E-02
Styrene	0.00E+00	0.00E+00	0.00E+00	2.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.35E-03	2.62E-05	4.38E-03
Toluene	0.00E+00	0.00E+00	0.00E+00	1.30E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.01E-03	1.30E-03	1.03E-02
Vinyl acetate	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	4.51E-02	0.00E+00	4.51E-02
Xylenes	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	5.87E-03	0.00E+00	5.87E-03
Ammonia	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	7.76E+00	0.00E+00	7.76E+00
Diesel PM	3.67E-02	7.34E-02	5.16E-05	7.82E-05	1.99E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-01	2.00E-02	1.39E-01
1,2,4-Trimethylbenzene	0.00E+00	0.00E+00	0.00E+00	2.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-04	2.18E-04
1,3-Butadiene	0.00E+00	0.00E+00	0.00E+00	1.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-04	1.20E-04
Acrolein	0.00E+00	0.00E+00	0.00E+00	3.06E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-05	3.06E-05
Chlorine	0.00E+00	0.00E+00	0.00E+00	1.69E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-04	1.69E-04
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	3.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-04	3.74E-04
Methyl tert-butyl ether	0.00E+00	0.00E+00	0.00E+00	4.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-04	4.26E-04
m-Xylene	0.00E+00	0.00E+00	0.00E+00	8.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.04E-04	8.04E-04
o-Xylene	0.00E+00	0.00E+00	0.00E+00	2.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-04	2.79E-04
Vanadium (Fume Or Dust)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.74E-07	1.56E-06	0.00E+00	0.00E+00	0.00E+00	2.53E-06	2.53E-06

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Table 30: Reduction from Baseline

Table 30: GHG Emissions Reduction from Baseline

Annual Throughput (ton/yr)	Compost Emission Reduction Factor (MT CO2e/ton feed)[1]	GHG Emissions Reduction (MT CO2e)
25,000	0.56	14,000

1. CARB, Method for Estimating Greenhouse Gas Emission Reductions From Diversion of Organic Waste From Landfills to Compost Facilities, 2017

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Table 1: Compost Facility Operations Assumptions- Scenario 5

Assumption	Scenario 5
Facility Size	Medium
Facility Capacity (cu yd)	12,500
Facility Size (acres)	11
Throughput (tpy)	25,000
Operating Schedule (hr/day)	10
Operating Schedule (wk/year)	52
Operating Schedule (day/year)	312
Feedstock	Green Waste (includes vegetative food material) + Food Waste
Feedstock Storage Time (days)	2
Feedstock Storage Building	Only as a BMP for facilities near receptors. No separate calculations.
Active Technology	Positive CASP
VOC Control Efficiency	80%
NH3 Control	80%
Curing	Yes
Mulch Colorizer Tons per Hour	50
Diesel Grinders	1
Diesel Screens	1
Diesel Stackers	1
Diesel Colorizer	1
Diesel Emergency Generator	1
Diesel Emergency Fire Pump	1
Employee and Commercial Light Duty Gasoline Vehicle Round Trips Per Day	12
Employee and Commercial Light Duty Diesel Vehicle Round Trips Per Day	1
Employee Mileage (one-way)	15
Tractor Trailers for Raw Materials Round Trips Per Day	35
Tractor Trailers for Product Round Trips Per Day	7
Feedstock Haul Truck Mileage (one-way)	20
Compost Product Haul Truck Mileage (one-way)	15
Baseline Feedstock Haul Truck Mileage (one-way)	15
Fuel Truck	1
Tractors	1
Excavator	1
Loader	3
Windrow Turner	0
Water Truck	1
Sweeper Truck	1
Fuel Truck Hours per Day	2
Other Off-road Engine (mobile and non-emergency stationary) Hours per Day	10

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Table 2: Additional Datasets and Assumptions

Table 2a: Colorizer Data and Assumptions

Parameter	Value	Unit of Measure	Notes
Bulk density - mulch	600	lb/cy	Average per Google AI
Conversion	2000	lb/ton	Constant
Throughput	21.37	cy/hr	Calculated from annual finished product throughput, assuming all is colorized
Annual Hours of Operation	3,120	hr/yr	Assumption
Application rate	6.5	lbs/cy	Google AI, max of listed range
Ammonia Concentration	0.5%	by weight	SDS

Table 2b: Stationary Engine Information[1]

Equipment	Number of Engines	Engine Tier and Information			
		Fuel[2]	Tier[2]	BHp[2]	Op Load[3]
Diesel Grinders	1	Diesel	4	100	95%
Diesel Screens	1	Diesel	4	100	95%
Diesel Stackers	1	Diesel	4	100	95%
Diesel Colorizer	1	Diesel	4	100	95%
Diesel Emergency Generator	1	Diesel	3	150	74%
Diesel Emergency Fire Pump	1	Diesel	3	300	74%

1. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
2. Engineering estimate based on projected throughput and machine capacity.
3. Engineering estimate based on projected throughput and machine capacity except for emergency engines, which are from User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12

Table 2c: Emergency Engine Operation Assumptions

Parameter	Value	Unit of Measure
Emergency Engine Operating Hours	2	hours/day, assumption
Emergency Engine Operating Days	100	day/yr, for 200 hours per year, assumption

Table 2d: Raw Material and Product Truck Loads

Parameter	Value	Unit of Measure
Raw Material quantity per truck	12	tons/truck
Compost quantity per truck	20	tons/truck

Table 2e: Onroad Vehicle Information and Mileage

Vehicle Type	Vehicle Use	Number of Vehicles	Vehicle Weight (lb)			Fuel	One-way Onsite Trip Mileage	One-way Offsite Trip Mileage[4]	Hours of Op Onsite and within
			Gross	Empty	Average				
LDT1	Employee	12	3,750	3,750	3,750	Gasoline	0.00	15	1
LHD2	Delivery of Office Supplies	1	15,006	8,200	11,603	Diesel	0.20	15	1
T7 Tractor	Ship Raw Material	35	47,000	23,000	35,000	Diesel	0.20	5	10
T7 Tractor	Ship Finished Compost	7	63,000	23,000	43,000	Diesel	0.20	15	10

4. Feedstock haul truck mileage is the mileage to the compost facility minus the baseline mileage to a landfill. Mileages are assumptions for representative facilities.

Table 2f: Fraction of Onroad Vehicle VMT by Functional Type of Roadway[5]

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 6

5. SJVAPCD, Appendix A: Comments
6. Rural is assumed to be 0.25 miles per

Table 2g: Onroad Vehicle VMT-weighted Average Vehicle Weight

Parameter	Value	Unit of Measure
Average Vehicle Weight	12.2	ton/vehicle

Table 2h: Offroad Vehicle Information

Offroad Equipment	Typical Model	Fuel	Engine Information		Op Load[7]	Hours per Day
			Tier	BHp		
Fuel Truck	Freightliner M2106	Diesel	4f	350	38%	2
Tractors	Massey Fergusen, 7619	Diesel	4f	200	37%	10
Excavator	Caterpillar 326	Diesel	4f	201	38%	10
Loader	Caterpillar, 962K	Diesel	4f	250	36%	10
Windrow Turner	Scarab	Diesel	4f	250	42%	10
Water Truck	International, 7400 6x4	Diesel	4f	350	38%	10
Sweeper Truck	Freightliner M2	Diesel	4f	240	46%	10

7. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12. Windrow turner using "Other Construction Equipment"

Table 2i: Offsite Mileage Included with Onsite Calculations

Parameter	Value	Unit of Measure
Offsite Mileage Included with Onsite Calculations	0.25	mile/trip

Table 2j: Gasoline Vehicle Mileage and Fuel Consumption

Parameter	Onsite	Near-site[8]
VMT/Day	0.00	6.00
Fuel Consumption (gal/day)	0.000	0.370

Average Fuel Economy Light Truck[9] 16.20 MPG

8. Near site mileage is calculated based on the total number of gasoline vehicle trips per day, multiplied by 0.25 miles (one way) multiplied by 2 (two way trip).
9. https://en.wikipedia.org/wiki/Fuel_efficiency

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Table 3: Emission Factors

Table 3a: Composting Emission Factors

Pollutant	Phase	Emission Factor	Note
VOC	Feedstock Storage	0.2 lb/wet ton/day	1
VOC (uncontrolled)	Composting + Curing	3.58 lb/ton	2
VOC control efficiency	Composting + Curing	80%	---
VOC (controlled)	Composting + Curing	0.72 lb/ton	calculated
VOC (controlled)	Composting (=90%)	0.64 lb/ton	2
VOC (controlled)	Curing (=10%)	0.07 lb/ton	2
VOC	Storage	0.02 lb/ton	3
NH_3	Feedstock Storage	0.02 lb/ton/day	1
NH3 (uncontrolled)	Composting + curing	0.78 lb/ton	4
NH3 control efficiency	Composting + curing	80%	---
NH_3 (controlled)	Composting + curing	0.16 lb/ton	calculated
NH_3	Storage	0.00038 lb/ton	5
GHG - CO2	Composting	0.44 kg/kg	6
GHG - CH4	Composting	0.004 kg/kg	6
GHG - N2O	Composting	0.0003 kg/kg	6

1. SJVAPCD Compost Emission Factor Report, Originally Published September 15, 2010, Revised March 21, 2023, Table 7.
2. SJVAPCD Compost Emission Factor Report Originally Published September 15, 2010 Revised March 21, 2023, Tables 3 and 4
3. Storage EF from SJVAPCD Compost ROG Emission Factors, Sept 15, 2010, App C, Table 4.3 which is based on 15 days storage.
4. SJVAPCD Compost Emission Factor Report, Originally Published September 15, 2010, Revised March 21, 2023, Table 6.
5. SJVAPCD Compost VOC Emission Factors, Sept 15, 2010, App C, Table 4.3 which is based on 15 days storage.
6. Greenhouse Gas Emissions Estimation Methodologies for Biogenic Emissions from Selected Source Categories: Measurement Policy Group, December 14, 2010 Solid Waste Disposal Wastewater Treatment Ethanol Fermentation Submitted to: U.S. Environmental Protection Agency Sector Policies and Programs Division

Table 3b: Uncontrolled Grinding and Screening PM Emission Factors

Process Operation	Emission Factor		Note
	PM10 (lb/ton)	PM2.5 (lb/ton)	
Grinding	0.0144	0.00216	7
Screening	0.0144	0.00216	8
Control Efficiency from Watering	75%		9

7. BAAQMD, Title V Permit Evaluation, Guadalupe Rubbish Disposal Co., Site A3294. BAAQMD references AP-42 for log debarking. Assume 15% fraction of PM2.5.
8. AP-42 section 10.3 Plywood Veneer and Layout Operations Table 10.3-1 (4th Edition) for log debarking, assuming 60% of emissions are PM10 with a 15% fraction of PM2.5.
9. Mojave Desert Air Quality Management District, "Emissions Inventory Guidance, Mineral Handling and Processing Industries", Section G, Wind Erosion from Storage Piles, April 2000.

Table 3c: Material Handling PM Emission Factors

Variable	Emission Factor		Note
	PM10	PM2.5	
Particle Size Multiplier (dimensionless)	0.35	0.053	10
Mean Wind Speed (MPH)	3.25	3.25	11
Material Moisture Content (%)	4.80	4.80	10
Emission Factor (lb/ton/drop point)	1.88E-04	2.84E-05	calculated

10. AP-42, Chapter 13.2.4 Aggregate Handling and Storage Piles. Moisture content used is the maximum allowed by the method. Actual moisture content will be higher, thus these emission factors are conservative.
11. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-1, Average of Los Angeles Airport and San Jose Airport.

Table 3d: Wind Erosion PM Emission Factors[11]

Variable	PM10	PM2.5	Note
Particulate aerodynamic factor	0.50	0.20	12
Average silt loading of storage pile in percent (%),	0.50	0.50	Assumed
Average number of days during the year with at least 0.01 inches of precipitation	24.30	24.30	13
Percentage of time with unobstructed wind speed >12 mph in percent (%)	10.00	10.00	Assumed
Wind Erosion EF (lb/acre/day)	2.74E-01	1.10E-01	Calculated
Control Efficiency from Watering	75%		12

12. Mojave Desert Air Quality Management District, "Emissions Inventory Guidance, Mineral Handling and Processing Industries", Section G, Wind Erosion from Storage Piles, April 2000.
13. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Table 3e: Compost Dust TAC Concentration

TAC	CAS	Concentration (lb/lb Dust)	Note
Arsenic	7440-38-2	6.20E-06	14
Cadmium	7440-43-9	2.00E-06	14
Hexavalent Chromium	18540-29-9	2.45E-06	14, 15
Cobalt	7440-48-4	8.80E-06	14
Copper	7440-50-8	6.90E-05	14
Lead	7439-92-1	2.00E-04	14
Manganese	7439-96-5	4.40E-04	14
Mercury	7439-97-6	1.00E-06	14
Nickel	7440-02-0	9.50E-05	14
Selenium	7782-49-2	1.00E-06	14

14. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm
15. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

Table 3f: Compost Organic TAC Emission Factors (lb TAC/lb VOC)[16]

TAC	Feedstock Storage	Composting	Curing	Finished Compost Storage
Acetone	8.25E-03	7.23E-02	1.08E-01	4.86E-02
1,4-Dichlorobenzene	4.21E-04	2.22E-04	6.10E-04	3.56E-03
2-Propanol (Isopropylalcohol, IPA)	1.13E-03	2.59E-04	7.37E-04	1.46E-03
Acetaldehyde	8.96E-02	4.29E-02	2.83E-02	1.86E-02
Allyl Chloride (3-Chloropropene)	2.19E-04	1.08E-04	8.75E-04	1.86E-03
Benzene	2.24E-04	1.60E-04	5.42E-04	1.89E-03
Carbondisulfide	2.18E-04	3.74E-04	1.30E-03	7.75E-03
Chloroethane	1.85E-04	8.30E-05	2.68E-04	1.56E-03
Chloroform	3.42E-04	1.63E-04	4.99E-04	2.89E-03
Ethylbenzene	3.04E-04	3.50E-04	8.06E-04	2.57E-03
Ethylene Dichloride (1,2-dichloroethane)	2.84E-04	5.37E-04	5.78E-04	2.40E-03
Hexane	7.86E-03	3.18E-04	6.42E-04	2.09E-03
Methanol (Methylalcohol)	9.68E-02	4.88E-02	3.07E-02	7.77E-04
Methyl Ethyl Ketone (2-butanone)	5.36E-02	7.82E-02	3.77E-02	1.75E-03
Naphthalene	2.81E-04	7.14E-04	1.12E-03	3.11E-03
Propene (Propylene)	9.45E-05	5.89E-03	3.21E-02	6.87E-02
Styrene	2.98E-04	3.53E-04	6.34E-04	2.53E-03
Toluene	2.64E-04	6.30E-04	2.54E-03	6.96E-03
Vinyl acetate	1.45E-02	3.01E-03	7.67E-04	2.09E-03
Xylenes	3.15E-04	4.36E-04	1.24E-03	5.15E-03

16. Speciation profile from BAAQMD Permit Handbook, Section 11.15

Table 3g: Stationary Engine Emission Factors[17]

Equipment	Fuel[18]	Tier[17]	NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
Diesel Grinders	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Screens	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Stackers	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Colorizer	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Emergency Generator	Diesel	3	2.85	1.02	3.7	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05
Diesel Emergency Fire Pump	Diesel	3	2.85	1.02	2.6	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05

17. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
18. Project description

Table 3h: Engine GHG Emission Factors[19]

Fuel	HHV (MMBtu/gal)	Default CO2 EF (kg CO2/MMBtu)	CO2 EF (kg/gal)	Default CH4 EF (kg CH4/MMBtu)	CH4 EF (kg/gal)	Default N2O EF (kg N2O/MMBtu)	N2O EF (kg/gal)
Diesel	0.138	73.96	10.20648	3.00E-03	4.14E-04	6.00E-04	8.28E-05

19. 40 CFR 98, Subpart C, Tables C-1 and C-2

Table 3i: Brake Specific Fuel Consumption (BSFC) Conversion - Diesel

Parameter	Value	Unit of Measure	Basis
Brake Specific Fuel Consumption	7,000	btu/hp-hr	Per EPA AP-42 Table 3.3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
Brake Specific Fuel Consumption	0.3602	lb/hp-hr	calculated

Table 3j: Onroad Mobile Sources - Criteria Pollutant Exhaust Emission Factors[20]

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)
NOx	LDT1	0.266	0.000	0.420
	LHD2	0.742	1.641	0.000
	T7 Tractor	0.927	5.946	5.191
VOC	LDT1	0.073	0.000	0.660
	LHD2	0.102	0.120	0.000
	T7 Tractor	0.010	0.635	0.000
CO	LDT1	4.803	0.000	6.799
	LHD2	0.241	0.996	0.000
	T7 Tractor	0.075	9.364	0.000
SOx	LDT1	0.002	0.000	0.000
	LHD2	0.002	0.001	0.000
	T7 Tractor	0.005	0.005	0.000
PM10	LDT1	0.004	0.000	0.003
	LHD2	0.020	0.030	0.000
	T7 Tractor	0.009	0.003	0.000
PM2.5	LDT1	0.004	0.000	0.003
	LHD2	0.020	0.029	0.000
	T7 Tractor	0.008	0.002	0.000

20. Emission factors are from EMFAC2025

Table 3k: Onroad Mobile Sources - Fugitive VOC Emission Factors[21]

Pollutant	Vehicle Type	Hot Soak EF (g/trip)	Running Loss EF (g/mile)	Diurnal EF (g/veh/day)
VOC	LDT1	0.37	0.68	4.24
	LHD2	-	-	-
	T7 Tractor	-	-	-

21. Emission factors are from EMFAC2025

Table 3l: Onroad Mobile Sources - Fugitive PM Emission Factors[22]

Pollutant	Vehicle Type	Tire Wear (g/mile)	Brake Wear (g/mile)
PM10	LDT1	0.0080	0.0085
	LHD2	0.0120	0.0910
	T7 Tractor	0.0360	0.0874
PM2.5	LDT1	0.0020	0.0030
	LHD2	0.0030	0.0319
	T7 Tractor	0.0090	0.0306

22. Emission factors are from EMFAC2025

Table 3m: Onroad Mobile Sources - GHG Exhaust Emission Factors[23,24]

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)
CO2	LDT1	377.335	0.000	90.387
	LHD2	636.055	212.543	0.000
	T7 Tractor	1544.504	1410.663	0.000
CH4	LDT1	0.016	0.000	0.101
	LHD2	0.005	0.006	0.000
	T7 Tractor	0.000	0.029	0.000
N2O	LDT1	0.017	0.000	0.029
	LHD2	0.103	0.034	0.000
	T7 Tractor	0.400	0.227	0.000
HFC	LDT1	0.000	N/A	N/A
	LHD2	0.001	N/A	N/A
	T7 Tractor	0.001	N/A	N/A

23. Emission factors are from EMFAC2025
24. Refrigerant R emission factor is from CalEEMod software

Table 3n: Paved Road PM10 Emission Factors[25]

Vehicle	Average Vehicle Weight (ton)	Pollutant	Freeway (lb/VMT)	Major (lb/VMT)	Collector (lb/VMT)	Local (lb/VMT)	Rural/Onsite (lb/VMT)
		sL (g/m^2)[26] -->	0.020	0.035	0.035	0.320	1.600
Fleet Average	12.20	PM10	7.90E-04	1.31E-03	1.31E-03	9.85E-03	4.26E-02
		PM2.5	1.97E-04	3.29E-04	3.29E-04	2.46E-03	1.06E-02

$E = k\ (sL)^{0.91} \times (W)^{1.02} * C_f$

Variable	Value	UOM
k (PM10)	1.00	g/VMT
k(PM2.5)	0.25	g/VMT
Rain Days[27]	24.30	day/yr
C_f	0.983	

25. Methodology per AP-42, 13.2.1 Paved Roads
26. SJVAPCD, Appendix A: Comments and Responses Rule 9510 and 3180 December 15, 2005
27. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Table 3o: Onroad Equipment Unpaved Road Emission Factors[28]

EMFAC Vehicle Type	Activity	PM Emission Factors[29,30] (lb/VMT)	
		PM10	PM2.5
LDT1	Employee	0.6895	0.0690
LHD2	Delivery of Office Supplies	1.1462	0.1146
T7 Tractor	Ship Raw Material	1.8839	0.1884
T7 Tractor	Ship Finished Compost	2.0667	0.2067

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[31]	24.3	day/year

Overall Control Efficiency[30]	75%	
Control for watering	55%	Ref 32
Control for vehicle speed	44%	Ref 32

28. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
29. MISCELLANEOUS PROCESS METHODOLOGY 7.9 Entrained Road Travel, Paved Road Dust (Revised and updated, November 2016), https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2016.pdf
30. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
31. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
32. Assumes twice daily watering and limiting travel speed to 25 mph; http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

Table 3p: Offroad Equipment Emission Factors[33]

Offroad Equipment	Typical Model	Fuel	Engine Tier and Information		NOx	VOC	CO	SOx	PM10	PM2.5	CO2	CH4	N2O
			Tier	BHp									
Fuel Truck	Freightliner M2106	Diesel	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Tractors	Massey Fergusen, 7619	Diesel	4f	200	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Excavator	Caterpillar 326	Diesel	4f	201	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Loader	Caterpillar, 962K	Diesel	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Windrow Turner	Scarab	Diesel	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Water Truck	International, 7400 6x4	Diesel	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Sweeper Truck	Freightliner M2	Diesel	4f	240	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083

33. From User Guide for CalEEMod Version 2022.1, Appendix G, Table G-13

Table 3q: Emission Factors for Dust Entrainment from Unpaved Roads for Offroad Equipment[34]

Equipment Description and Use		GVW	Empty	Average	PM Emission	
					PM10	PM2.5
Fuel Truck	Freightliner M2106	31.5	11.5	22.5	2.1106	0.2111
Tractors	Massey Fergusen, 7619	7.9	7.9	22.5	2.1106	0.2111
Excavator	Caterpillar 326	28.6	28.6	22.5	2.1106	0.2111
Loader	Caterpillar, 962K	22.5	22.5	22.5	2.1106	0.2111
Windrow Turner	Scarab	20.0	20.0	22.5	2.1106	0.2111
Water Truck[37]	International, 7400 6x4	31.5	11.5	22.5	0.0000	0.0000
Sweeper Truck[37]	Freightliner M2	16.5	16.5	22.5	0.0000	0.0000

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[38]	24.3	day/year

34. Although compost surfaces are paved, because the compost processing areas are expected to have compost residuals covering the active surfaces, the unpaved road calculations are used to estimate emissions.
35. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
36. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
37. Entrained road dust is assumed to be negligible for the water truck due to watering and the sweeper truck due to watering and sweeping.
38. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Overall Control Efficiency[37]	75%	
Control for watering	55%	Ref 39
Control for vehicle speed	44%	Ref 39

39. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

Table 3r: TAC Emissions from Onroad Gasoline Vehicles

TAC	CAS#	Emission Factor[40] (lb/1000-gal)
1,2,4-Trimethylbenzene	95636	5.89E-01
1,3-Butadiene	106990	3.24E-01
Acetaldehyde	75070	1.47E-01
Acrolein	107028	8.25E-02
Benzene	71432	1.57E+00
Chlorine	7782505	4.55E-01
Copper	7440508	3.30E-03
Ethylbenzene	100414	6.42E-01
Formaldehyde	50000	1.01E+00
Hexane	110543	9.42E-01
Manganese	7439965	3.30E-03
Methanol (Methylalcohol)	67561	2.42E-01
Methyl Ethyl Ketone (2-butanone)	78933	1.18E-02
Methyl tert-butyl ether	1634044	1.15E+00
m-Xylene	108383	2.17E+00
Naphthalene	91203	2.95E-02
Nickel	7440020	3.30E-03
o-Xylene	95476	7.54E-01
Styrene	100425	7.07E-02
Toluene	108883	3.50E+00

40. SJVAPCD, AB 2588 "Hot Spots" Air Toxics Profiles, March 27, 2017, District Toxic Profile ID 176, Gasoline-Fired Portable Catalyst ICE

Table 3s: TAC from Paved Road Dust

TAC	Wt. Fraction[41, 42]
Arsenic	0.000013
Cadmium	0.000003
Hexavalent Chromium	0.00000085
Cobalt	0.000023
Copper	0.000148
Lead	0.000124
Manganese	0.0008
Nickel	0.000012
Mercury	0.000009
Selenium	0.000002
Vanadium (Fume Or Dust)	0.000071

41. CARB speciation profile for Paved Roads

42. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

Table 3t: TAC from Vehicle/Equipment Travel on Unpaved Surfaces

TAC	Concentration[43]
Arsenic	6.20E-06
Cadmium	2.00E-06
Hexavalent Chromium	2.45E-06
Cobalt	8.80E-06
Copper	6.90E-05
Lead	2.00E-04
Manganese	4.40E-04
Nickel	9.50E-05
Mercury	1.00E-06
Selenium	1.00E-06

43. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm

Table 3u: Emissions Reduction from Baseline[44]

Waste Type	Compost Emission Reduction Factor (MT CO2e/ton feedstock)
Food Waste	0.62
Green Waste (includes vegetative food material)	0.44
Green Waste (includes vegetative food material) + Food Waste	0.56
Compost Emission Reduction Factor for Scenario 5	**0.56**

44. CARB, Method for Estimating Greenhouse Gas Emission Reductions From Diversion of Organic Waste From Landfills to Compost Facilities, 2017

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Table 4: Process Throughputs

Table 4: Process Throughput Calculations

Processing Step	Loss based on Initial Charge	Loss based on Previous Step	Proposed Project (TPY)	Proposed Project (TPD)
Initial Charge	---	---	25,000	80
Loss Upon Composting	10.0%	90.0%	2,500	8
Initial Charge to Curing	---	---	22,500	72
Loss Upon Curing	5.0%	5.6%	1,250	4
Initial Charge to Screening	---	---	21,250	68
Loss Upon Screening	5.0%	5.9%	1,250	4
Finished Product	---	---	20,000	64

Data and Parameters

Daily Operating Hours	10	hours/day
Annual Operating Days	312	Day/year

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Table 5: Grinding and Screening PM Emissions

Table 5a: Emission Factors

Process Operation	PM10	PM2.5
Grinding	0.0144	0.00216
Screening	0.0144	0.00216

Table 5b: Grinding and Screening PM Emissions

Operation	Annual Throughput (ton/yr)	Peak Daily Throughput (ton/day)	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Grinding	25,000	80	90.00	13.50	0.29	0.04	0.03	0.00
Screening	21,250	68	76.50	11.48	0.25	0.04	0.02	0.00
		Total	166.50	24.98	0.53	0.08	0.05	0.01
		Total (TPY)	0.05	0.007				

Data and Parameters

Operating Hours	10	hrs/day
Control Efficiency for Watering	75%	

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Table 6: Material Handling PM Emissions

Table 6: Material Handling PM Emissions

Process Step	Annual Throughput (ton/yr)	Average Daily Throughput (ton/day)	No. of Drop Points	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
				PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Feedstock	25,000	80	1	4.70	0.71	0.0150	0.0023	0.00150	0.00023
Grinding[1]	25,000	80	4	18.78	2.84	0.0602	0.0091	0.00602	0.00091
Composting	25,000	80	1	4.70	0.71	0.0150	0.0023	0.00150	0.00023
Curing	22,500	72	1	4.23	0.64	0.0135	0.0021	0.00135	0.00021
Screening[2]	21,250	68	4	15.96	2.42	0.0512	0.0077	0.00512	0.00077
Finished Compost Storage	20,000	64	1	3.76	0.57	0.0120	0.0018	0.00120	0.00018
Truck Loadout	20,000	64	1	3.76	0.57	0.0120	0.0018	0.00120	0.00018
			Total (lb/yr)	55.87	8.46	0.1791	0.0271	0.01791	0.00271
			Total (TPY)	0.028	0.0042				

Data and Parameters

Operating Schedule	10	hr/day
Days per year	312	day/yr
PM10 EF	1.88E-04	lb/ton/drop
PM2.5 EF	2.84E-05	lb/ton/drop

Notes

1. Four drop points are assumed for the grinding: 1) load hopper, 2) hopper to grinder, 3) grinder to conveyor, 4) conveyor to storage pile
2. Four drop points are assumed for the screens: 1) load hopper, 2) hopper to screen, 3) screen to conveyor, 4) conveyor to storage pile

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Table 7: Wind Erosion PM Emissions

Table 7a: Wind Erosion Dimensions/Area

Area	Acres
Composting Facility	11

Table 7b: Wind Erosion PM Emission Factors

Variable	PM10 lb/acre/day	PM2.5 lb/acre/day
Inactive Day Wind Erosion EF	2.74E-01	1.10E-01

Table 7c: Wind Erosion PM Emissions

Area	Acres	Days per Year	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Composting Facility	11.00	365	274.88	109.95	0.75	0.30	0.031	0.013
		Total (TPY)	0.137	0.055				

Data and Parameters			Notes:
1. Control by watering per MDAQMD Mineral Guidance	75%		All piles are watered for dust suppression or moisture control, or both.
Weeks per year	52	weeks/yr	Constant
Days per year	365	day/yr	Constant
Hours per day	24	hr/day	Constant
Conversion	43,560	ft^2/acre	Constant

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Table 8: Composting VOC Emissions

Table 8: Composting VOC Emissions

Process Unit	Annual Throughput (ton/yr)	Emission Factor	Annual Emissions (lb/yr)	Average Daily Emissions (lb/day)	Average Hourly Emissions (lb/hr)
Feedstock Storage	25,000	0.2 lb/wet ton/day	10,000	27.40	1.14
Composting	25,000	0.64 lb/ton	16,110	44.14	1.84
Curing[1]	25,000	0.07 lb/ton	1,790	4.90	0.20
Finished Compost Storage	20,000	0.02 lb/ton	400	1.10	0.05
1. EF developed for composting throughput		Total (lb/yr)	28,300	77.53	3.23
		Total (TPY)	14.15		

Data and Parameters			Notes
Daily Hours of Emissions	24	hr/day	Constant
Feedstock Storage Duration	2	days	Assumption
Days per year	365	days per year	

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Table 9: Composting GHG Emissions

Table 9a: Composting GHG Emissions[1]

Process Unit	Annual Throughput (ton/yr)	CH4 Emission Factor	N2O Emission Factor	CH4 (MT/yr)	N2O (MT/yr)	CO2e (MT/Yr)
Composting	25,000	0.004 kg/kg	0.0003 kg/kg	91	6.80	4,343

Data and Parameters

Conversion	454	gram/lb
Conversion	1,000	Kg/MT
Conversion	1,000	gram/Kg

Table 9b: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

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Table 10: Stationary Engines - Criteria Pollutant and GHG Emissions

Table 10a: Engine Emission Factors

Equipment	Number of Engines	Engine Tier and Information			NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
		Fuel	Tier	BHp									
Diesel Grinders	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Screens	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Stackers	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Colorizer	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Emergency Generator	1	Diesel	3	150	2.85	1.02	3.7	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05
Diesel Emergency Fire Pump	1	Diesel	3	300	2.85	1.02	2.6	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05

Table 10b: Total Daily Criteria Pollutant Emissions from Stationary Engine

Function	Number of Engines	Engine Characteristics		Hr/Day	Criteria Pollutant Exhaust Emissions (lb/day)					
		BHp	Op Load		NOx	VOC	CO	SOx	PM10	PM2.5
Diesel Grinders	1	100	95%	10	0.54	0.10	7.75	0.01	0.02	0.02
Diesel Screens	1	100	95%	10	0.54	0.10	7.75	0.01	0.02	0.02
Diesel Stackers	1	100	95%	10	0.54	0.10	7.75	0.01	0.02	0.02
Diesel Colorizer	1	100	95%	10	0.54	0.10	7.75	0.01	0.02	0.02
Diesel Emergency Generator	1	150	74%	2	1.39	0.50	1.81	0.00	0.07	0.07
Diesel Emergency Fire Pump	1	300	74%	2	2.79	1.00	2.55	0.00	0.15	0.15

Table 10c: Total Annual Criteria Pollutant Emissions from Stationary Engine

Function	Number of Engines	Engine Characteristics		Hr/Yr	Criteria Pollutant Exhaust Emissions (lb/yr)					
		BHp	Op Load		NOx	VOC	CO	SOx	PM10	PM2.5
Diesel Grinders	1	100	95%	3,120	169.90	32.7	2,418	3.20	6.53	6.53
Diesel Screens	1	100	95%	3,120	169.90	32.7	2,418	3.20	6.53	6.53
Diesel Stackers	1	100	95%	3,120	169.90	32.7	2,418	3.20	6.53	6.53
Diesel Colorizer	1	100	95%	3,120	169.90	33	2,418	3.20	6.53	6.53
Diesel Emergency Generator	1	150	74%	200	139.49	50	181	0.24	7.34	7.34
Diesel Emergency Fire Pump	1	300	74%	200	278.97	100	255	0.48	14.7	14.7

Table 10d: Stationary Engine - GHG Emissions

Function	Number of Engines	Engine Characteristics		Hr/Yr	Fuel (gal/yr)	CO2 (MT/yr)	CH4 (kg/yr)	N2O (kg/yr)	CO2e (MT/Yr)
		BHp	Op Load						
Diesel Grinders	1	100	95%	3,120	15,145	154.6	0.0063	0.0013	154.6
Diesel Screens	1	100	95%	3,120	15,145	154.6	0.0063	0.0013	154.6
Diesel Stackers	1	100	95%	3,120	15,145	154.6	0.0063	0.0013	154.6
Diesel Colorizer	1	100	95%	3,120	15,145	154.6	0.0063	0.0013	154.6
Diesel Emergency Generator	1	150	74%	200	1,134	11.6	0.0005	0.0001	11.6
Diesel Emergency Fire Pump	1	300	74%	200	2,269	23.2	0.0009	0.0002	23.2

Table 10e: Brake Specific Fuel Consumption (BSFC) Conversion - Diesel

Parameter	Value	Unit of Measure	Basis
Brake Specific Fuel Consumption	7,000	btu/hp-hr	Per EPA AP-42 Table 3.3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
Brake Specific Fuel Consumption	0.3602	lb/hp-hr	calculated

Table 10f: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

Table 10g: CO2 Emission Factors[2]

Fuel	HHV (MMBtu/gal)	Default CO2 EF	CO2 EF (kg/gal)	Default CH4 EF	CH4 EF (kg/gal)	Default N2O EF	N2O EF (kg/gal)
Diesel	0.138	73.96	10.20648	3.00E-03	4.14E-04	6.00E-04	8.28E-05

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr
Emergency Engine Operating Hours	2	hours/day
Emergency Engine Operating Days	100	day/yr
Conversion	454	gram/lb
Conversion	1,000,000	gm/MT
Conversion	1,000	Kg/MT
Conversion	1,000	gram/Kg

Notes:

1. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
2. Ref: 40 CFR 98, Subpart C, Tables C-1 and C-2

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Table 11: Summary of Criteria Pollutant and GHG Emissions from Composting Activities

Table 11a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
5. Grinding and Screening	---	---	---	---	0.53	0.08
6. Material Handling	---	---	---	---	0.18	0.03
7. Wind Erosion	---	---	---	---	0.75	0.30
8. Composting VOC	---	77.53	---	---	---	---
10. Stationary Engines	6.36	1.92	35.35	0.05	0.30	0.30
Total	6.36	79.45	35.35	0.05	1.77	0.71

Table 11b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
5. Grinding and Screening	---	---	---	---	166.5	24.98
6. Material Handling	---	---	---	---	55.9	8.46
7. Wind Erosion	---	---	---	---	275	110.0
8. Composting VOC	---	28,300	---	---	---	---
10. Stationary Engines	1,098	280	10,107	13.5	48.2	48.2
Total (lb/yr)	1,098	28,580	10,107	13.5	545	192
Total (TPY)	0.55	14.29	5.05	0.0068	0.27	0.096

Table 11c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	CO2e (MT/Yr)
9. Composting GHG	N/A	91	6.80	4,343
10. Stationary Engines	653	0.0265	0.0053	653
Total (MT/yr)	653	91	6.81	4,996

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Table 12: TAC from Composting Dust

Table 12a: Material Handling and Wind Erosion Dust Emissions (PM10)

Source	lb/hr	lb/yr
5. Grinding and Screening	0.05	166.50
6. Material Handling	0.02	55.87
7. Wind Erosion	0.03	274.88
Total PM10	0.10	497.25

Table 12b: TAC from Material Handling and Wind Erosion

TAC	CAS	Concentration[1, 2] (lb/lb Dust)	Total TAC Emissions		Grinding and Screening TAC Emissions		Material Handling TAC Emissions		Wind Erosion TAC Emissions	
			(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)
Arsenic	7440-38-2	6.20E-06	6.36E-07	3.08E-03	3.31E-07	1.03E-03	1.11E-07	3.46E-04	1.95E-07	1.70E-03
Cadmium	7440-43-9	2.00E-06	2.05E-07	9.94E-04	1.07E-07	3.33E-04	3.58E-08	1.12E-04	6.28E-08	5.50E-04
Hexavalent Chromium	18540-29-9	2.45E-06	2.51E-07	1.22E-03	1.31E-07	4.08E-04	4.39E-08	1.37E-04	7.69E-08	6.73E-04
Cobalt	7440-48-4	8.80E-06	9.03E-07	4.38E-03	4.70E-07	1.47E-03	1.58E-07	4.92E-04	2.76E-07	2.42E-03
Copper	7440-50-8	6.90E-05	7.08E-06	3.43E-02	3.68E-06	1.15E-02	1.24E-06	3.86E-03	2.17E-06	1.90E-02
Lead	7439-92-1	2.00E-04	2.05E-05	9.94E-02	1.07E-05	3.33E-02	3.58E-06	1.12E-02	6.28E-06	5.50E-02
Manganese	7439-96-5	4.40E-04	4.52E-05	2.19E-01	2.35E-05	7.33E-02	7.88E-06	2.46E-02	1.38E-05	1.21E-01
Mercury	7439-97-6	1.00E-06	1.03E-07	4.97E-04	5.34E-08	1.67E-04	1.79E-08	5.59E-05	3.14E-08	2.75E-04
Nickel	7440-02-0	9.50E-05	9.75E-06	4.72E-02	5.07E-06	1.58E-02	1.70E-06	5.31E-03	2.98E-06	2.61E-02
Selenium	7782-49-2	1.00E-06	1.03E-07	4.97E-04	5.34E-08	1.67E-04	1.79E-08	5.59E-05	3.14E-08	2.75E-04
			Annual Total	0.410	Annual Total	0.137	Annual Total	0.046	Annual Total	0.227

Notes:

1. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm
2. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

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Table 13: Organic TAC Emissions

Table 13a: Organic Storage VOC Emissions

Process Description	(lb/hr)	(lb/yr)
Feedstock Storage	1.14	10,000
Composting	1.84	16,110
Curing	0.20	1,790
Finished Compost Storage	0.05	400

Table 13b: Feedstock Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	8.25E-03	9.42E-03	82.50
1,4-Dichlorobenzene	4.21E-04	4.81E-04	4.21
2-Propanol (Isopropylalcohol, IPA)	1.13E-03	1.29E-03	11.30
Acetaldehyde	8.96E-02	1.02E-01	896.00
Allyl Chloride (3-Chloropropene)	2.19E-04	2.50E-04	2.19
Benzene	2.24E-04	2.56E-04	2.24
Carbondisulfide	2.18E-04	2.49E-04	2.18
Chloroethane	1.85E-04	2.11E-04	1.85
Chloroform	3.42E-04	3.90E-04	3.42
Ethylbenzene	3.04E-04	3.47E-04	3.04
Ethylene Dichloride (1,2-dichloroethane)	2.84E-04	3.24E-04	2.84
Hexane	7.86E-03	8.97E-03	78.60
Methanol (Methylalcohol)	9.68E-02	1.11E-01	968.00
Methyl Ethyl Ketone (2-butanone)	5.36E-02	6.12E-02	536.00
Naphthalene	2.81E-04	3.21E-04	2.81
Propene (Propylene)	9.45E-05	1.08E-04	0.95
Styrene	2.98E-04	3.40E-04	2.98
Toluene	2.64E-04	3.01E-04	2.64
Vinyl acetate	1.45E-02	1.66E-02	145.00
Xylenes	3.15E-04	3.60E-04	3.15

Table 13c: Composting TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	7.23E-02	1.33E-01	1164.75
1,4-Dichlorobenzene	2.22E-04	4.08E-04	3.58
2-Propanol (Isopropylalcohol, IPA)	2.59E-04	4.76E-04	4.17
Acetaldehyde	4.29E-02	7.89E-02	691.12
Allyl Chloride (3-Chloropropene)	1.08E-04	1.99E-04	1.74
Benzene	1.60E-04	2.94E-04	2.58
Carbondisulfide	3.74E-04	6.88E-04	6.03
Chloroethane	8.30E-05	1.53E-04	1.34
Chloroform	1.63E-04	3.00E-04	2.63
Ethylbenzene	3.50E-04	6.44E-04	5.64
Ethylene Dichloride (1,2-dichloroethane)	5.37E-04	9.88E-04	8.65
Hexane	3.18E-04	5.85E-04	5.12
Methanol (Methylalcohol)	4.88E-02	8.97E-02	786.17
Methyl Ethyl Ketone (2-butanone)	7.82E-02	1.44E-01	1259.80
Naphthalene	7.14E-04	1.31E-03	11.50
Propene (Propylene)	5.89E-03	1.08E-02	94.89
Styrene	3.53E-04	6.49E-04	5.69
Toluene	6.30E-04	1.16E-03	10.15
Vinyl acetate	3.01E-03	5.54E-03	48.49
Xylenes	4.36E-04	8.02E-04	7.02

Table 13d: Curing TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	1.08E-01	2.21E-02	193.32
1,4-Dichlorobenzene	6.10E-04	1.25E-04	1.09
2-Propanol (Isopropylalcohol, IPA)	7.37E-04	1.51E-04	1.32
Acetaldehyde	2.83E-02	5.78E-03	50.66
Allyl Chloride (3-Chloropropene)	8.75E-04	1.79E-04	1.57
Benzene	5.42E-04	1.11E-04	0.97
Carbondisulfide	1.30E-03	2.66E-04	2.33
Chloroethane	2.68E-04	5.48E-05	0.48
Chloroform	4.99E-04	1.02E-04	0.89
Ethylbenzene	8.06E-04	1.65E-04	1.44
Ethylene Dichloride (1,2-dichloroethane)	5.78E-04	1.18E-04	1.03
Hexane	6.42E-04	1.31E-04	1.15
Methanol (Methylalcohol)	3.07E-02	6.27E-03	54.95
Methyl Ethyl Ketone (2-butanone)	3.77E-02	7.70E-03	67.48
Naphthalene	1.12E-03	2.29E-04	2.00
Propene (Propylene)	3.21E-02	6.56E-03	57.46
Styrene	6.34E-04	1.30E-04	1.13
Toluene	2.54E-03	5.19E-04	4.55
Vinyl acetate	7.67E-04	1.57E-04	1.37
Xylenes	1.24E-03	2.53E-04	2.22

Table 13e: Finished Compost Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	4.86E-02	2.22E-03	19.44
1,4-Dichlorobenzene	3.56E-03	1.63E-04	1.42
2-Propanol (Isopropylalcohol, IPA)	1.46E-03	6.67E-05	0.58
Acetaldehyde	1.86E-02	8.49E-04	7.44
Allyl Chloride (3-Chloropropene)	1.86E-03	8.49E-05	0.74
Benzene	1.89E-03	8.63E-05	0.76
Carbondisulfide	7.75E-03	3.54E-04	3.10
Chloroethane	1.56E-03	7.12E-05	0.62
Chloroform	2.89E-03	1.32E-04	1.16
Ethylbenzene	2.57E-03	1.17E-04	1.03
Ethylene Dichloride (1,2-dichloroethane)	2.40E-03	1.10E-04	0.96
Hexane	2.09E-03	9.54E-05	0.84
Methanol (Methylalcohol)	7.77E-04	3.55E-05	0.31
Methyl Ethyl Ketone (2-butanone)	1.75E-03	7.99E-05	0.70
Naphthalene	3.11E-03	1.42E-04	1.24
Propene (Propylene)	6.87E-02	3.14E-03	27.48
Styrene	2.53E-03	1.16E-04	1.01
Toluene	6.96E-03	3.18E-04	2.78
Vinyl acetate	2.09E-03	9.54E-05	0.84
Xylenes	5.15E-03	2.35E-04	2.06

Notes:

1. Speciation profile from BAAQMD Permit Handbook, Section 11.15

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Table 14: NH3 Emissions

Table 14a: NH3 Emissions

Process Unit	Annual Throughput (ton/yr)	Daily Throughput (ton/day)	Emission Factor (lb/ton)	Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Feedstock Storage	25,000	80	0.020 lb/ton/day	0.11	1,000
Composting + Curing	25,000	80	0.16 lb/ton	0.45	3,900
Finished Compost Storage	20,000	64	0.0004 lb/ton	0.0009	8

Assumed Percentage of Composting + Curing to Composting:	90%	Assumed same as percent of VOC emissions

Table 14b: Colorant Application Ammonia Emissions[1]

Equipment	Annual Throughput (ton/yr)	Hourly Throughput (ton/hr)	Ammonia Emissions (lb/hr)	Ammonia Emissions (lb/yr)
Colorizer	1,250	50.0	5.42	135

	lb/hr	lb/yr
Total Ammonia Emissions:	**5.9769**	**5,043**

1. Ammonia emissions may occur at the colorizer or from the storage piles. No attempt has been made to determine the actual emission point.

Data and Parameters

Daily Hours of Emissions	24	hr/day	
Days of feedstock storage	2	days	
Annual hours of operation	8,760	hr/yr	
Bulk density - mulch	600	lb/cy	Average per Google AI
Conversion	2000	lb/ton	Constant
Application rate	6.5	lbs/cy	Google AI, max of listed range
Ammonia Concentration	0.5%	by weight	SDS

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Table 15: Stationary Diesel Engine TAC Emissions

Table 15: Stationary Diesel Engine TAC Emissions

Vehicle	PM10 Emissions (lb/hr)	PM10 Emissions (lb/day)	PM10 Emissions (lb/yr)
Diesel Grinders	0.002	2.09E-02	6.53
Diesel Screens	0.002	2.09E-02	6.53
Diesel Stackers	0.002	2.09E-02	6.53
Diesel Colorizer	0.002	2.09E-02	6.53
Diesel Emergency Generator	0.037	7.34E-02	7.34
Diesel Emergency Fire Pump	0.073	1.47E-01	14.68
Total PM10 = DPM	**0.118**	**3.04E-01**	**48.16**

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr
Emergency Engine Operating Hours	2	hours/day
Emergency Engine Operating Days	100	day/yr

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Table 16: Summary of TAC Emissions from Composting Activities

Table 16a: Summary of TAC Emissions from Composting Activities, lb/yr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine	Emergency Generator	Fire Pump	Total
Arsenic	7440382	1.03E-03	3.46E-04	1.70E-03	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	0.00E+00	0.00E+00	3.08E-03
Cadmium	7440439	3.33E-04	1.12E-04	5.50E-04	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	0.00E+00	0.00E+00	9.94E-04
Hexavalent Chromium	18540299	4.08E-04	1.37E-04	6.73E-04	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	0.00E+00	0.00E+00	1.22E-03
Cobalt	7440484	1.47E-03	4.92E-04	2.42E-03	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	0.00E+00	0.00E+00	4.38E-03
Copper	7440508	1.15E-02	3.86E-03	1.90E-02	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	0.00E+00	0.00E+00	3.43E-02
Lead	7439921	3.33E-02	1.12E-02	5.50E-02	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	0.00E+00	0.00E+00	9.94E-02
Manganese	7439965	7.33E-02	2.46E-02	1.21E-01	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	0.00E+00	0.00E+00	2.19E-01
Mercury	7439976	1.67E-04	5.59E-05	2.75E-04	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	0.00E+00	0.00E+00	4.97E-04
Nickel	7440020	1.58E-02	5.31E-03	2.61E-02	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	0.00E+00	0.00E+00	4.72E-02
Selenium	7782492	1.67E-04	5.59E-05	2.75E-04	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	0.00E+00	0.00E+00	4.97E-04
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	8.25E+01	1.16E+03	1.93E+02	1.94E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E+03
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	4.21E+00	3.58E+00	1.09E+00	1.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E+01
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	1.13E+01	4.17E+00	1.32E+00	5.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.74E+01
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	8.96E+02	6.91E+02	5.07E+01	7.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E+03
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	2.19E+00	1.74E+00	1.57E+00	7.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.24E+00
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	2.24E+00	2.58E+00	9.70E-01	7.56E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.54E+00
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	2.18E+00	6.03E+00	2.33E+00	3.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E+01
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	1.85E+00	1.34E+00	4.80E-01	6.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.29E+00
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	3.42E+00	2.63E+00	8.93E-01	1.16E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.10E+00
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	3.04E+00	5.64E+00	1.44E+00	1.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+01
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	2.84E+00	8.65E+00	1.03E+00	9.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E+01
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	7.86E+01	5.12E+00	1.15E+00	8.36E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.57E+01
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	9.68E+02	7.86E+02	5.50E+01	3.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E+03
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	5.36E+02	1.26E+03	6.75E+01	7.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E+03
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	2.81E+00	1.15E+01	2.00E+00	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E+01
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	9.45E-01	9.49E+01	5.75E+01	2.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E+02
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	2.98E+00	5.69E+00	1.13E+00	1.01E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E+01
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	2.64E+00	1.01E+01	4.55E+00	2.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E+01
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	1.45E+02	4.85E+01	1.37E+00	8.36E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E+02
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	3.15E+00	7.02E+00	2.22E+00	2.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E+01
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	1.00E+03	3.51E+03	3.90E+02	7.60E+00	1.35E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.04E+03
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.53E+00	6.53E+00	6.53E+00	6.53E+00	7.34E+00	1.47E+01	4.82E+01

Table 16b: Summary of TAC Emissions from Composting Activities, lb/hr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine	Emergency Generator	Fire Pump	Total
Arsenic	7440382	3.31E-07	1.11E-07	1.95E-07	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	0.00E+00	0.00E+00	6.36E-07
Cadmium	7440439	1.07E-07	3.58E-08	6.28E-08	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	0.00E+00	0.00E+00	2.05E-07
Hexavalent Chromium	18540299	1.31E-07	4.39E-08	7.69E-08	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	0.00E+00	0.00E+00	2.51E-07
Cobalt	7440484	4.70E-07	1.58E-07	2.76E-07	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	0.00E+00	0.00E+00	9.03E-07
Copper	7440508	3.68E-06	1.24E-06	2.17E-06	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	0.00E+00	0.00E+00	7.08E-06
Lead	7439921	1.07E-05	3.58E-06	6.28E-06	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	0.00E+00	0.00E+00	2.05E-05
Manganese	7439965	2.35E-05	7.88E-06	1.38E-05	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	0.00E+00	0.00E+00	4.52E-05
Mercury	7439976	5.34E-08	1.79E-08	3.14E-08	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	0.00E+00	0.00E+00	1.03E-07
Nickel	7440020	5.07E-06	1.70E-06	2.98E-06	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	0.00E+00	0.00E+00	9.75E-06
Selenium	7782492	5.34E-08	1.79E-08	3.14E-08	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	0.00E+00	0.00E+00	1.03E-07
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	9.42E-03	1.33E-01	2.21E-02	2.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-01
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	4.81E-04	4.08E-04	1.25E-04	1.63E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-03
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	1.29E-03	4.76E-04	1.51E-04	6.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-03
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	1.02E-01	7.89E-02	5.78E-03	8.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-01
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	2.50E-04	1.99E-04	1.79E-04	8.49E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.12E-04
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	2.56E-04	2.94E-04	1.11E-04	8.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.47E-04
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	2.49E-04	6.88E-04	2.66E-04	3.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-03
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	2.11E-04	1.53E-04	5.48E-05	7.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.90E-04
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	3.90E-04	3.00E-04	1.02E-04	1.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.24E-04
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	3.47E-04	6.44E-04	1.65E-04	1.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-03
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	3.24E-04	9.88E-04	1.18E-04	1.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-03
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	8.97E-03	5.85E-04	1.31E-04	9.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.78E-03
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	1.11E-01	8.97E-02	6.27E-03	3.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E-01
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	6.12E-02	1.44E-01	7.70E-03	7.99E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-01
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	3.21E-04	1.31E-03	2.29E-04	1.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-03
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	1.08E-04	1.08E-02	6.56E-03	3.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.06E-02
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	3.40E-04	6.49E-04	1.30E-04	1.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-03
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	3.01E-04	1.16E-03	5.19E-04	3.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-03
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	1.66E-02	5.54E-03	1.57E-04	9.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E-02
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	3.60E-04	8.02E-04	2.53E-04	2.35E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-03
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	1.14E-01	4.01E-01	4.45E-02	8.68E-04	5.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.98E+00
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-03	2.09E-03	2.09E-03	2.09E-03	3.67E-02	7.34E-02	1.18E-01

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Table 17: Onroad Mobile Sources - Vehicle Information

Table 17: Vehicle Information and Mileage Calculation

Vehicle Type	Vehicle Use	Number of Vehicles per Day	Vehicle Weight (lb)			Fuel	Days	One-way Trips per Vehicle per Day	One-way Trips per Year	One-way Onsite Trip Mileage	One-way Offsite Trip Mileage	Total One-way Trip Mileage	Onsite Total VMT/yr	Offsite Total VMT/yr	Total VMT/yr
			Gross	Empty	Average										
LDT1	Employee	12	3,750	3,750	3,750	Gasoline	312	2	7,488	0.00	15	15.00	0	112,320	112,320
LHD2	Delivery of Office Supplies	1	15,006	8,200	11,603	Diesel	312	2	624	0.20	15	15.20	125	9,360	9,485
T7 Tractor	Ship Raw Material	35	47,000	23,000	35,000	Diesel	312	2	21,840	0.20	5	5.20	4,368	109,200	113,568
T7 Tractor	Ship Finished Compost	7	63,000	23,000	43,000	Diesel	312	2	4,368	0.20	15	15.20	874	65,520	66,394

Assuming 12 cu yd per raw material truck, 20 cu yd per compost product truck

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Table 18: Onroad Mobile Sources Exhaust Emissions

Table 18a: Onroad Mobile Sources - Criteria Pollutant Exhaust Emissions

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)	Total Running Exhaust (lb/yr)	Total Idle (lb/yr)	Total Start (lb/yr)	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)	Onsite Emissions (lb/day)	Offsite Emissions (lb/day)
NOx	LDT1	0.266	0.000	0.420	65.79	0.00	6.92	72.71	0.00	72.71	0.23	0.00E+00	2.33E-01
	LHD2	0.742	1.641	0.000	15.51	1.13	0.00	16.63	0.22	16.42	0.05	7.01E-04	5.26E-02
	T7 Tractor	0.927	5.946	5.191	367.49	171.63	299.68	838.80	24.43	814.37	2.69	7.83E-02	2.61E+00
VOC	LDT1	0.073	0.000	0.660	18.04	0.00	10.89	28.93	0.00	28.93	0.09	0.00E+00	9.27E-02
	LHD2	0.102	0.120	0.000	2.13	0.08	0.00	2.21	0.03	2.18	0.01	9.33E-05	6.99E-03
	T7 Tractor	0.010	0.635	0.000	3.81	18.32	0.00	22.13	0.64	21.49	0.07	2.07E-03	6.89E-02
CO	LDT1	4.803	0.000	6.799	1,188.30	0.00	112.13	1,300.44	0.00	1,300.44	4.17	0.00E+00	4.17E+00
	LHD2	0.241	0.996	0.000	5.04	0.68	0.00	5.72	0.08	5.65	0.02	2.41E-04	1.81E-02
	T7 Tractor	0.075	9.364	0.000	29.64	270.27	0.00	299.91	8.74	291.18	0.96	2.80E-02	9.33E-01
SOx	LDT1	0.002	0.000	0.000	0.40	0.00	0.01	0.41	0.00	0.41	0.00	0.00E+00	1.31E-03
	LHD2	0.002	0.001	0.000	0.04	0.00	0.00	0.05	0.00	0.04	0.00	1.90E-06	1.43E-04
	T7 Tractor	0.005	0.005	0.000	2.06	0.14	0.00	2.19	0.06	2.13	0.01	2.05E-04	6.83E-03
PM10	LDT1	0.004	0.000	0.003	1.05	0.00	0.06	1.10	0.00	1.10	0.00	0.00E+00	3.54E-03
	LHD2	0.020	0.030	0.000	0.43	0.02	0.00	0.45	0.01	0.44	0.00	1.88E-05	1.41E-03
	T7 Tractor	0.009	0.003	0.000	3.44	0.07	0.00	3.51	0.10	3.41	0.01	3.28E-04	1.09E-02
PM2.5	LDT1	0.004	0.000	0.003	0.96	0.00	0.05	1.02	0.00	1.02	0.00	0.00E+00	3.26E-03
	LHD2	0.020	0.029	0.000	0.41	0.02	0.00	0.43	0.01	0.42	0.00	1.80E-05	1.35E-03
	T7 Tractor	0.008	0.002	0.000	3.29	0.07	0.00	3.36	0.10	3.26	0.01	3.14E-04	1.05E-02

Table 18b: Onroad Mobile Sources - Fugitive VOC Emissions

Pollutant	Vehicle Type	Hot Soak EF (g/trip)	Running Loss EF (g/mile)	Diurnal EF (g/veh/day)	Total Hot Soak (lb/yr)	Total Running Loss (lb/yr)	Total Diurnal (lb/yr)	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)
VOC	LDT1	0.37	0.68	4.24	6.1	169.0	35.0	210.02	0.00	210.02	0.67
	LHD2	-	-	-	-	-	-	-	-	-	-
	T7 Tractor	-	-	-	-	-	-	-	-	-	-

Table 18c: Onroad Mobile Sources - Fugitive PM Emissions

Pollutant	Vehicle Type	Tire Wear (g/mile)	Brake Wear (g/mile)	Total Tire Wear (lb/yr)	Total Brake Wear	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)
PM10	LDT1	0.0080	0.0085	1.98	2.09	4.07	0.00	4.07	0.013
	LHD2	0.0120	0.0910	0.25	1.90	2.15	0.03	2.12	0.007
	T7 Tractor	0.0360	0.0874	14.27	34.63	48.90	1.42	47.48	0.157
PM2.5	LDT1	0.0020	0.0030	0.49	0.73	1.23	0.00	1.23	0.004
	LHD2	0.0030	0.0319	0.06	0.67	0.73	0.01	0.72	0.002
	T7 Tractor	0.0090	0.0306	3.57	12.12	15.69	0.46	15.23	0.050

Table 18d: Summary of Criteria Pollutant Emissions from Onroad Operations Vehicles

Type	NO_x (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SO_x (lb/yr)	PM_{10} (lb/yr)	$PM_{2.5}$ (lb/yr)
Exhaust	928.15	53.27	1606.07	2.65	5.06	4.81
Fugitive	---	210.02	---	---	55.13	17.64
Total (Lb/Yr)	928.15	263.29	1606.07	2.65	60.19	22.45
Total (Lb/day)	2.97	0.84	5.15	0.01	0.19	0.07
Total (TPY)	0.46	0.13	0.80	0.001	0.03	0.01

Table 18e: Onroad Mobile Sources - Greenhouse Gas Exhaust Emissions

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)	Total Running Exhaust (MT/yr)	Total Idle (MT/yr)	Total Start (MT/yr)	Total Emissions (MT/yr)
CO2	LDT1	377.335	0.000	90.387	42.4	0.00E+00	6.77E-01	43
	LHD2	636.055	212.543	0.000	6.0	6.63E-02	0.00E+00	6.10
	T7 Tractor	1544.504	1410.663	0.000	278.0	1.85E+01	0.00E+00	296
CH4	LDT1	0.016	0.000	0.101	0.0	0.00E+00	7.55E-04	0
	LHD2	0.005	0.006	0.000	0.0	1.74E-06	0.00E+00	0.00
	T7 Tractor	0.000	0.029	0.000	0.0	3.86E-04	0.00E+00	0
N2O	LDT1	0.017	0.000	0.029	0.0	0.00E+00	2.20E-04	0
	LHD2	0.103	0.034	0.000	0.0	1.07E-05	0.00E+00	0.00
	T7 Tractor	0.400	0.227	0.000	0.1	2.98E-03	0.00E+00	0
HFC	LDT1	0.000	N/A	N/A	0.0	N/A	N/A	0
	LHD2	0.001	N/A	N/A	0.0	N/A	N/A	0.00
	T7 Tractor	0.001	N/A	N/A	0.0	N/A	N/A	0
CO2e	LDT1							44
	LHD2							6.48
	T7 Tractor							319
							Total	**369**

Table 18f: GHG Emissions from Onroad Mobile Source Activity

CO_2	CH_4	N_2O	Total CO_2e
(MT/Yr)	(Kg/Yr)	(Kg/Yr)	(MT/Yr)
346	3.05	78.09	369

Table 18g: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265
HFC[1]	12,400

1. Conservatively using GWP for HFC-23, the HFC with the highest GWP

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 19: Onroad Mobile Source Paved Road Dust

Table 19a: Paved Road PM_{10} Emission Factors[1]

Vehicle	Average Vehicle Weight (ton)	Pollutant	Freeway (lb/VMT)	Major (lb/VMT)	Collector (lb/VMT)	Local (lb/VMT)	Rural/Onsite (lb/VMT)
		sL (g/m^2)^2 -->	0.020	0.035	0.035	0.320	1.600
Fleet Average	2.40	PM10	1.48E-04	2.46E-04	2.46E-04	1.84E-03	7.97E-03
		PM2.5	3.70E-05	6.15E-05	6.15E-05	4.61E-04	1.99E-03

$E = k\ (sL)^{0.91} \times (W)^{1.02} * C_f$

Variable	Value	UOM
k (PM10)	1.00	g/VMT
k(PM2.5)	0.25	g/VMT
Rain Days[3]	49	day/yr
C_f	0.966	

Table 19b: Fraction of VMT by Functional Type of Roadway[2]

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 4

Table 19c: Summary of Onroad VMT by Phase and Road Type

EMFAC Vehicle Type	Activity	Unit of Measure	Freeway	Major	Collector	Local	Rural	Total Offsite	Onsite	Total VMT
LDT1	Employee	VMT/day	119.70	140.29	99.32	0.72	6.00	366	0	366
		VMT/Yr	37,346	43,771	30,989	225	1,872	112,320	0	112,320
LHD2	Delivery of Office Supplies	VMT/day	9.98	11.69	8.28	0.06	0.50	31	0.4	31
		VMT/Yr	3,112	3,648	2,582	19	156	9,360	125	9,485
T7 Tractor	Ship Raw Material	VMT/day	116.38	136.40	96.57	0.70	17.50	368	14	382
		VMT/Yr	36,309	42,555	30,128	218	5,460	109,200	4,368	113,568
T7 Tractor	Ship Finished Compost	VMT/day	69.83	81.84	57.94	0.42	3.50	214	2.8	216
		VMT/Yr	21,785	25,533	18,077	131	1,092	65,520	874	66,394

Table 19d: Entrained Road Dust Emissions from Travel on Paved Roads (lb/day)

EMFAC Vehicle	Activity	Pollutant	Freeway	Major	Collector	Local	Rural	Onsite	Total
LDT1	Employee	PM10	1.77E-02	3.45E-02	2.44E-02	1.33E-03	4.78E-02	0.00E+00	1.26E-01
		PM2.5	4.42E-03	8.63E-03	6.11E-03	3.32E-04	1.20E-02	0.00E+00	3.15E-02
LHD2	Delivery of Office Supplies	PM10	1.47E-03	2.88E-03	2.04E-03	1.11E-04	3.99E-03	3.19E-03	1.37E-02
		PM2.5	3.69E-04	7.19E-04	5.09E-04	2.77E-05	9.97E-04	7.97E-04	3.42E-03
T7 Tractor	Ship Raw Material	PM10	1.72E-02	3.36E-02	2.38E-02	1.29E-03	1.40E-01	1.12E-01	3.27E-01
		PM2.5	4.30E-03	8.39E-03	5.94E-03	3.23E-04	3.49E-02	2.79E-02	8.18E-02
T7 Tractor	Ship Finished Compost	PM10	1.03E-02	2.01E-02	1.43E-02	7.74E-04	2.79E-02	2.23E-02	9.57E-02
		PM2.5	2.58E-03	5.03E-03	3.56E-03	1.94E-04	6.98E-03	5.58E-03	2.39E-02
Total	All	PM10	0.05	0.09	0.06	0.00	0.22	0.14	0.56
		PM2.5	0.01	0.02	0.02	0.00	0.05	0.03	0.14

Table 19e: Entrained Road Dust Emissions from Travel on Paved Roads (lb/yr)

EMFAC Vehicle	Activity	Pollutant	Freeway	Major	Collector	Local	Rural	Onsite	Total
LDT1	Employee	PM10	5.52	10.77	7.63	0.41	14.93	0.00	39.26
		PM2.5	1.38	2.69	1.91	0.10	3.73	0.00	9.81
LHD2	Delivery of Office Supplies	PM10	0.46	0.90	0.64	0.03	1.24	1.00	4.27
		PM2.5	0.12	0.22	0.16	0.01	0.31	0.25	1.07
T7 Tractor	Ship Raw Material	PM10	5.37	10.47	7.41	0.40	43.54	34.83	102.03
		PM2.5	1.34	2.62	1.85	0.10	10.88	8.71	25.51
T7 Tractor	Ship Finished Compost	PM10	3.22	6.28	4.45	0.24	8.71	6.97	29.87
		PM2.5	0.81	1.57	1.11	0.06	2.18	1.74	7.47
Total	All	PM10	14.57	28.42	20.12	1.09	68.42	42.79	175.42
		PM2.5	3.64	7.11	5.03	0.27	17.10	10.70	43.85

Notes:

1. Methodology per AP-42, 13.2.1 Paved Roads
2. SJVAPCD, Appendix A: Comments and Responses Rule 9510 and 3180 December 15, 2005
3. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
4. Rural is assumed to be 0.25 miles per one-way trip.

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 20: Fugitive Dust From Travel on Unpaved Roads

Table 20a: Unpaved Road Emission Factors[1]

EMFAC Vehicle Type	Activity	PM Emission Factors[2,3] (lb/VMT)	
		PM10	PM2.5
LDT1	Employee	0.6895	0.0690
LHD2	Delivery of Office Supplies	1.1462	0.1146
T7 Tractor	Ship Raw Material	1.8839	0.1884
T7 Tractor	Ship Finished Compost	2.0667	0.2067

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[4]	24.3	day/year

Table 20b: Vehicle Miles Travelled for Transport of Personnel, Supplies, Materials and Product

EMFAC Vehicle Type	Activity	Vehicle Weight (ton)			No. of days	Veh/day	Trips/Day	Trips/Year	One-way Miles per Trip	Total VMT[5] (mi/day)	Total VMT[5] (mi/yr)
		Gross	Empty	Average							
LDT1	Employee	1.88	1.88	1.88	312	12	2	7,488	0.00	0	0
LHD2	Delivery of Office Supplies	7.50	4.10	5.80	312	1	2	624	0.20	0.4	125
T7 Tractor	Ship Raw Material	23.50	11.50	17.50	312	35	2	21,840	0.20	14.0	4,368
T7 Tractor	Ship Finished Compost	31.50	11.50	21.50	312	7	2	4,368	0.20	2.8	874

Table 20c: Entrained Road Dust from Unpaved Roads

EMFAC Vehicle Type	Activity	Uncontrolled (lb/day)		Controlled (lb/day)		Uncontrolled (lb/yr)		Controlled (lb/yr)	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
LDT1	Employee	0.00	0.00	0.00	0.00	0	0	0	0
LHD2	Delivery of Office Supplies	0.46	0.05	0.12	0.01	143	14	36	4
T7 Tractor	Ship Raw Material	26.37	2.64	6.65	0.66	8,229	823	2,074	207
T7 Tractor	Ship Finished Compost	5.79	0.58	1.46	0.15	1,805	181	455	45
Total		32.6	3.3	8.22	0.82	10,177	1,018	2,565	256
Total (ton/yr)						5.1	0.5	1.3	0.1

Overall Control Efficiency[6]	75%
Control for watering	55%
Control for vehicle speed	44%

Notes:

1. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
2. MISCELLANEOUS PROCESS METHODOLOGY 7.9 Entrained Road Travel, Paved Road Dust (Revised and updated, November 2016), https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2016.pdf
3. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
4. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
5. Assume onsite roads are unpaved, offsite roads are paved.
6. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

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Table 21: Offroad Equipment - Criteria Pollutant and GHG Emissions

Table 21a: Emission Factors[1]

Unit Count	Offroad Equipment	Typical Model (or Equivalent)	Engine Tier and Information		NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
			Tier	BHp									
1	Fuel Truck	Freightliner M2106	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Tractors	Massey Fergusen, 7619	4f	200	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Excavator	Caterpillar 326	4f	201	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
3	Loader	Caterpillar, 962K	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
0	Windrow Turner	Scarab	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Water Truck	International, 7400 6x4	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Sweeper Truck	Freightliner M2	4f	240	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083

Table 21b: Total Criteria Pollutant Emissions from Offroad Equipment

Unit	Offroad Equipment	Typical Model	Engine Characteristics			Criteria Pollutant Exhaust Emissions (lb/day)					
			BHp	Op Load	Hr/Day	NOx	VOC	CO	SOx	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	350	0.38	2.00	0.18	0.08	1.52	0.00	0.01	0.01
1	Tractors	Massey Fergusen, 7619	200	0.37	10.00	0.49	0.23	4.24	0.01	0.02	0.02
1	Excavator	Caterpillar 326	201	0.38	10.00	0.51	0.24	4.38	0.01	0.02	0.02
3	Loader	Caterpillar, 962K	250	0.36	10.00	1.79	0.83	15.48	0.03	0.06	0.06
0	Windrow Turner	Scarab	250	0.42	10.00	0.00	0.00	0.00	0.00	0.00	0.00
1	Water Truck	International, 7400 6x4	350	0.38	10.00	0.88	0.41	7.62	0.01	0.03	0.03
1	Sweeper Truck	Freightliner M2	240	0.46	10.00	0.73	0.34	6.33	0.01	0.02	0.02
Total Emissions from offroad equipment (lb/day)						4.57	2.13	39.57	0.07	0.15	0.15

Table 21c: Total Criteria Pollutant Emissions from Offroad Equipment

Unit	Offroad Equipment	Typical Model	Engine Characteristics			Criteria Pollutant Exhaust Emissions (lb/yr)					
			BHp	Op Load[1]	Hr/Yr	NOx	VOC	CO	SOx	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	350	0.38	624	54.89	25.61	475.70	0.90	1.83	1.83
1	Tractors	Massey Fergusen, 7619	200	0.37	3,120	152.70	71.26	1,323.39	2.50	5.09	5.09
1	Excavator	Caterpillar 326	201	0.38	3,120	157.61	73.55	1,365.95	2.58	5.25	5.25
3	Loader	Caterpillar, 962K	250	0.36	3,120	557.14	260.00	4,828.57	9.10	18.57	18.57
0	Windrow Turner	Scarab	250	0.42	3,120	0.00	0.00	0.00	0.00	0.00	0.00
1	Water Truck	International, 7400 6x4	350	0.38	3,120	274.44	128.07	2,378.52	4.48	9.15	9.15
1	Sweeper Truck	Freightliner M2	240	0.46	3,120	227.81	106.31	1,974.35	3.72	7.59	7.59
Total Emissions from offroad equipment (lb/yr)						1,424.59	664.81	12,346.48	23.28	47.49	47.49
Total Emissions from offroad equipment (TPY)						0.71	0.33	6.17	0.01	0.02	0.02

Table 21d: Offroad Equipment - GHG Emissions[2]

Unit Count	Offroad Equipment	Typical Model (or Equivalent)	Engine Information				Fuel (gal/yr)	CO2 (MT/yr)	CH4 (kg/yr)	N2O (kg/yr)	CO2e (MT/Yr)
			Tier	BHp	Hr/Yr	Op Load[1]					
1	Fuel Truck	Freightliner M2106	4f	350	624	0.38	4,240	43	1.76	0.35	43
1	Tractors	Massey Fergusen, 7619	4f	200	3,120	0.37	11,797	120	4.88	0.98	121
1	Excavator	Caterpillar 326	4f	201	3,120	0.38	12,176	124	5.04	1.01	125
3	Loader	Caterpillar, 962K	4f	250	3,120	0.36	43,042	439	17.82	3.56	441
0	Windrow Turner	Scarab	4f	250	3,120	0.42	0	0	0.00	0.00	0
1	Water Truck	International, 7400 6x4	4f	350	3,120	0.38	21,202	216	8.78	1.76	217
1	Sweeper Truck	Freightliner M2	4f	240	3,120	0.46	17,600	180	7.29	1.46	180
Total							110,058	1,123	46	9.11	1,127

Table 21e: Brake Specific Fuel Consumption (BSFC) Conversion

Parameter	Value	Unit of Measure	Basis
BSFC	7000	btu/hp-hr	Per EPA AP-42 Table 3,3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
BSFC	0.3602	lb/hp-hr	calculated

Table 21f: Global Warming Potentials, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

Data and Parameters

Operating Days	312	day/yr

Notes:

1. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12
2. Solid, gaseous, liquid and biomass fuels: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule , 30Oct09, 261 pp. Tables C-1 and C-2 at FR pp. 56409-56410. Revised emission factors for selected fuels: Federal Register (2010) EPA; 40 CFR Part 98; Mandatory Reporting of Greenhouse Gases; Final Rule, 17Dec10, 81 pp. With Amendments from Memo: Table of Final 2013 Revisions to the Greenhouse Gas Reporting Rule (PDF) to 40 CFR part 98, subpart C: Table C–1 to Subpart C—Default CO2 Emission Factors and High Heat Values for Various Types of Fuel and Table C–2 to Subpart C—Default CH4 and N2O Emission Factors for Various Types of Fuel.

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Table 22: Fugitive Dust From Offroad Equipment Travel on Unpaved Areas and Haul Roads[1]

Table 22a: EPA Predictive Emission Factors for Offroad Equipment[2]

No. of Units	Equipment	Typical	PM Emission Factors[3] (lb/VMT)	
			PM10	PM2.5
1	Fuel Truck	Freightliner M2106	2.1106	0.2111
1	Tractors	Massey Fergusen, 7619	2.1106	0.2111
1	Excavator	Caterpillar 326	2.1106	0.2111
3	Loader	Caterpillar, 962K	2.1106	0.2111
0	Windrow Turner	Scarab	2.1106	0.2111
1	Water Truck[4]	International, 7400 6x4	0.0000	0.0000
1	Sweeper Truck[4]	Freightliner M2	0.0000	0.0000

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[5]	24.3	day/year

Table 22b: Onsite Equipment Tonnage, Operating Hours, and VMT

No. of Units	Equipment Description and Use		GVW (tons)	Empty (tons)	Average (tons)	Operating Hours (hr/day)	Operating Hours (hr/yr)	Ave. Speed (MPH)	Total Travel (VMT/day)	Total Travel (VMT/yr)
1	Fuel Truck	Freightliner M2106	31.5	11.5	22.5	2.0	624	2.0	4.0	1,248
1	Tractors	Massey Fergusen, 7619	7.9	7.9	22.5	10.0	3,120	0.3	3.0	936
1	Excavator	Caterpillar 326	28.6	28.6	22.5	10.0	3,120	0.3	3.0	936
3	Loader	Caterpillar, 962K	22.5	22.5	22.5	10.0	3,120	0.3	9.0	2,808
0	Windrow Turner	Scarab	20.0	20.0	22.5	10.0	3,120	0.3	0.0	0
1	Water Truck[4]	International, 7400 6x4	31.5	11.5	22.5	10.0	3,120	3.0	30.0	9,360
1	Sweeper Truck[4]	Freightliner M2	16.5	16.5	22.5	10.0	3,120	3.0	30.0	9,360

Table 22c: Offroad Equipment Unpaved Road Dust Emissions

No. of	Equipment Description and Use		Uncontrolled (lb/day)		Controlled (lb/day)		Uncontrolled (lb/yr)		Controlled (lb/yr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	8.44	0.84	2.13	0.21	2,634	263	664	66
1	Tractors	Massey Fergusen, 7619	6.33	0.63	1.60	0.16	1,976	198	498	50
1	Excavator	Caterpillar 326	6.33	0.63	1.60	0.16	1,976	198	498	50
3	Loader	Caterpillar, 962K	19.00	1.90	4.79	0.48	5,927	593	1,493	149
0	Windrow Turner	Scarab	0.00	0.00	0.00	0.00	0	0	0	0
1	Water Truck[4]	International, 7400 6x4	0.00	0.00	0.00	0.00	0	0	0	0
1	Sweeper Truck[4]	Freightliner M2	0.00	0.00	0.00	0.00	0	0	0	0
Total Dust from Equip. On Unpaved Areas (Lb/Day or Lb/Year)			40.10	4.01	10.11	1.01	12,512	1,251	3,153	315
Total Dust from Equip. On Unpaved Areas (Ton/Year)			---	---	---	---	6.3	0.6	1.6	0.2

Overall Control Efficiency[6]	75%
Control for watering	55%
Control for vehicle speed	44%

Notes:

1. Although compost surfaces are paved, because the compost processing areas are expected to have compost residuals covering the active surfaces, the unpaved road calculations are used to esti
2. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
3. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
4. Entrained road dust is assumed to be negligible for the water truck due to watering and the sweeper truck due to watering and sweeping.
5. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
6. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2
7. Chow, Judith C., et. al., "Evaluation of Regenerative-air Vacuum Street Sweeping on Geological Contributions to PM10", Journal of the Air & Waste Management Association, published online 06

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Table 23: Summary of Emissions

Table 23a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
18. Onroad Vehicle Exhaust	2.97	0.84	5.15	0.01	0.19	0.07
19. Onroad Vehicle Paved Road Dust	---	---	---	---	0.56	0.14
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	8.22	0.82
21. Offroad Equipment Exhaust	4.57	2.13	39.57	0.07	0.15	0.15
22. Offroad Equipment Unpaved Dust	---	---	---	---	10.11	1.01
Total	7.54	2.97	44.72	0.08	19.23	2.20

Table 23b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
18. Onroad Vehicle Exhaust	928	263	1606	3	60	22
19. Onroad Vehicle Paved Road Dust	---	---	---	---	175	44
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	2,565	256
21. Offroad Equipment Exhaust	1,425	665	12,346	23	47	47
22. Offroad Equipment Unpaved Dust	---	---	---	---	3,153	315
Total	2,353	928	13,953	26	6,001	686
Total (TPY)	1.18	0.46	6.98	0.01	3.00	0.34

Table 23c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	HFC (MT/yr)	CO2e (MT/Yr)
18. Onroad Vehicle Exhaust	346	0.0031	0.0781	0.0002	369
19. Onroad Vehicle Paved Road Dust	---	---	---	---	---
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	---
21. Offroad Equipment Exhaust	1123	0.0456	0.0091	---	1127
22. Offroad Equipment Unpaved Dust	---	---	---	---	---
Total	**1469**	**0.0486**	**0.0872**	**0.0002**	**1,496**

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Table 24: Diesel and Gasoline Vehicle TAC Emissions

Table 24a: DPM Emissions

Vehicle	PM10 Emissions (lb/hr)		PM10 Emissions (lb/day)		PM10 Emissions (lb/yr)	
	Onsite Exhaust	Nearsite Exhaust[1,2]	Onsite Exhaust	Nearsite Exhaust[1,2]	Onsite Exhaust	Nearsite Exhaust[1,2]
LHD2	1.88E-05	2.36E-05	1.88E-05	2.36E-05	0.006	0.007
T7 Tractor	3.28E-05	5.47E-05	3.28E-04	5.47E-04	0.10	0.171
Fuel Truck	2.93E-03	0.00E+00	5.86E-03	0	1.83	0
Tractors	1.63E-03	0.00E+00	1.63E-02	0	5.09	0
Excavator	1.68E-03	0.00E+00	1.68E-02	0	5.25	0
Loader	5.95E-03	0.00E+00	5.95E-02	0	18.57	0
Windrow Turner	0.00E+00	0.00E+00	0.00E+00	0	0.00	0
Water Truck	2.93E-03	0.00E+00	2.93E-02	0	9.15	0
Sweeper Truck	2.43E-03	0.00E+00	2.43E-02	0	7.59	0
Total PM10 = DPM	1.76E-02	7.82E-05	1.53E-01	5.70E-04	47.59	0.178

Table 24b: Gasoline Vehicle Mileage and Fuel Consumption

Parameter	Onsite	Near-site[3]
VMT/Day	0.00	6.00
Fuel Consumption (gal/day)	0.000	0.370

Average Fuel Economy Light Truck[4] 16.20 MPG

Table 24c: TAC Emissions from Onroad Gasoline Vehicles

TAC	CAS#	Emission Factor[5] (lb/1000-gal)	Onsite (lb/day)	Near-site (lb/day)	Total (lb/day)	Onsite (lb/yr)	Near-site (lb/yr)	Total lb/yr)	Onsite (lb/hr)	Near-site (lb/hr)	Total (lb/hr)
1,2,4-Trimethylbenzene	95636	5.89E-01	0.000E+00	2.181E-04	2.18E-04	0.000E+00	6.806E-02	6.81E-02	0.00E+00	2.18E-04	2.18E-04
1,3-Butadiene	106990	3.24E-01	0.000E+00	1.200E-04	1.20E-04	0.000E+00	3.744E-02	3.74E-02	0.00E+00	1.20E-04	1.20E-04
Acetaldehyde	75070	1.47E-01	0.000E+00	5.444E-05	5.44E-05	0.000E+00	1.699E-02	1.70E-02	0.00E+00	5.44E-05	5.44E-05
Acrolein	107028	8.25E-02	0.000E+00	3.056E-05	3.06E-05	0.000E+00	9.533E-03	9.53E-03	0.00E+00	3.06E-05	3.06E-05
Benzene	71432	1.57E+00	0.000E+00	5.815E-04	5.81E-04	0.000E+00	1.814E-01	1.81E-01	0.00E+00	5.81E-04	5.81E-04
Chlorine	7782505	4.55E-01	0.000E+00	1.685E-04	1.69E-04	0.000E+00	5.258E-02	5.26E-02	0.00E+00	1.69E-04	1.69E-04
Copper	7440508	3.30E-03	0.000E+00	1.222E-06	1.22E-06	0.000E+00	3.813E-04	3.81E-04	0.00E+00	1.22E-06	1.22E-06
Ethylbenzene	100414	6.42E-01	0.000E+00	2.378E-04	2.38E-04	0.000E+00	7.419E-02	7.42E-02	0.00E+00	2.38E-04	2.38E-04
Formaldehyde	50000	1.01E+00	0.000E+00	3.741E-04	3.74E-04	0.000E+00	1.167E-01	1.17E-01	0.00E+00	3.74E-04	3.74E-04
Hexane	110543	9.42E-01	0.000E+00	3.489E-04	3.49E-04	0.000E+00	1.089E-01	1.09E-01	0.00E+00	3.49E-04	3.49E-04
Manganese	7439965	3.30E-03	0.000E+00	1.222E-06	1.22E-06	0.000E+00	3.813E-04	3.81E-04	0.00E+00	1.22E-06	1.22E-06
Methanol (Methylalcohol)	67561	2.42E-01	0.000E+00	8.963E-05	8.96E-05	0.000E+00	2.796E-02	2.80E-02	0.00E+00	8.96E-05	8.96E-05
Methyl Ethyl Ketone (2-butanone)	78933	1.18E-02	0.000E+00	4.370E-06	4.37E-06	0.000E+00	1.364E-03	1.36E-03	0.00E+00	4.37E-06	4.37E-06
Methyl tert-butyl ether	1634044	1.15E+00	0.000E+00	4.259E-04	4.26E-04	0.000E+00	1.329E-01	1.33E-01	0.00E+00	4.26E-04	4.26E-04
m-Xylene	108383	2.17E+00	0.000E+00	8.037E-04	8.04E-04	0.000E+00	2.508E-01	2.51E-01	0.00E+00	8.04E-04	8.04E-04
Naphthalene	91203	2.95E-02	0.000E+00	1.093E-05	1.09E-05	0.000E+00	3.409E-03	3.41E-03	0.00E+00	1.09E-05	1.09E-05
Nickel	7440020	3.30E-03	0.000E+00	1.222E-06	1.22E-06	0.000E+00	3.813E-04	3.81E-04	0.00E+00	1.22E-06	1.22E-06
o-Xylene	95476	7.54E-01	0.000E+00	2.793E-04	2.79E-04	0.000E+00	8.713E-02	8.71E-02	0.00E+00	2.79E-04	2.79E-04
Styrene	100425	7.07E-02	0.000E+00	2.619E-05	2.62E-05	0.000E+00	8.170E-03	8.17E-03	0.00E+00	2.62E-05	2.62E-05
Toluene	108883	3.50E+00	0.000E+00	1.296E-03	1.30E-03	0.000E+00	4.044E-01	4.04E-01	0.00E+00	1.30E-03	1.30E-03

Data and Parameters

Fuel Truck Hr/Day	2	
Offorad Diesel Vehicle Operating Hr/Day	10	assuming vehicles are running onsite for this many hours in a day
Haul Truck Operating Hr/Day	10	assuming vehicles are running onsite or within 1/4 mile for this many hours in a day
Employee/Business Vehicle Operating Hr/Day	1	assuming vehicles are running onsite or within 1/4 mile for this many hours in a day
Operating Days day/yr	312	

Notes:

1. Nearsite mileage is estimated based on the total offsite distance multipiled by a ratio of 0.25 miles divided by the one-way trip length.
2. Offroad equipment operates onsite only.
3. Near site mileage is calculated based on the total number of gasoline vehicle trips per year divided by the operating days per year, multiplied by 0.25 miles (one way) multiplied by 2 (two way trip).
4. https://en.wikipedia.org/wiki/Fuel_efficiency
5. SJVAPCD, AB 2588 “Hot Spots” Air Toxics Profiles, March 27, 2017, District Toxic Profile ID 176, Gasoline-Fired Portable Catalyst ICE

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Table 25: TAC from Paved Road Dust

Table 25a: Criteria Pollutant Information

Pollutant	Onsite (lb/hr)	Near-site[1] (lb/hr)	Onsite (lb/day)	Near-site[1] (lb/day)	Onsite (lb/yr)	Near-site[1] (lb/yr)
PM10	0.0137	0.0219	0.14	0.22	42.79	68.42
Total (Onsite & Near-site)		0.03564				111.21

Table 25b: TAC from Paved Road Dust

TAC	Wt.	Total TAC Emissions		Onsite TAC Emissions		Near-site TAC Emissions	
		lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
Arsenic	0.000013	4.63E-07	1.45E-03	1.78E-07	5.56E-04	2.85E-07	8.89E-04
Cadmium	0.000003	1.07E-07	3.34E-04	4.11E-08	1.28E-04	6.58E-08	2.05E-04
Hexavalent Chromium	0.00000085	3.03E-08	9.45E-05	1.17E-08	3.64E-05	1.86E-08	5.82E-05
Cobalt	0.000023	8.20E-07	2.56E-03	3.15E-07	9.84E-04	5.04E-07	1.57E-03
Copper	0.000148	5.28E-06	1.65E-02	2.03E-06	6.33E-03	3.25E-06	1.01E-02
Lead	0.000124	4.42E-06	1.38E-02	1.70E-06	5.31E-03	2.72E-06	8.48E-03
Manganese	0.0008	2.85E-05	8.90E-02	1.10E-05	3.42E-02	1.75E-05	5.47E-02
Nickel	0.000012	4.28E-07	1.33E-03	1.65E-07	5.14E-04	2.63E-07	8.21E-04
Mercury	0.000009	3.21E-07	1.00E-03	1.23E-07	3.85E-04	1.97E-07	6.16E-04
Selenium	0.000002	7.13E-08	2.22E-04	2.74E-08	8.56E-05	4.39E-08	1.37E-04
Vanadium (Fume Or Dust)	0.000071	2.53E-06	7.90E-03	9.74E-07	3.04E-03	1.56E-06	4.86E-03

Data and Parameters

Operating Hr/Day	10	assuming vehicles are running for this many hours in a day
Operating Days	312	day/yr

Notes:

1. Nearsite emissions include emissions up to 1/4 mile offsite. Nearsite PM10 emissions are calculated in Table 4 as "Rural" emissions.
2. CARB speciation profile for Paved Roads (#471):
https://ww2.arb.ca.gov/speciation-profiles-used-carb-modeling
3. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

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Table 26: TAC from Offroad Vehicles Operation on Unpaved Surfaces

Table 26a: Offroad Equipment Entrained Dust Emissions, PM10

Source	lb/hr	lb/day	lb/yr
Unpaved Road Dust from Onroad Vehicles	0.82	8.22	2,565
Unpaved Road Dust from Offroad Vehicles	1.01	10.11	3,153
Total PM10	1.83	18.33	5,718

Table 26b: TAC from Vehicle/Equipment Travel on Unpaved Surfaces

TAC	Concentration[1]	Total TAC Emissions		Onroad Vehicle TAC Emissions		Offroad Vehicle TAC Emissions	
		(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)
Arsenic	6.20E-06	1.14E-05	3.54E-02	5.10E-06	1.59E-02	6.27E-06	1.95E-02
Cadmium	2.00E-06	3.67E-06	1.14E-02	1.64E-06	5.13E-03	2.02E-06	6.31E-03
Hexavalent Chromium	2.45E-06	4.49E-06	1.40E-02	2.01E-06	6.28E-03	2.48E-06	7.72E-03
Cobalt	8.80E-06	1.61E-05	5.03E-02	7.23E-06	2.26E-02	8.89E-06	2.77E-02
Copper	6.90E-05	1.26E-04	3.95E-01	5.67E-05	1.77E-01	6.97E-05	2.18E-01
Lead	2.00E-04	3.67E-04	1.14E+00	1.64E-04	5.13E-01	2.02E-04	6.31E-01
Manganese	4.40E-04	8.06E-04	2.52E+00	3.62E-04	1.13E+00	4.45E-04	1.39E+00
Nickel	9.50E-05	1.74E-04	5.43E-01	7.81E-05	2.44E-01	9.60E-05	3.00E-01
Mercury	1.00E-06	1.83E-06	5.72E-03	8.22E-07	2.56E-03	1.01E-06	3.15E-03
Selenium	1.00E-06	1.83E-06	5.72E-03	8.22E-07	2.56E-03	1.01E-06	3.15E-03

Data and Parameters

Operating Hr/Day	10	assuming vehicles are running for this many hours in a day, including fuel truck
Operating Days	312	day/yr

Notes:

1. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm

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Table 27: Summary of TAC Emissions from Mobile Sources

Table 27a: Summary of TAC Emissions from Mobile Sources, lb/yr

Activity	CAS No.	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total
Diesel PM	9901	1.08E-01	1.78E-01	4.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.78E+01
1,2,4-Trimethylbenzene	95636	0.00E+00	6.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.81E-02
1,3-Butadiene	106990	0.00E+00	3.74E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-02
Acetaldehyde	75070	0.00E+00	1.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-02
Acrolein	107028	0.00E+00	9.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.53E-03
Benzene	71432	0.00E+00	1.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-01
Chlorine	7782505	0.00E+00	5.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.26E-02
Copper	7440508	0.00E+00	3.81E-04	0.00E+00	6.33E-03	1.01E-02	1.77E-01	2.18E-01	4.11E-01
Ethylbenzene	100414	0.00E+00	7.42E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.42E-02
Formaldehyde	50000	0.00E+00	1.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-01
Hexane	110543	0.00E+00	1.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-01
Manganese	7439965	0.00E+00	3.81E-04	0.00E+00	3.42E-02	5.47E-02	1.13E+00	1.39E+00	2.61E+00
Methanol (Methylalcohol)	67561	0.00E+00	2.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-02
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	1.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-03
Methyl tert-butyl ether	1634044	0.00E+00	1.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-01
m-Xylene	108383	0.00E+00	2.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-01
Naphthalene	91203	0.00E+00	3.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.41E-03
Nickel	7440020	0.00E+00	3.81E-04	0.00E+00	5.14E-04	8.21E-04	2.44E-01	3.00E-01	5.45E-01
o-Xylene	95476	0.00E+00	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.71E-02
Styrene	100425	0.00E+00	8.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.17E-03
Toluene	108883	0.00E+00	4.04E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.04E-01
Arsenic	7440382	0.00E+00	0.00E+00	0.00E+00	5.56E-04	8.89E-04	1.59E-02	1.95E-02	3.69E-02
Cadmium	7440439	0.00E+00	0.00E+00	0.00E+00	1.28E-04	2.05E-04	5.13E-03	6.31E-03	1.18E-02
Hexavalent Chromium	18540299	0.00E+00	0.00E+00	0.00E+00	3.64E-05	5.82E-05	6.28E-03	7.72E-03	1.41E-02
Cobalt	7440484	0.00E+00	0.00E+00	0.00E+00	9.84E-04	1.57E-03	2.26E-02	2.77E-02	5.29E-02
Lead	7439921	0.00E+00	0.00E+00	0.00E+00	5.31E-03	8.48E-03	5.13E-01	6.31E-01	1.16E+00
Mercury	7439976	0.00E+00	0.00E+00	0.00E+00	3.85E-04	6.16E-04	2.56E-03	3.15E-03	6.72E-03
Selenium	7782492	0.00E+00	0.00E+00	0.00E+00	8.56E-05	1.37E-04	2.56E-03	3.15E-03	5.94E-03
Vanadium (Fume Or Dust)	7440622	0.00E+00	0.00E+00	0.00E+00	3.04E-03	4.86E-03	0.00E+00	0.00E+00	7.90E-03

Table 27b: Summary of TAC Emissions from Mobile Sources, lb/hr

Activity	CAS No.	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total
Diesel PM	9901	5.16E-05	7.82E-05	1.76E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-02
1,2,4-Trimethylbenzene	95636	0.00E+00	2.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-04
1,3-Butadiene	106990	0.00E+00	1.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-04
Acetaldehyde	75070	0.00E+00	5.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E-05
Acrolein	107028	0.00E+00	3.06E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-05
Benzene	71432	0.00E+00	5.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.81E-04
Chlorine	7782505	0.00E+00	1.69E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-04
Copper	7440508	0.00E+00	1.22E-06	0.00E+00	2.03E-06	3.25E-06	5.67E-05	6.97E-05	1.33E-04
Ethylbenzene	100414	0.00E+00	2.38E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-04
Formaldehyde	50000	0.00E+00	3.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-04
Hexane	110543	0.00E+00	3.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.49E-04
Manganese	7439965	0.00E+00	1.22E-06	0.00E+00	1.10E-05	1.75E-05	3.62E-04	4.45E-04	8.36E-04
Methanol (Methylalcohol)	67561	0.00E+00	8.96E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.96E-05
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	4.37E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E-06
Methyl tert-butyl ether	1634044	0.00E+00	4.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-04
m-Xylene	108383	0.00E+00	8.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.04E-04
Naphthalene	91203	0.00E+00	1.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05
Nickel	7440020	0.00E+00	1.22E-06	0.00E+00	1.65E-07	2.63E-07	7.81E-05	9.60E-05	1.76E-04
o-Xylene	95476	0.00E+00	2.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-04
Styrene	100425	0.00E+00	2.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-05
Toluene	108883	0.00E+00	1.30E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-03
Arsenic	7440382	0.00E+00	0.00E+00	0.00E+00	1.78E-07	2.85E-07	5.10E-06	6.27E-06	1.18E-05
Cadmium	7440439	0.00E+00	0.00E+00	0.00E+00	4.11E-08	6.58E-08	1.64E-06	2.02E-06	3.77E-06
Hexavalent Chromium	18540299	0.00E+00	0.00E+00	0.00E+00	1.17E-08	1.86E-08	2.01E-06	2.48E-06	4.52E-06
Cobalt	7440484	0.00E+00	0.00E+00	0.00E+00	3.15E-07	5.04E-07	7.23E-06	8.89E-06	1.69E-05
Lead	7439921	0.00E+00	0.00E+00	0.00E+00	1.70E-06	2.72E-06	1.64E-04	2.02E-04	3.71E-04
Mercury	7439976	0.00E+00	0.00E+00	0.00E+00	1.23E-07	1.97E-07	8.22E-07	1.01E-06	2.15E-06
Selenium	7782492	0.00E+00	0.00E+00	0.00E+00	2.74E-08	4.39E-08	8.22E-07	1.01E-06	1.90E-06
Vanadium (Fume Or Dust)	7440622	0.00E+00	0.00E+00	0.00E+00	9.74E-07	1.56E-06	0.00E+00	0.00E+00	2.53E-06

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Table 28: Summary of Criteria Pollutant and GHG Emissions

Table 28a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
11. Composting Criteria and GHG	6.36	79.45	35.35	0.05	1.77	0.71
23. Mobile Criteria and GHG	7.54	2.97	44.72	0.08	19.23	2.20
Total	13.90	82.43	80.07	0.13	21.00	2.91

Table 28b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
11. Composting Criteria and GHG	1,098	28,580	10,107	14	545	192
23. Mobile Criteria and GHG	2,353	928	13,953	26	6,001	686
Total	3,451	29,509	24,059	39	6,546	877
Total (TPY)	1.73	14.75	12.03	0.02	3.27	0.44

Table 28c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	HFC (MT/yr)	CO2e (MT/Yr)
11. Composting Criteria and GHG	653	90.74	6.81	N/A	4,996
23. Mobile Criteria and GHG	1,469	0.0486	0.0872	0.0002	1,496
Total	**2,122**	**90.79**	**6.90**	**0.0002**	**6,492**

Table 29: Summary of TAC Emissions

Table 29a: Summary of TAC Emissions, lb/yr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine
Arsenic	7440382	1.03E-03	3.46E-04	1.70E-03	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
Cadmium	7440439	3.33E-04	1.12E-04	5.50E-04	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
Hexavalent Chromium	18540299	4.08E-04	1.37E-04	6.73E-04	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
Cobalt	7440484	1.47E-03	4.92E-04	2.42E-03	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
Copper	7440508	1.15E-02	3.86E-03	1.90E-02	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
Lead	7439921	3.33E-02	1.12E-02	5.50E-02	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
Manganese	7439965	7.33E-02	2.46E-02	1.21E-01	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
Mercury	7439976	1.67E-04	5.59E-05	2.75E-04	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
Nickel	7440020	1.58E-02	5.31E-03	2.61E-02	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
Selenium	7782492	1.67E-04	5.59E-05	2.75E-04	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
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	8.25E+01	1.16E+03	1.93E+02	1.94E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	4.21E+00	3.58E+00	1.09E+00	1.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	1.13E+01	4.17E+00	1.32E+00	5.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	8.96E+02	6.91E+02	5.07E+01	7.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	2.19E+00	1.74E+00	1.57E+00	7.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	2.24E+00	2.58E+00	9.70E-01	7.56E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	2.18E+00	6.03E+00	2.33E+00	3.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	1.85E+00	1.34E+00	4.80E-01	6.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	3.42E+00	2.63E+00	8.93E-01	1.16E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	3.04E+00	5.64E+00	1.44E+00	1.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	2.84E+00	8.65E+00	1.03E+00	9.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	7.86E+01	5.12E+00	1.15E+00	8.36E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	9.68E+02	7.86E+02	5.50E+01	3.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	5.36E+02	1.26E+03	6.75E+01	7.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	2.81E+00	1.15E+01	2.00E+00	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	9.45E-01	9.49E+01	5.75E+01	2.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	2.98E+00	5.69E+00	1.13E+00	1.01E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	2.64E+00	1.01E+01	4.55E+00	2.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	1.45E+02	4.85E+01	1.37E+00	8.36E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	3.15E+00	7.02E+00	2.22E+00	2.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	1.00E+03	3.51E+03	3.90E+02	7.60E+00	1.35E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.53E+00	6.53E+00	6.53E+00	6.53E+00
1,2,4-Trimethylbenzene	95636	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	0.00E+00	0.00E+00	0.00E+00
1,3-Butadiene	106990	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	0.00E+00	0.00E+00	0.00E+00
Acrolein	107028	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	0.00E+00	0.00E+00	0.00E+00
Chlorine	7782505	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	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	50000	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	0.00E+00	0.00E+00	0.00E+00
Methyl tert-butyl ether	1634044	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	0.00E+00	0.00E+00	0.00E+00
m-Xylene	108383	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	0.00E+00	0.00E+00	0.00E+00
o-Xylene	95476	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	0.00E+00	0.00E+00	0.00E+00
Vanadium (Fume Or Dust)	7440622	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	0.00E+00	0.00E+00	0.00E+00

Table 29b: Summary of TAC Emissions, lb/hr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine
Arsenic	7440382	3.31E-07	1.11E-07	1.95E-07	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
Cadmium	7440439	1.07E-07	3.58E-08	6.28E-08	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
Hexavalent Chromium	18540299	1.31E-07	4.39E-08	7.69E-08	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
Cobalt	7440484	4.70E-07	1.58E-07	2.76E-07	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
Copper	7440508	3.68E-06	1.24E-06	2.17E-06	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
Lead	7439921	1.07E-05	3.58E-06	6.28E-06	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
Manganese	7439965	2.35E-05	7.88E-06	1.38E-05	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
Mercury	7439976	5.34E-08	1.79E-08	3.14E-08	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
Nickel	7440020	5.07E-06	1.70E-06	2.98E-06	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
Selenium	7782492	5.34E-08	1.79E-08	3.14E-08	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
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	9.42E-03	1.33E-01	2.21E-02	2.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	4.81E-04	4.08E-04	1.25E-04	1.63E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	1.29E-03	4.76E-04	1.51E-04	6.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	1.02E-01	7.89E-02	5.78E-03	8.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	2.50E-04	1.99E-04	1.79E-04	8.49E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	2.56E-04	2.94E-04	1.11E-04	8.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	2.49E-04	6.88E-04	2.66E-04	3.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	2.11E-04	1.53E-04	5.48E-05	7.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	3.90E-04	3.00E-04	1.02E-04	1.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	3.47E-04	6.44E-04	1.65E-04	1.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	3.24E-04	9.88E-04	1.18E-04	1.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	8.97E-03	5.85E-04	1.31E-04	9.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	1.11E-01	8.97E-02	6.27E-03	3.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	6.12E-02	1.44E-01	7.70E-03	7.99E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	3.21E-04	1.31E-03	2.29E-04	1.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	1.08E-04	1.08E-02	6.56E-03	3.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	3.40E-04	6.49E-04	1.30E-04	1.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	3.01E-04	1.16E-03	5.19E-04	3.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	1.66E-02	5.54E-03	1.57E-04	9.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	3.60E-04	8.02E-04	2.53E-04	2.35E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	1.14E-01	4.01E-01	4.45E-02	8.68E-04	5.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-03	2.09E-03	2.09E-03	2.09E-03
1,2,4-Trimethylbenzene	95636	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	0.00E+00	0.00E+00	0.00E+00
1,3-Butadiene	106990	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	0.00E+00	0.00E+00	0.00E+00
Acrolein	107028	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	0.00E+00	0.00E+00	0.00E+00
Chlorine	7782505	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	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	50000	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	0.00E+00	0.00E+00	0.00E+00
Methyl tert-butyl ether	1634044	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	0.00E+00	0.00E+00	0.00E+00
m-Xylene	108383	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	0.00E+00	0.00E+00	0.00E+00
o-Xylene	95476	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	0.00E+00	0.00E+00	0.00E+00
Vanadium (Fume Or Dust)	7440622	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	0.00E+00	0.00E+00	0.00E+00

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Table 29: Summary of TAC Emissions

Table 29a: Summary of TAC Emissions, lb

Activity	Emergency Generator	Fire Pump	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total, Stationary Sources	Total, Mobile Sources	Total
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E-04	8.89E-04	1.59E-02	1.95E-02	3.08E-03	3.69E-02	4.00E-02
Cadmium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-04	2.05E-04	5.13E-03	6.31E-03	9.94E-04	1.18E-02	1.28E-02
Hexavalent Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E-05	5.82E-05	6.28E-03	7.72E-03	1.22E-03	1.41E-02	1.53E-02
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.84E-04	1.57E-03	2.26E-02	2.77E-02	4.38E-03	5.29E-02	5.72E-02
Copper	0.00E+00	0.00E+00	0.00E+00	3.81E-04	0.00E+00	6.33E-03	1.01E-02	1.77E-01	2.18E-01	3.43E-02	4.11E-01	4.46E-01
Lead	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.31E-03	8.48E-03	5.13E-01	6.31E-01	9.94E-02	1.16E+00	1.26E+00
Manganese	0.00E+00	0.00E+00	0.00E+00	3.81E-04	0.00E+00	3.42E-02	5.47E-02	1.13E+00	1.39E+00	2.19E-01	2.61E+00	2.82E+00
Mercury	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.85E-04	6.16E-04	2.56E-03	3.15E-03	4.97E-04	6.72E-03	7.22E-03
Nickel	0.00E+00	0.00E+00	0.00E+00	3.81E-04	0.00E+00	5.14E-04	8.21E-04	2.44E-01	3.00E-01	4.72E-02	5.45E-01	5.92E-01
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.56E-05	1.37E-04	2.56E-03	3.15E-03	4.97E-04	5.94E-03	6.44E-03
Acetone	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	1.46E+03	0.00E+00	1.46E+03
1,4-Dichlorobenzene	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	1.03E+01	0.00E+00	1.03E+01
2-Propanol (Isopropylalcohol, IPA)	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	1.74E+01	0.00E+00	1.74E+01
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	1.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E+03	1.70E-02	1.65E+03
Allyl Chloride (3-Chloropropene)	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	6.24E+00	0.00E+00	6.24E+00
Benzene	0.00E+00	0.00E+00	0.00E+00	1.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.54E+00	1.81E-01	6.73E+00
Carbondisulfide	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	1.36E+01	0.00E+00	1.36E+01
Chloroethane	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	4.29E+00	0.00E+00	4.29E+00
Chloroform	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	8.10E+00	0.00E+00	8.10E+00
Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	7.42E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.11E+01	7.42E-02	1.12E+01
Ethylene Dichloride (1,2-dichloroethane)	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	1.35E+01	0.00E+00	1.35E+01
Hexane	0.00E+00	0.00E+00	0.00E+00	1.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.57E+01	1.09E-01	8.58E+01
Methanol (Methylalcohol)	0.00E+00	0.00E+00	0.00E+00	2.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E+03	2.80E-02	1.81E+03
Methyl Ethyl Ketone (2-butanone)	0.00E+00	0.00E+00	0.00E+00	1.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E+03	1.36E-03	1.86E+03
Naphthalene	0.00E+00	0.00E+00	0.00E+00	3.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E+01	3.41E-03	1.76E+01
Propene (Propylene)	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	1.81E+02	0.00E+00	1.81E+02
Styrene	0.00E+00	0.00E+00	0.00E+00	8.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E+01	8.17E-03	1.08E+01
Toluene	0.00E+00	0.00E+00	0.00E+00	4.04E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E+01	4.04E-01	2.05E+01
Vinyl acetate	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	1.96E+02	0.00E+00	1.96E+02
Xylenes	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	1.45E+01	0.00E+00	1.45E+01
Ammonia	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	5.04E+03	0.00E+00	5.04E+03
Diesel PM	7.34E+00	1.47E+01	1.08E-01	1.78E-01	4.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.82E+01	4.78E+01	9.59E+01
1,2,4-Trimethylbenzene	0.00E+00	0.00E+00	0.00E+00	6.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.81E-02	6.81E-02
1,3-Butadiene	0.00E+00	0.00E+00	0.00E+00	3.74E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-02	3.74E-02
Acrolein	0.00E+00	0.00E+00	0.00E+00	9.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.53E-03	9.53E-03
Chlorine	0.00E+00	0.00E+00	0.00E+00	5.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.26E-02	5.26E-02
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	1.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-01	1.17E-01
Methyl tert-butyl ether	0.00E+00	0.00E+00	0.00E+00	1.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-01	1.33E-01
m-Xylene	0.00E+00	0.00E+00	0.00E+00	2.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-01	2.51E-01
o-Xylene	0.00E+00	0.00E+00	0.00E+00	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.71E-02	8.71E-02
Vanadium (Fume Or Dust)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-03	4.86E-03	0.00E+00	0.00E+00	0.00E+00	7.90E-03	7.90E-03

Table 29b: Summary of TAC Emissions, lb

Activity	Emergency Generator	Fire Pump	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total, Stationary Sources	Total, Mobile Sources	Total
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-07	2.85E-07	5.10E-06	6.27E-06	6.36E-07	1.18E-05	1.25E-05
Cadmium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E-08	6.58E-08	1.64E-06	2.02E-06	2.05E-07	3.77E-06	3.98E-06
Hexavalent Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-08	1.86E-08	2.01E-06	2.48E-06	2.51E-07	4.52E-06	4.77E-06
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-07	5.04E-07	7.23E-06	8.89E-06	9.03E-07	1.69E-05	1.78E-05
Copper	0.00E+00	0.00E+00	0.00E+00	1.22E-06	0.00E+00	2.03E-06	3.25E-06	5.67E-05	6.97E-05	7.08E-06	1.33E-04	1.40E-04
Lead	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-06	2.72E-06	1.64E-04	2.02E-04	2.05E-05	3.71E-04	3.91E-04
Manganese	0.00E+00	0.00E+00	0.00E+00	1.22E-06	0.00E+00	1.10E-05	1.75E-05	3.62E-04	4.45E-04	4.52E-05	8.36E-04	8.81E-04
Mercury	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-07	1.97E-07	8.22E-07	1.01E-06	1.03E-07	2.15E-06	2.26E-06
Nickel	0.00E+00	0.00E+00	0.00E+00	1.22E-06	0.00E+00	1.65E-07	2.63E-07	7.81E-05	9.60E-05	9.75E-06	1.76E-04	1.85E-04
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-08	4.39E-08	8.22E-07	1.01E-06	1.03E-07	1.90E-06	2.01E-06
Acetone	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	1.67E-01	0.00E+00	1.67E-01
1,4-Dichlorobenzene	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	1.18E-03	0.00E+00	1.18E-03
2-Propanol (Isopropylalcohol, IPA)	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	1.98E-03	0.00E+00	1.98E-03
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	5.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-01	5.44E-05	1.88E-01
Allyl Chloride (3-Chloropropene)	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	7.12E-04	0.00E+00	7.12E-04
Benzene	0.00E+00	0.00E+00	0.00E+00	5.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.47E-04	5.81E-04	1.33E-03
Carbondisulfide	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	1.56E-03	0.00E+00	1.56E-03
Chloroethane	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	4.90E-04	0.00E+00	4.90E-04
Chloroform	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	9.24E-04	0.00E+00	9.24E-04
Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	2.38E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-03	2.38E-04	1.51E-03
Ethylene Dichloride (1,2-dichloroethane)	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	1.54E-03	0.00E+00	1.54E-03
Hexane	0.00E+00	0.00E+00	0.00E+00	3.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.78E-03	3.49E-04	1.01E-02
Methanol (Methylalcohol)	0.00E+00	0.00E+00	0.00E+00	8.96E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E-01	8.96E-05	2.07E-01
Methyl Ethyl Ketone (2-butanone)	0.00E+00	0.00E+00	0.00E+00	4.37E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-01	4.37E-06	2.13E-01
Naphthalene	0.00E+00	0.00E+00	0.00E+00	1.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-03	1.09E-05	2.02E-03
Propene (Propylene)	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	2.06E-02	0.00E+00	2.06E-02
Styrene	0.00E+00	0.00E+00	0.00E+00	2.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-03	2.62E-05	1.26E-03
Toluene	0.00E+00	0.00E+00	0.00E+00	1.30E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-03	1.30E-03	3.59E-03
Vinyl acetate	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	2.23E-02	0.00E+00	2.23E-02
Xylenes	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	1.65E-03	0.00E+00	1.65E-03
Ammonia	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	5.98E+00	0.00E+00	5.98E+00
Diesel PM	3.67E-02	7.34E-02	5.16E-05	7.82E-05	1.76E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-01	1.77E-02	1.36E-01
1,2,4-Trimethylbenzene	0.00E+00	0.00E+00	0.00E+00	2.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-04	2.18E-04
1,3-Butadiene	0.00E+00	0.00E+00	0.00E+00	1.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-04	1.20E-04
Acrolein	0.00E+00	0.00E+00	0.00E+00	3.06E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-05	3.06E-05
Chlorine	0.00E+00	0.00E+00	0.00E+00	1.69E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-04	1.69E-04
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	3.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-04	3.74E-04
Methyl tert-butyl ether	0.00E+00	0.00E+00	0.00E+00	4.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-04	4.26E-04
m-Xylene	0.00E+00	0.00E+00	0.00E+00	8.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.04E-04	8.04E-04
o-Xylene	0.00E+00	0.00E+00	0.00E+00	2.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-04	2.79E-04
Vanadium (Fume Or Dust)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.74E-07	1.56E-06	0.00E+00	0.00E+00	0.00E+00	2.53E-06	2.53E-06

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Table 30: Reduction from Baseline

Table 30: GHG Emissions Reduction from Baseline

Annual Throughput (ton/yr)	Compost Emission Reduction Factor (MT CO2e/ton feed)[1]	GHG Emissions Reduction (MT CO2e)
25,000	0.56	14,000

1. CARB, Method for Estimating Greenhouse Gas Emission Reductions From Diversion of Organic Waste From Landfills to Compost Facilities, 2017

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Table 1: Compost Facility Operations Assumptions- Scenario 6

Assumption	Scenario 6
Facility Size	Medium
Facility Capacity (cu yd)	12,500
Facility Size (acres)	11
Throughput (tpy)	25,000
Operating Schedule (hr/day)	10
Operating Schedule (wk/year)	52
Operating Schedule (day/year)	312
Feedstock	Green Waste (includes vegetative food material) + Food Waste
Feedstock Storage Time (days)	2
Feedstock Storage Building	Only as a BMP for facilities near receptors. No separate calculations.
Active Technology	Negative ASP w Filter
VOC Control Efficiency	90%
NH3 Control	80%
Curing	Yes
Mulch Colorizer Tons per Hour	50
Diesel Grinders	1
Diesel Screens	1
Diesel Stackers	1
Diesel Colorizer	1
Diesel Emergency Generator	1
Diesel Emergency Fire Pump	1
Employee and Commercial Light Duty Gasoline Vehicle Round Trips Per Day	12
Employee and Commercial Light Duty Diesel Vehicle Round Trips Per Day	1
Employee Mileage (one-way)	15
Tractor Trailers for Raw Materials Round Trips Per Day	35
Tractor Trailers for Product Round Trips Per Day	7
Feedstock Haul Truck Mileage (one-way)	20
Compost Product Haul Truck Mileage (one-way)	15
Baseline Feedstock Haul Truck Mileage (one-way)	15
Fuel Truck	1
Tractors	1
Excavator	1
Loader	3
Windrow Turner	0
Water Truck	1
Sweeper Truck	1
Fuel Truck Hours per Day	2
Other Off-road Engine (mobile and non-emergency stationary) Hours per Day	10

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Table 2: Additional Datasets and Assumptions

Table 2a: Colorizer Data and Assumptions

Parameter	Value	Unit of Measure	Notes
Bulk density - mulch	600	lb/cy	Average per Google AI
Conversion	2000	lb/ton	Constant
Throughput	21.37	cy/hr	Calculated from annual finished product throughput, assuming all is colorized
Annual Hours of Operation	3,120	hr/yr	Assumption
Application rate	6.5	lbs/cy	Google AI, max of listed range
Ammonia Concentration	0.5%	by weight	SDS

Table 2b: Stationary Engine Information[1]

Equipment	Number of Engines	Engine Tier and Information			
		Fuel[2]	Tier[2]	BHp[2]	Op Load[3]
Diesel Grinders	1	Diesel	4	100	95%
Diesel Screens	1	Diesel	4	100	95%
Diesel Stackers	1	Diesel	4	100	95%
Diesel Colorizer	1	Diesel	4	100	95%
Diesel Emergency Generator	1	Diesel	3	150	74%
Diesel Emergency Fire Pump	1	Diesel	3	300	74%

1. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
2. Engineering estimate based on projected throughput and machine capacity.
3. Engineering estimate based on projected throughput and machine capacity except for emergency engines, which are from User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12

Table 2c: Emergency Engine Operation Assumptions

Parameter	Value	Unit of Measure
Emergency Engine Operating Hours	2	hours/day, assumption
Emergency Engine Operating Days	100	day/yr, for 200 hours per year, assumption

Table 2d: Raw Material and Product Truck Loads

Parameter	Value	Unit of Measure
Raw Material quantity per truck	12	tons/truck
Compost quantity per truck	20	tons/truck

Table 2e: Onroad Vehicle Information and Mileage

Vehicle Type	Vehicle Use	Number of Vehicles	Vehicle Weight (lb)			Fuel	One-way Onsite Trip Mileage	One-way Offsite Trip Mileage[4]	Hours of Op Onsite and within
			Gross	Empty	Average				
LDT1	Employee	12	3,750	3,750	3,750	Gasoline	0.00	15	1
LHD2	Delivery of Office Supplies	1	15,006	8,200	11,603	Diesel	0.20	15	1
T7 Tractor	Ship Raw Material	35	47,000	23,000	35,000	Diesel	0.20	5	10
T7 Tractor	Ship Finished Compost	7	63,000	23,000	43,000	Diesel	0.20	15	10

4. Feedstock haul truck mileage is the mileage to the compost facility minus the baseline mileage to a landfill. Mileages are assumptions for representative facilities.

Table 2f: Fraction of Onroad Vehicle VMT by Functional Type of Roadway[5]

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 6

5. SJVAPCD, Appendix A: Comments
6. Rural is assumed to be 0.25 miles per

Table 2g: Onroad Vehicle VMT-weighted Average Vehicle Weight

Parameter	Value	Unit of Measure
Average Vehicle Weight	12.2	ton/vehicle

Table 2h: Offroad Vehicle Information

Offroad Equipment	Typical Model	Fuel	Engine Information		Op Load[7]	Hours per Day
			Tier	BHp		
Fuel Truck	Freightliner M2106	Diesel	4f	350	38%	2
Tractors	Massey Fergusen, 7619	Diesel	4f	200	37%	10
Excavator	Caterpillar 326	Diesel	4f	201	38%	10
Loader	Caterpillar, 962K	Diesel	4f	250	36%	10
Windrow Turner	Scarab	Diesel	4f	250	42%	10
Water Truck	International, 7400 6x4	Diesel	4f	350	38%	10
Sweeper Truck	Freightliner M2	Diesel	4f	240	46%	10

7. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12. Windrow turner using "Other Construction Equipment"

Table 2i: Offsite Mileage Included with Onsite Calculations

Parameter	Value	Unit of Measure
Offsite Mileage Included with Onsite Calculations	0.25	mile/trip

Table 2j: Gasoline Vehicle Mileage and Fuel Consumption

Parameter	Onsite	Near-site[8]
VMT/Day	0.00	6.00
Fuel Consumption (gal/day)	0.000	0.370

Average Fuel Economy Light Truck[9] 16.20 MPG

8. Near site mileage is calculated based on the total number of gasoline vehicle trips per day, multiplied by 0.25 miles (one way) multiplied by 2 (two way trip).
9. https://en.wikipedia.org/wiki/Fuel_efficiency

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Table 3: Emission Factors

Table 3a: Composting Emission Factors

Pollutant	Phase	Emission Factor	Note
VOC	Feedstock Storage	0.2 lb/wet ton/day	1
VOC (uncontrolled)	Composting + Curing	3.58 lb/ton	2
VOC control efficiency	Composting + Curing	90%	---
VOC (controlled)	Composting + Curing	0.36 lb/ton	calculated
VOC (controlled)	Composting (=90%)	0.32 lb/ton	2
VOC (controlled)	Curing (=10%)	0.04 lb/ton	2
VOC	Storage	0.02 lb/ton	3
NH_3	Feedstock Storage	0.02 lb/ton/day	1
NH3 (uncontrolled)	Composting + curing	0.78 lb/ton	4
NH3 control efficiency	Composting + curing	80%	---
NH_3 (controlled)	Composting + curing	0.16 lb/ton	calculated
NH_3	Storage	0.00038 lb/ton	5
GHG - CO2	Composting	0.44 kg/kg	6
GHG - CH4	Composting	0.004 kg/kg	6
GHG - N2O	Composting	0.0003 kg/kg	6

1. SJVAPCD Compost Emission Factor Report, Originally Published September 15, 2010, Revised March 21, 2023, Table 7.
2. SJVAPCD Compost Emission Factor Report Originally Published September 15, 2010 Revised March 21, 2023, Tables 3 and 4
3. Storage EF from SJVAPCD Compost ROG Emission Factors, Sept 15, 2010, App C, Table 4.3 which is based on 15 days storage.
4. SJVAPCD Compost Emission Factor Report, Originally Published September 15, 2010, Revised March 21, 2023, Table 6.
5. SJVAPCD Compost VOC Emission Factors, Sept 15, 2010, App C, Table 4.3 which is based on 15 days storage.
6. Greenhouse Gas Emissions Estimation Methodologies for Biogenic Emissions from Selected Source Categories: Measurement Policy Group, December 14, 2010 Solid Waste Disposal Wastewater Treatment Ethanol Fermentation Submitted to: U.S. Environmental Protection Agency Sector Policies and Programs Division

Table 3b: Uncontrolled Grinding and Screening PM Emission Factors

Process Operation	Emission Factor		Note
	PM10 (lb/ton)	PM2.5 (lb/ton)	
Grinding	0.0144	0.00216	7
Screening	0.0144	0.00216	8
Control Efficiency from Watering	75%		9

7. BAAQMD, Title V Permit Evaluation, Guadalupe Rubbish Disposal Co., Site A3294. BAAQMD references AP-42 for log debarking. Assume 15% fraction of PM2.5.
8. AP-42 section 10.3 Plywood Veneer and Layout Operations Table 10.3-1 (4th Edition) for log debarking, assuming 60% of emissions are PM10 with a 15% fraction of PM2.5.
9. Mojave Desert Air Quality Management District, "Emissions Inventory Guidance, Mineral Handling and Processing Industries", Section G, Wind Erosion from Storage Piles, April 2000.

Table 3c: Material Handling PM Emission Factors

Variable	Emission Factor		Note
	PM10	PM2.5	
Particle Size Multiplier (dimensionless)	0.35	0.053	10
Mean Wind Speed (MPH)	3.25	3.25	11
Material Moisture Content (%)	4.80	4.80	10
Emission Factor (lb/ton/drop point)	1.88E-04	2.84E-05	calculated

10. AP-42, Chapter 13.2.4 Aggregate Handling and Storage Piles. Moisture content used is the maximum allowed by the method. Actual moisture content will be higher, thus these emission factors are conservative.
11. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-1, Average of Los Angeles Airport and San Jose Airport.

Table 3d: Wind Erosion PM Emission Factors[11]

Variable	PM10	PM2.5	Note
Particulate aerodynamic factor	0.50	0.20	12
Average silt loading of storage pile in percent (%),	0.50	0.50	Assumed
Average number of days during the year with at least 0.01 inches of precipitation	24.30	24.30	13
Percentage of time with unobstructed wind speed >12 mph in percent (%)	10.00	10.00	Assumed
Wind Erosion EF (lb/acre/day)	2.74E-01	1.10E-01	Calculated
Control Efficiency from Watering	75%		12

12. Mojave Desert Air Quality Management District, "Emissions Inventory Guidance, Mineral Handling and Processing Industries", Section G, Wind Erosion from Storage Piles, April 2000.
13. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Table 3e: Compost Dust TAC Concentration

TAC	CAS	Concentration (lb/lb Dust)	Note
Arsenic	7440-38-2	6.20E-06	14
Cadmium	7440-43-9	2.00E-06	14
Hexavalent Chromium	18540-29-9	2.45E-06	14, 15
Cobalt	7440-48-4	8.80E-06	14
Copper	7440-50-8	6.90E-05	14
Lead	7439-92-1	2.00E-04	14
Manganese	7439-96-5	4.40E-04	14
Mercury	7439-97-6	1.00E-06	14
Nickel	7440-02-0	9.50E-05	14
Selenium	7782-49-2	1.00E-06	14

14. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm
15. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

Table 3f: Compost Organic TAC Emission Factors (lb TAC/lb VOC)[16]

TAC	Feedstock Storage	Composting	Curing	Finished Compost Storage
Acetone	8.25E-03	7.23E-02	1.08E-01	4.86E-02
1,4-Dichlorobenzene	4.21E-04	2.22E-04	6.10E-04	3.56E-03
2-Propanol (Isopropylalcohol, IPA)	1.13E-03	2.59E-04	7.37E-04	1.46E-03
Acetaldehyde	8.96E-02	4.29E-02	2.83E-02	1.86E-02
Allyl Chloride (3-Chloropropene)	2.19E-04	1.08E-04	8.75E-04	1.86E-03
Benzene	2.24E-04	1.60E-04	5.42E-04	1.89E-03
Carbondisulfide	2.18E-04	3.74E-04	1.30E-03	7.75E-03
Chloroethane	1.85E-04	8.30E-05	2.68E-04	1.56E-03
Chloroform	3.42E-04	1.63E-04	4.99E-04	2.89E-03
Ethylbenzene	3.04E-04	3.50E-04	8.06E-04	2.57E-03
Ethylene Dichloride (1,2-dichloroethane)	2.84E-04	5.37E-04	5.78E-04	2.40E-03
Hexane	7.86E-03	3.18E-04	6.42E-04	2.09E-03
Methanol (Methylalcohol)	9.68E-02	4.88E-02	3.07E-02	7.77E-04
Methyl Ethyl Ketone (2-butanone)	5.36E-02	7.82E-02	3.77E-02	1.75E-03
Naphthalene	2.81E-04	7.14E-04	1.12E-03	3.11E-03
Propene (Propylene)	9.45E-05	5.89E-03	3.21E-02	6.87E-02
Styrene	2.98E-04	3.53E-04	6.34E-04	2.53E-03
Toluene	2.64E-04	6.30E-04	2.54E-03	6.96E-03
Vinyl acetate	1.45E-02	3.01E-03	7.67E-04	2.09E-03
Xylenes	3.15E-04	4.36E-04	1.24E-03	5.15E-03

16. Speciation profile from BAAQMD Permit Handbook, Section 11.15

Table 3g: Stationary Engine Emission Factors[17]

Equipment	Fuel[18]	Tier[17]	NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
Diesel Grinders	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Screens	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Stackers	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Colorizer	Diesel	4	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Emergency Generator	Diesel	3	2.85	1.02	3.7	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05
Diesel Emergency Fire Pump	Diesel	3	2.85	1.02	2.6	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05

17. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
18. Project description

Table 3h: Engine GHG Emission Factors[19]

Fuel	HHV (MMBtu/gal)	Default CO2 EF (kg CO2/MMBtu)	CO2 EF (kg/gal)	Default CH4 EF (kg CH4/MMBtu)	CH4 EF (kg/gal)	Default N2O EF (kg N2O/MMBtu)	N2O EF (kg/gal)
Diesel	0.138	73.96	10.20648	3.00E-03	4.14E-04	6.00E-04	8.28E-05

19. 40 CFR 98, Subpart C, Tables C-1 and C-2

Table 3i: Brake Specific Fuel Consumption (BSFC) Conversion - Diesel

Parameter	Value	Unit of Measure	Basis
Brake Specific Fuel Consumption	7,000	btu/hp-hr	Per EPA AP-42 Table 3.3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
Brake Specific Fuel Consumption	0.3602	lb/hp-hr	calculated

Table 3j: Onroad Mobile Sources - Criteria Pollutant Exhaust Emission Factors[20]

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)
NOx	LDT1	0.266	0.000	0.420
	LHD2	0.742	1.641	0.000
	T7 Tractor	0.927	5.946	5.191
VOC	LDT1	0.073	0.000	0.660
	LHD2	0.102	0.120	0.000
	T7 Tractor	0.010	0.635	0.000
CO	LDT1	4.803	0.000	6.799
	LHD2	0.241	0.996	0.000
	T7 Tractor	0.075	9.364	0.000
SOx	LDT1	0.002	0.000	0.000
	LHD2	0.002	0.001	0.000
	T7 Tractor	0.005	0.005	0.000
PM10	LDT1	0.004	0.000	0.003
	LHD2	0.020	0.030	0.000
	T7 Tractor	0.009	0.003	0.000
PM2.5	LDT1	0.004	0.000	0.003
	LHD2	0.020	0.029	0.000
	T7 Tractor	0.008	0.002	0.000

20. Emission factors are from EMFAC2025

Table 3k: Onroad Mobile Sources - Fugitive VOC Emission Factors[21]

Pollutant	Vehicle Type	Hot Soak EF (g/trip)	Running Loss EF (g/mile)	Diurnal EF (g/veh/day)
VOC	LDT1	0.37	0.68	4.24
	LHD2	-	-	-
	T7 Tractor	-	-	-

21. Emission factors are from EMFAC2025

Table 3l: Onroad Mobile Sources - Fugitive PM Emission Factors[22]

Pollutant	Vehicle Type	Tire Wear (g/mile)	Brake Wear (g/mile)
PM10	LDT1	0.0080	0.0085
	LHD2	0.0120	0.0910
	T7 Tractor	0.0360	0.0874
PM2.5	LDT1	0.0020	0.0030
	LHD2	0.0030	0.0319
	T7 Tractor	0.0090	0.0306

22. Emission factors are from EMFAC2025

Table 3m: Onroad Mobile Sources - GHG Exhaust Emission Factors[23,24]

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)
CO2	LDT1	377.335	0.000	90.387
	LHD2	636.055	212.543	0.000
	T7 Tractor	1544.504	1410.663	0.000
CH4	LDT1	0.016	0.000	0.101
	LHD2	0.005	0.006	0.000
	T7 Tractor	0.000	0.029	0.000
N2O	LDT1	0.017	0.000	0.029
	LHD2	0.103	0.034	0.000
	T7 Tractor	0.400	0.227	0.000
HFC	LDT1	0.000	N/A	N/A
	LHD2	0.001	N/A	N/A
	T7 Tractor	0.001	N/A	N/A

23. Emission factors are from EMFAC2025
24. Refrigerant R emission factor is from CalEEMod software

Table 3n: Paved Road PM10 Emission Factors[25]

Vehicle	Average Vehicle Weight (ton)	Pollutant	Freeway (lb/VMT)	Major (lb/VMT)	Collector (lb/VMT)	Local (lb/VMT)	Rural/Onsite (lb/VMT)
		sL (g/m^2)[26] -->	0.020	0.035	0.035	0.320	1.600
Fleet Average	12.20	PM10	7.90E-04	1.31E-03	1.31E-03	9.85E-03	4.26E-02
		PM2.5	1.97E-04	3.29E-04	3.29E-04	2.46E-03	1.06E-02

$E = k\ (sL)^{0.91} \times (W)^{1.02} * C_f$

Variable	Value	UOM
k (PM10)	1.00	g/VMT
k(PM2.5)	0.25	g/VMT
Rain Days[27]	24.30	day/yr
C_f	0.983	

25. Methodology per AP-42, 13.2.1 Paved Roads
26. SJVAPCD, Appendix A: Comments and Responses Rule 9510 and 3180 December 15, 2005
27. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Table 3o: Onroad Equipment Unpaved Road Emission Factors[28]

EMFAC Vehicle Type	Activity	PM Emission Factors[29,30] (lb/VMT)	
		PM10	PM2.5
LDT1	Employee	0.6895	0.0690
LHD2	Delivery of Office Supplies	1.1462	0.1146
T7 Tractor	Ship Raw Material	1.8839	0.1884
T7 Tractor	Ship Finished Compost	2.0667	0.2067

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[31]	24.3	day/year

Overall Control Efficiency[30]	75%	
Control for watering	55%	Ref 32
Control for vehicle speed	44%	Ref 32

28. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
29. MISCELLANEOUS PROCESS METHODOLOGY 7.9 Entrained Road Travel, Paved Road Dust (Revised and updated, November 2016), https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2016.pdf
30. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
31. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
32. Assumes twice daily watering and limiting travel speed to 25 mph; http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

Table 3p: Offroad Equipment Emission Factors[33]

Offroad Equipment	Typical Model	Fuel	Engine Tier and Information		NOx	VOC	CO	SOx	PM10	PM2.5	CO2	CH4	N2O
			Tier	BHp									
Fuel Truck	Freightliner M2106	Diesel	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Tractors	Massey Fergusen, 7619	Diesel	4f	200	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Excavator	Caterpillar 326	Diesel	4f	201	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Loader	Caterpillar, 962K	Diesel	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Windrow Turner	Scarab	Diesel	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Water Truck	International, 7400 6x4	Diesel	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
Sweeper Truck	Freightliner M2	Diesel	4f	240	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083

33. From User Guide for CalEEMod Version 2022.1, Appendix G, Table G-13

Table 3q: Emission Factors for Dust Entrainment from Unpaved Roads for Offroad Equipment[34]

Equipment Description and Use		GVW	Empty	Average	PM Emission	
					PM10	PM2.5
Fuel Truck	Freightliner M2106	31.5	11.5	22.5	2.1106	0.2111
Tractors	Massey Fergusen, 7619	7.9	7.9	22.5	2.1106	0.2111
Excavator	Caterpillar 326	28.6	28.6	22.5	2.1106	0.2111
Loader	Caterpillar, 962K	22.5	22.5	22.5	2.1106	0.2111
Windrow Turner	Scarab	20.0	20.0	22.5	2.1106	0.2111
Water Truck[37]	International, 7400 6x4	31.5	11.5	22.5	0.0000	0.0000
Sweeper Truck[37]	Freightliner M2	16.5	16.5	22.5	0.0000	0.0000

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[38]	24.3	day/year

34. Although compost surfaces are paved, because the compost processing areas are expected to have compost residuals covering the active surfaces, the unpaved road calculations are used to estimate emissions.
35. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
36. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
37. Entrained road dust is assumed to be negligible for the water truck due to watering and the sweeper truck due to watering and sweeping.
38. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.

Overall Control Efficiency[37]	75%	
Control for watering	55%	Ref 39
Control for vehicle speed	44%	Ref 39

39. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

Table 3r: TAC Emissions from Onroad Gasoline Vehicles

TAC	CAS#	Emission Factor[40] (lb/1000-gal)
1,2,4-Trimethylbenzene	95636	5.89E-01
1,3-Butadiene	106990	3.24E-01
Acetaldehyde	75070	1.47E-01
Acrolein	107028	8.25E-02
Benzene	71432	1.57E+00
Chlorine	7782505	4.55E-01
Copper	7440508	3.30E-03
Ethylbenzene	100414	6.42E-01
Formaldehyde	50000	1.01E+00
Hexane	110543	9.42E-01
Manganese	7439965	3.30E-03
Methanol (Methylalcohol)	67561	2.42E-01
Methyl Ethyl Ketone (2-butanone)	78933	1.18E-02
Methyl tert-butyl ether	1634044	1.15E+00
m-Xylene	108383	2.17E+00
Naphthalene	91203	2.95E-02
Nickel	7440020	3.30E-03
o-Xylene	95476	7.54E-01
Styrene	100425	7.07E-02
Toluene	108883	3.50E+00

40. SJVAPCD, AB 2588 "Hot Spots" Air Toxics Profiles, March 27, 2017, District Toxic Profile ID 176, Gasoline-Fired Portable Catalyst ICE

Table 3s: TAC from Paved Road Dust

TAC	Wt. Fraction[41, 42]
Arsenic	0.000013
Cadmium	0.000003
Hexavalent Chromium	0.00000085
Cobalt	0.000023
Copper	0.000148
Lead	0.000124
Manganese	0.0008
Nickel	0.000012
Mercury	0.000009
Selenium	0.000002
Vanadium (Fume Or Dust)	0.000071

41. CARB speciation profile for Paved Roads

42. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

Table 3t: TAC from Vehicle/Equipment Travel on Unpaved Surfaces

TAC	Concentration[43]
Arsenic	6.20E-06
Cadmium	2.00E-06
Hexavalent Chromium	2.45E-06
Cobalt	8.80E-06
Copper	6.90E-05
Lead	2.00E-04
Manganese	4.40E-04
Nickel	9.50E-05
Mercury	1.00E-06
Selenium	1.00E-06

43. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm

Table 3u: Emissions Reduction from Baseline[44]

Waste Type	Compost Emission Reduction Factor (MT CO2e/ton feedstock)
Food Waste	0.62
Green Waste (includes vegetative food material)	0.44
Green Waste (includes vegetative food material) + Food Waste	0.56
Compost Emission Reduction Factor for Scenario 6	**0.56**

44. CARB, Method for Estimating Greenhouse Gas Emission Reductions From Diversion of Organic Waste From Landfills to Compost Facilities, 2017

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Table 4: Process Throughputs

Table 4: Process Throughput Calculations

Processing Step	Loss based on Initial Charge	Loss based on Previous Step	Proposed Project (TPY)	Proposed Project (TPD)
Initial Charge	---	---	25,000	80
Loss Upon Composting	10.0%	90.0%	2,500	8
Initial Charge to Curing	---	---	22,500	72
Loss Upon Curing	5.0%	5.6%	1,250	4
Initial Charge to Screening	---	---	21,250	68
Loss Upon Screening	5.0%	5.9%	1,250	4
Finished Product	---	---	20,000	64

Data and Parameters

Daily Operating Hours	10	hours/day
Annual Operating Days	312	Day/year

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Table 5: Grinding and Screening PM Emissions

Table 5a: Emission Factors

Process Operation	PM10	PM2.5
Grinding	0.0144	0.00216
Screening	0.0144	0.00216

Table 5b: Grinding and Screening PM Emissions

Operation	Annual Throughput (ton/yr)	Peak Daily Throughput (ton/day)	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Grinding	25,000	80	90.00	13.50	0.29	0.04	0.03	0.00
Screening	21,250	68	76.50	11.48	0.25	0.04	0.02	0.00
		Total	166.50	24.98	0.53	0.08	0.05	0.01
		Total (TPY)	0.05	0.007				

Data and Parameters

Operating Hours	10	hrs/day
Control Efficiency for Watering	75%	

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Table 6: Material Handling PM Emissions

Table 6: Material Handling PM Emissions

Process Step	Annual Throughput (ton/yr)	Average Daily Throughput (ton/day)	No. of Drop Points	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
				PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Feedstock	25,000	80	1	4.70	0.71	0.0150	0.0023	0.00150	0.00023
Grinding[1]	25,000	80	4	18.78	2.84	0.0602	0.0091	0.00602	0.00091
Composting	25,000	80	1	4.70	0.71	0.0150	0.0023	0.00150	0.00023
Curing	22,500	72	1	4.23	0.64	0.0135	0.0021	0.00135	0.00021
Screening[2]	21,250	68	4	15.96	2.42	0.0512	0.0077	0.00512	0.00077
Finished Compost Storage	20,000	64	1	3.76	0.57	0.0120	0.0018	0.00120	0.00018
Truck Loadout	20,000	64	1	3.76	0.57	0.0120	0.0018	0.00120	0.00018
			Total (lb/yr)	55.87	8.46	0.1791	0.0271	0.01791	0.00271
			Total (TPY)	0.028	0.0042				

Data and Parameters

Operating Schedule	10	hr/day
Days per year	312	day/yr
PM10 EF	1.88E-04	lb/ton/drop
PM2.5 EF	2.84E-05	lb/ton/drop

Notes

1. Four drop points are assumed for the grinding: 1) load hopper, 2) hopper to grinder, 3) grinder to conveyor, 4) conveyor to storage pile
2. Four drop points are assumed for the screens: 1) load hopper, 2) hopper to screen, 3) screen to conveyor, 4) conveyor to storage pile

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Table 7: Wind Erosion PM Emissions

Table 7a: Wind Erosion Dimensions/Area

Area	Acres
Composting Facility	11

Table 7b: Wind Erosion PM Emission Factors

Variable	PM10 lb/acre/day	PM2.5 lb/acre/day
Inactive Day Wind Erosion EF	2.74E-01	1.10E-01

Table 7c: Wind Erosion PM Emissions

Area	Acres	Days per Year	Annual Emissions(lb/yr)		Average Daily Emissions(lb/day)		Average Hourly Emissions(lb/hr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Composting Facility	11.00	365	274.88	109.95	0.75	0.30	0.031	0.013
		Total (TPY)	0.137	0.055				

Data and Parameters			Notes:
1. Control by watering per MDAQMD Mineral Guidance	75%		All piles are watered for dust suppression or moisture control, or both.
Weeks per year	52	weeks/yr	Constant
Days per year	365	day/yr	Constant
Hours per day	24	hr/day	Constant
Conversion	43,560	ft^2/acre	Constant

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Table 8: Composting VOC Emissions

Table 8: Composting VOC Emissions

Process Unit	Annual Throughput (ton/yr)	Emission Factor	Annual Emissions (lb/yr)	Average Daily Emissions (lb/day)	Average Hourly Emissions (lb/hr)
Feedstock Storage	25,000	0.2 lb/wet ton/day	10,000	27.40	1.14
Composting	25,000	0.32 lb/ton	8,055	22.07	0.92
Curing[1]	25,000	0.04 lb/ton	895	2.45	0.10
Finished Compost Storage	20,000	0.02 lb/ton	400	1.10	0.05
1. EF developed for composting throughput		Total (lb/yr)	19,350	53.01	2.21
		Total (TPY)	9.68		

Data and Parameters			Notes
Daily Hours of Emissions	24	hr/day	Constant
Feedstock Storage Duration	2	days	Assumption
Days per year	365	days per year	

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Table 9: Composting GHG Emissions

Table 9a: Composting GHG Emissions[1]

Process Unit	Annual Throughput (ton/yr)	CH4 Emission Factor	N2O Emission Factor	CH4 (MT/yr)	N2O (MT/yr)	CO2e (MT/Yr)
Composting	25,000	0.004 kg/kg	0.0003 kg/kg	91	6.80	4,343

Data and Parameters

Conversion	454	gram/lb
Conversion	1,000	Kg/MT
Conversion	1,000	gram/Kg

Table 9b: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

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Table 10: Stationary Engines - Criteria Pollutant and GHG Emissions

Table 10a: Engine Emission Factors

Equipment	Number of Engines	Engine Tier and Information			NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
		Fuel	Tier	BHp									
Diesel Grinders	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Screens	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Stackers	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Colorizer	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01	10.21	4.14E-04	8.28E-05
Diesel Emergency Generator	1	Diesel	3	150	2.85	1.02	3.7	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05
Diesel Emergency Fire Pump	1	Diesel	3	300	2.85	1.02	2.6	0.005	0.15	0.15	10.21	4.14E-04	8.28E-05

Table 10b: Total Daily Criteria Pollutant Emissions from Stationary Engine

Function	Number of Engines	Engine Characteristics		Hr/Day	Criteria Pollutant Exhaust Emissions (lb/day)					
		BHp	Op Load		NOx	VOC	CO	SOx	PM10	PM2.5
Diesel Grinders	1	100	95%	10	0.54	0.10	7.75	0.01	0.02	0.02
Diesel Screens	1	100	95%	10	0.54	0.10	7.75	0.01	0.02	0.02
Diesel Stackers	1	100	95%	10	0.54	0.10	7.75	0.01	0.02	0.02
Diesel Colorizer	1	100	95%	10	0.54	0.10	7.75	0.01	0.02	0.02
Diesel Emergency Generator	1	150	74%	2	1.39	0.50	1.81	0.00	0.07	0.07
Diesel Emergency Fire Pump	1	300	74%	2	2.79	1.00	2.55	0.00	0.15	0.15

Table 10c: Total Annual Criteria Pollutant Emissions from Stationary Engine

Function	Number of Engines	Engine Characteristics		Hr/Yr	Criteria Pollutant Exhaust Emissions (lb/yr)					
		BHp	Op Load		NOx	VOC	CO	SOx	PM10	PM2.5
Diesel Grinders	1	100	95%	3,120	169.90	32.7	2,418	3.20	6.53	6.53
Diesel Screens	1	100	95%	3,120	169.90	32.7	2,418	3.20	6.53	6.53
Diesel Stackers	1	100	95%	3,120	169.90	32.7	2,418	3.20	6.53	6.53
Diesel Colorizer	1	100	95%	3,120	169.90	33	2,418	3.20	6.53	6.53
Diesel Emergency Generator	1	150	74%	200	139.49	50	181	0.24	7.34	7.34
Diesel Emergency Fire Pump	1	300	74%	200	278.97	100	255	0.48	14.7	14.7

Table 10d: Stationary Engine - GHG Emissions

Function	Number of Engines	Engine Characteristics		Hr/Yr	Fuel (gal/yr)	CO2 (MT/yr)	CH4 (kg/yr)	N2O (kg/yr)	CO2e (MT/Yr)
		BHp	Op Load						
Diesel Grinders	1	100	95%	3,120	15,145	154.6	0.0063	0.0013	154.6
Diesel Screens	1	100	95%	3,120	15,145	154.6	0.0063	0.0013	154.6
Diesel Stackers	1	100	95%	3,120	15,145	154.6	0.0063	0.0013	154.6
Diesel Colorizer	1	100	95%	3,120	15,145	154.6	0.0063	0.0013	154.6
Diesel Emergency Generator	1	150	74%	200	1,134	11.6	0.0005	0.0001	11.6
Diesel Emergency Fire Pump	1	300	74%	200	2,269	23.2	0.0009	0.0002	23.2

Table 10e: Brake Specific Fuel Consumption (BSFC) Conversion - Diesel

Parameter	Value	Unit of Measure	Basis
Brake Specific Fuel Consumption	7,000	btu/hp-hr	Per EPA AP-42 Table 3.3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
Brake Specific Fuel Consumption	0.3602	lb/hp-hr	calculated

Table 10f: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

Table 10g: CO2 Emission Factors[2]

Fuel	HHV (MMBtu/gal)	Default CO2 EF	CO2 EF (kg/gal)	Default CH4 EF	CH4 EF (kg/gal)	Default N2O EF	N2O EF (kg/gal)
Diesel	0.138	73.96	10.20648	3.00E-03	4.14E-04	6.00E-04	8.28E-05

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr
Emergency Engine Operating Hours	2	hours/day
Emergency Engine Operating Days	100	day/yr
Conversion	454	gram/lb
Conversion	1,000,000	gm/MT
Conversion	1,000	Kg/MT
Conversion	1,000	gram/Kg

Notes:

1. From User Guide for CalEEMod Version 2022.1, Appendix G, Tables G-13 and G-40 (emergency generator and fire pump)
2. Ref: 40 CFR 98, Subpart C, Tables C-1 and C-2

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Table 11: Summary of Criteria Pollutant and GHG Emissions from Composting Activities

Table 11a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
5. Grinding and Screening	---	---	---	---	0.53	0.08
6. Material Handling	---	---	---	---	0.18	0.03
7. Wind Erosion	---	---	---	---	0.75	0.30
8. Composting VOC	---	53.01	---	---	---	---
10. Stationary Engines	6.36	1.92	35.35	0.05	0.30	0.30
Total	6.36	54.93	35.35	0.05	1.77	0.71

Table 11b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
5. Grinding and Screening	---	---	---	---	166.5	24.98
6. Material Handling	---	---	---	---	55.9	8.46
7. Wind Erosion	---	---	---	---	275	110.0
8. Composting VOC	---	19,350	---	---	---	---
10. Stationary Engines	1,098	280	10,107	13.5	48.2	48.2
Total (lb/yr)	1,098	19,630	10,107	13.5	545	192
Total (TPY)	0.55	9.82	5.05	0.0068	0.27	0.096

Table 11c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	CO2e (MT/Yr)
9. Composting GHG	N/A	91	6.80	4,343
10. Stationary Engines	653	0.0265	0.0053	653
Total (MT/yr)	653	91	6.81	4,996

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Table 12: TAC from Composting Dust

Table 12a: Material Handling and Wind Erosion Dust Emissions (PM10)

Source	lb/hr	lb/yr
5. Grinding and Screening	0.05	166.50
6. Material Handling	0.02	55.87
7. Wind Erosion	0.03	274.88
Total PM10	0.10	497.25

Table 12b: TAC from Material Handling and Wind Erosion

TAC	CAS	Concentration[1, 2] (lb/lb Dust)	Total TAC Emissions		Grinding and Screening TAC Emissions		Material Handling TAC Emissions		Wind Erosion TAC Emissions	
			(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)
Arsenic	7440-38-2	6.20E-06	6.36E-07	3.08E-03	3.31E-07	1.03E-03	1.11E-07	3.46E-04	1.95E-07	1.70E-03
Cadmium	7440-43-9	2.00E-06	2.05E-07	9.94E-04	1.07E-07	3.33E-04	3.58E-08	1.12E-04	6.28E-08	5.50E-04
Hexavalent Chromium	18540-29-9	2.45E-06	2.51E-07	1.22E-03	1.31E-07	4.08E-04	4.39E-08	1.37E-04	7.69E-08	6.73E-04
Cobalt	7440-48-4	8.80E-06	9.03E-07	4.38E-03	4.70E-07	1.47E-03	1.58E-07	4.92E-04	2.76E-07	2.42E-03
Copper	7440-50-8	6.90E-05	7.08E-06	3.43E-02	3.68E-06	1.15E-02	1.24E-06	3.86E-03	2.17E-06	1.90E-02
Lead	7439-92-1	2.00E-04	2.05E-05	9.94E-02	1.07E-05	3.33E-02	3.58E-06	1.12E-02	6.28E-06	5.50E-02
Manganese	7439-96-5	4.40E-04	4.52E-05	2.19E-01	2.35E-05	7.33E-02	7.88E-06	2.46E-02	1.38E-05	1.21E-01
Mercury	7439-97-6	1.00E-06	1.03E-07	4.97E-04	5.34E-08	1.67E-04	1.79E-08	5.59E-05	3.14E-08	2.75E-04
Nickel	7440-02-0	9.50E-05	9.75E-06	4.72E-02	5.07E-06	1.58E-02	1.70E-06	5.31E-03	2.98E-06	2.61E-02
Selenium	7782-49-2	1.00E-06	1.03E-07	4.97E-04	5.34E-08	1.67E-04	1.79E-08	5.59E-05	3.14E-08	2.75E-04
			Annual Total	0.410	Annual Total	0.137	Annual Total	0.046	Annual Total	0.227

Notes:

1. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm
2. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

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Table 13: Organic TAC Emissions

Table 13a: Organic Storage VOC Emissions

Process Description	(lb/hr)	(lb/yr)
Feedstock Storage	1.14	10,000
Composting	0.92	8,055
Curing	0.10	895
Finished Compost Storage	0.05	400

Table 13b: Feedstock Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	8.25E-03	9.42E-03	82.50
1,4-Dichlorobenzene	4.21E-04	4.81E-04	4.21
2-Propanol (Isopropylalcohol, IPA)	1.13E-03	1.29E-03	11.30
Acetaldehyde	8.96E-02	1.02E-01	896.00
Allyl Chloride (3-Chloropropene)	2.19E-04	2.50E-04	2.19
Benzene	2.24E-04	2.56E-04	2.24
Carbondisulfide	2.18E-04	2.49E-04	2.18
Chloroethane	1.85E-04	2.11E-04	1.85
Chloroform	3.42E-04	3.90E-04	3.42
Ethylbenzene	3.04E-04	3.47E-04	3.04
Ethylene Dichloride (1,2-dichloroethane)	2.84E-04	3.24E-04	2.84
Hexane	7.86E-03	8.97E-03	78.60
Methanol (Methylalcohol)	9.68E-02	1.11E-01	968.00
Methyl Ethyl Ketone (2-butanone)	5.36E-02	6.12E-02	536.00
Naphthalene	2.81E-04	3.21E-04	2.81
Propene (Propylene)	9.45E-05	1.08E-04	0.95
Styrene	2.98E-04	3.40E-04	2.98
Toluene	2.64E-04	3.01E-04	2.64
Vinyl acetate	1.45E-02	1.66E-02	145.00
Xylenes	3.15E-04	3.60E-04	3.15

Table 13c: Composting TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	7.23E-02	6.65E-02	582.38
1,4-Dichlorobenzene	2.22E-04	2.04E-04	1.79
2-Propanol (Isopropylalcohol, IPA)	2.59E-04	2.38E-04	2.09
Acetaldehyde	4.29E-02	3.94E-02	345.56
Allyl Chloride (3-Chloropropene)	1.08E-04	9.93E-05	0.87
Benzene	1.60E-04	1.47E-04	1.29
Carbondisulfide	3.74E-04	3.44E-04	3.01
Chloroethane	8.30E-05	7.63E-05	0.67
Chloroform	1.63E-04	1.50E-04	1.31
Ethylbenzene	3.50E-04	3.22E-04	2.82
Ethylene Dichloride (1,2-dichloroethane)	5.37E-04	4.94E-04	4.33
Hexane	3.18E-04	2.92E-04	2.56
Methanol (Methylalcohol)	4.88E-02	4.49E-02	393.08
Methyl Ethyl Ketone (2-butanone)	7.82E-02	7.19E-02	629.90
Naphthalene	7.14E-04	6.57E-04	5.75
Propene (Propylene)	5.89E-03	5.42E-03	47.44
Styrene	3.53E-04	3.25E-04	2.84
Toluene	6.30E-04	5.79E-04	5.07
Vinyl acetate	3.01E-03	2.77E-03	24.25
Xylenes	4.36E-04	4.01E-04	3.51

Table 13d: Curing TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	1.08E-01	1.10E-02	96.66
1,4-Dichlorobenzene	6.10E-04	6.23E-05	0.55
2-Propanol (Isopropylalcohol, IPA)	7.37E-04	7.53E-05	0.66
Acetaldehyde	2.83E-02	2.89E-03	25.33
Allyl Chloride (3-Chloropropene)	8.75E-04	8.94E-05	0.78
Benzene	5.42E-04	5.54E-05	0.49
Carbondisulfide	1.30E-03	1.33E-04	1.16
Chloroethane	2.68E-04	2.74E-05	0.24
Chloroform	4.99E-04	5.10E-05	0.45
Ethylbenzene	8.06E-04	8.23E-05	0.72
Ethylene Dichloride (1,2-dichloroethane)	5.78E-04	5.91E-05	0.52
Hexane	6.42E-04	6.56E-05	0.57
Methanol (Methylalcohol)	3.07E-02	3.14E-03	27.48
Methyl Ethyl Ketone (2-butanone)	3.77E-02	3.85E-03	33.74
Naphthalene	1.12E-03	1.14E-04	1.00
Propene (Propylene)	3.21E-02	3.28E-03	28.73
Styrene	6.34E-04	6.48E-05	0.57
Toluene	2.54E-03	2.60E-04	2.27
Vinyl acetate	7.67E-04	7.84E-05	0.69
Xylenes	1.24E-03	1.27E-04	1.11

Table 13e: Finished Compost Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions	
		(lb/hr)	(lb/yr)
Acetone	4.86E-02	2.22E-03	19.44
1,4-Dichlorobenzene	3.56E-03	1.63E-04	1.42
2-Propanol (Isopropylalcohol, IPA)	1.46E-03	6.67E-05	0.58
Acetaldehyde	1.86E-02	8.49E-04	7.44
Allyl Chloride (3-Chloropropene)	1.86E-03	8.49E-05	0.74
Benzene	1.89E-03	8.63E-05	0.76
Carbondisulfide	7.75E-03	3.54E-04	3.10
Chloroethane	1.56E-03	7.12E-05	0.62
Chloroform	2.89E-03	1.32E-04	1.16
Ethylbenzene	2.57E-03	1.17E-04	1.03
Ethylene Dichloride (1,2-dichloroethane)	2.40E-03	1.10E-04	0.96
Hexane	2.09E-03	9.54E-05	0.84
Methanol (Methylalcohol)	7.77E-04	3.55E-05	0.31
Methyl Ethyl Ketone (2-butanone)	1.75E-03	7.99E-05	0.70
Naphthalene	3.11E-03	1.42E-04	1.24
Propene (Propylene)	6.87E-02	3.14E-03	27.48
Styrene	2.53E-03	1.16E-04	1.01
Toluene	6.96E-03	3.18E-04	2.78
Vinyl acetate	2.09E-03	9.54E-05	0.84
Xylenes	5.15E-03	2.35E-04	2.06

Notes:

1. Speciation profile from BAAQMD Permit Handbook, Section 11.15

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Table 14: NH3 Emissions

Table 14a: NH3 Emissions

Process Unit	Annual Throughput (ton/yr)	Daily Throughput (ton/day)	Emission Factor (lb/ton)	Hourly Emissions (lb/hr)	Annual Emissions (lb/yr)
Feedstock Storage	25,000	80	0.020 lb/ton/day	0.11	1,000
Composting + Curing	25,000	80	0.16 lb/ton	0.45	3,900
Finished Compost Storage	20,000	64	0.0004 lb/ton	0.0009	8

Assumed Percentage of Composting + Curing to Composting:	90%	Assumed same as percent of VOC emissions

Table 14b: Colorant Application Ammonia Emissions[1]

Equipment	Annual Throughput (ton/yr)	Hourly Throughput (ton/hr)	Ammonia Emissions (lb/hr)	Ammonia Emissions (lb/yr)
Colorizer	1,250	50.0	5.42	135

	lb/hr	lb/yr
Total Ammonia Emissions:	**5.9769**	**5,043**

1. Ammonia emissions may occur at the colorizer or from the storage piles. No attempt has been made to determine the actual emission point.

Data and Parameters

Daily Hours of Emissions	24	hr/day	
Days of feedstock storage	2	days	
Annual hours of operation	8,760	hr/yr	
Bulk density - mulch	600	lb/cy	Average per Google AI
Conversion	2000	lb/ton	Constant
Application rate	6.5	lbs/cy	Google AI, max of listed range
Ammonia Concentration	0.5%	by weight	SDS

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Table 15: Stationary Diesel Engine TAC Emissions

Table 15: Stationary Diesel Engine TAC Emissions

Vehicle	PM10 Emissions (lb/hr)	PM10 Emissions (lb/day)	PM10 Emissions (lb/yr)
Diesel Grinders	0.002	2.09E-02	6.53
Diesel Screens	0.002	2.09E-02	6.53
Diesel Stackers	0.002	2.09E-02	6.53
Diesel Colorizer	0.002	2.09E-02	6.53
Diesel Emergency Generator	0.037	7.34E-02	7.34
Diesel Emergency Fire Pump	0.073	1.47E-01	14.68
Total PM10 = DPM	**0.118**	**3.04E-01**	**48.16**

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr
Emergency Engine Operating Hours	2	hours/day
Emergency Engine Operating Days	100	day/yr

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Table 16: Summary of TAC Emissions from Composting Activities

Table 16a: Summary of TAC Emissions from Composting Activities, lb/yr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine	Emergency Generator	Fire Pump	Total
Arsenic	7440382	1.03E-03	3.46E-04	1.70E-03	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	0.00E+00	0.00E+00	3.08E-03
Cadmium	7440439	3.33E-04	1.12E-04	5.50E-04	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	0.00E+00	0.00E+00	9.94E-04
Hexavalent Chromium	18540299	4.08E-04	1.37E-04	6.73E-04	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	0.00E+00	0.00E+00	1.22E-03
Cobalt	7440484	1.47E-03	4.92E-04	2.42E-03	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	0.00E+00	0.00E+00	4.38E-03
Copper	7440508	1.15E-02	3.86E-03	1.90E-02	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	0.00E+00	0.00E+00	3.43E-02
Lead	7439921	3.33E-02	1.12E-02	5.50E-02	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	0.00E+00	0.00E+00	9.94E-02
Manganese	7439965	7.33E-02	2.46E-02	1.21E-01	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	0.00E+00	0.00E+00	2.19E-01
Mercury	7439976	1.67E-04	5.59E-05	2.75E-04	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	0.00E+00	0.00E+00	4.97E-04
Nickel	7440020	1.58E-02	5.31E-03	2.61E-02	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	0.00E+00	0.00E+00	4.72E-02
Selenium	7782492	1.67E-04	5.59E-05	2.75E-04	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	0.00E+00	0.00E+00	4.97E-04
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	8.25E+01	5.82E+02	9.67E+01	1.94E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.81E+02
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	4.21E+00	1.79E+00	5.46E-01	1.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.97E+00
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	1.13E+01	2.09E+00	6.60E-01	5.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E+01
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	8.96E+02	3.46E+02	2.53E+01	7.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E+03
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	2.19E+00	8.70E-01	7.83E-01	7.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.59E+00
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	2.24E+00	1.29E+00	4.85E-01	7.56E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.77E+00
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	2.18E+00	3.01E+00	1.16E+00	3.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.46E+00
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	1.85E+00	6.69E-01	2.40E-01	6.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E+00
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	3.42E+00	1.31E+00	4.47E-01	1.16E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.34E+00
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	3.04E+00	2.82E+00	7.21E-01	1.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.61E+00
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	2.84E+00	4.33E+00	5.17E-01	9.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.64E+00
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	7.86E+01	2.56E+00	5.75E-01	8.36E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.26E+01
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	9.68E+02	3.93E+02	2.75E+01	3.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E+03
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	5.36E+02	6.30E+02	3.37E+01	7.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E+03
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	2.81E+00	5.75E+00	1.00E+00	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E+01
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	9.45E-01	4.74E+01	2.87E+01	2.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E+02
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	2.98E+00	2.84E+00	5.67E-01	1.01E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E+00
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	2.64E+00	5.07E+00	2.27E+00	2.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E+01
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	1.45E+02	2.42E+01	6.86E-01	8.36E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.71E+02
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	3.15E+00	3.51E+00	1.11E+00	2.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.83E+00
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	1.00E+03	3.51E+03	3.90E+02	7.60E+00	1.35E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.04E+03
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.53E+00	6.53E+00	6.53E+00	6.53E+00	7.34E+00	1.47E+01	4.82E+01

Table 16b: Summary of TAC Emissions from Composting Activities, lb/hr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine	Emergency Generator	Fire Pump	Total
Arsenic	7440382	3.31E-07	1.11E-07	1.95E-07	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	0.00E+00	0.00E+00	6.36E-07
Cadmium	7440439	1.07E-07	3.58E-08	6.28E-08	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	0.00E+00	0.00E+00	2.05E-07
Hexavalent Chromium	18540299	1.31E-07	4.39E-08	7.69E-08	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	0.00E+00	0.00E+00	2.51E-07
Cobalt	7440484	4.70E-07	1.58E-07	2.76E-07	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	0.00E+00	0.00E+00	9.03E-07
Copper	7440508	3.68E-06	1.24E-06	2.17E-06	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	0.00E+00	0.00E+00	7.08E-06
Lead	7439921	1.07E-05	3.58E-06	6.28E-06	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	0.00E+00	0.00E+00	2.05E-05
Manganese	7439965	2.35E-05	7.88E-06	1.38E-05	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	0.00E+00	0.00E+00	4.52E-05
Mercury	7439976	5.34E-08	1.79E-08	3.14E-08	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	0.00E+00	0.00E+00	1.03E-07
Nickel	7440020	5.07E-06	1.70E-06	2.98E-06	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	0.00E+00	0.00E+00	9.75E-06
Selenium	7782492	5.34E-08	1.79E-08	3.14E-08	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	0.00E+00	0.00E+00	1.03E-07
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	9.42E-03	6.65E-02	1.10E-02	2.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.92E-02
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	4.81E-04	2.04E-04	6.23E-05	1.63E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.10E-04
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	1.29E-03	2.38E-04	7.53E-05	6.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-03
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	1.02E-01	3.94E-02	2.89E-03	8.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-01
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	2.50E-04	9.93E-05	8.94E-05	8.49E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.24E-04
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	2.56E-04	1.47E-04	5.54E-05	8.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.45E-04
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	2.49E-04	3.44E-04	1.33E-04	3.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-03
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	2.11E-04	7.63E-05	2.74E-05	7.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.86E-04
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	3.90E-04	1.50E-04	5.10E-05	1.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.23E-04
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	3.47E-04	3.22E-04	8.23E-05	1.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.69E-04
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	3.24E-04	4.94E-04	5.91E-05	1.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.87E-04
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	8.97E-03	2.92E-04	6.56E-05	9.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.43E-03
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	1.11E-01	4.49E-02	3.14E-03	3.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-01
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	6.12E-02	7.19E-02	3.85E-03	7.99E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-01
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	3.21E-04	6.57E-04	1.14E-04	1.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-03
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	1.08E-04	5.42E-03	3.28E-03	3.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-02
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	3.40E-04	3.25E-04	6.48E-05	1.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.45E-04
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	3.01E-04	5.79E-04	2.60E-04	3.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-03
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	1.66E-02	2.77E-03	7.84E-05	9.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-02
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	3.60E-04	4.01E-04	1.27E-04	2.35E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-03
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	1.14E-01	4.01E-01	4.45E-02	8.68E-04	5.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.98E+00
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-03	2.09E-03	2.09E-03	2.09E-03	3.67E-02	7.34E-02	1.18E-01

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Table 17: Onroad Mobile Sources - Vehicle Information

Table 17: Vehicle Information and Mileage Calculation

Vehicle Type	Vehicle Use	Number of Vehicles per Day	Vehicle Weight (lb)			Fuel	Days	One-way Trips per Vehicle per Day	One-way Trips per Year	One-way Onsite Trip Mileage	One-way Offsite Trip Mileage	Total One-way Trip Mileage	Onsite Total VMT/yr	Offsite Total VMT/yr	Total VMT/yr
			Gross	Empty	Average										
LDT1	Employee	12	3,750	3,750	3,750	Gasoline	312	2	7,488	0.00	15	15.00	0	112,320	112,320
LHD2	Delivery of Office Supplies	1	15,006	8,200	11,603	Diesel	312	2	624	0.20	15	15.20	125	9,360	9,485
T7 Tractor	Ship Raw Material	35	47,000	23,000	35,000	Diesel	312	2	21,840	0.20	5	5.20	4,368	109,200	113,568
T7 Tractor	Ship Finished Compost	7	63,000	23,000	43,000	Diesel	312	2	4,368	0.20	15	15.20	874	65,520	66,394

Assuming 12 cu yd per raw material truck, 20 cu yd per compost product truck

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Table 18: Onroad Mobile Sources Exhaust Emissions

Table 18a: Onroad Mobile Sources - Criteria Pollutant Exhaust Emissions

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)	Total Running Exhaust (lb/yr)	Total Idle (lb/yr)	Total Start (lb/yr)	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)	Onsite Emissions (lb/day)	Offsite Emissions (lb/day)
NOx	LDT1	0.266	0.000	0.420	65.79	0.00	6.92	72.71	0.00	72.71	0.23	0.00E+00	2.33E-01
	LHD2	0.742	1.641	0.000	15.51	1.13	0.00	16.63	0.22	16.42	0.05	7.01E-04	5.26E-02
	T7 Tractor	0.927	5.946	5.191	367.49	171.63	299.68	838.80	24.43	814.37	2.69	7.83E-02	2.61E+00
VOC	LDT1	0.073	0.000	0.660	18.04	0.00	10.89	28.93	0.00	28.93	0.09	0.00E+00	9.27E-02
	LHD2	0.102	0.120	0.000	2.13	0.08	0.00	2.21	0.03	2.18	0.01	9.33E-05	6.99E-03
	T7 Tractor	0.010	0.635	0.000	3.81	18.32	0.00	22.13	0.64	21.49	0.07	2.07E-03	6.89E-02
CO	LDT1	4.803	0.000	6.799	1,188.30	0.00	112.13	1,300.44	0.00	1,300.44	4.17	0.00E+00	4.17E+00
	LHD2	0.241	0.996	0.000	5.04	0.68	0.00	5.72	0.08	5.65	0.02	2.41E-04	1.81E-02
	T7 Tractor	0.075	9.364	0.000	29.64	270.27	0.00	299.91	8.74	291.18	0.96	2.80E-02	9.33E-01
SOx	LDT1	0.002	0.000	0.000	0.40	0.00	0.01	0.41	0.00	0.41	0.00	0.00E+00	1.31E-03
	LHD2	0.002	0.001	0.000	0.04	0.00	0.00	0.05	0.00	0.04	0.00	1.90E-06	1.43E-04
	T7 Tractor	0.005	0.005	0.000	2.06	0.14	0.00	2.19	0.06	2.13	0.01	2.05E-04	6.83E-03
PM10	LDT1	0.004	0.000	0.003	1.05	0.00	0.06	1.10	0.00	1.10	0.00	0.00E+00	3.54E-03
	LHD2	0.020	0.030	0.000	0.43	0.02	0.00	0.45	0.01	0.44	0.00	1.88E-05	1.41E-03
	T7 Tractor	0.009	0.003	0.000	3.44	0.07	0.00	3.51	0.10	3.41	0.01	3.28E-04	1.09E-02
PM2.5	LDT1	0.004	0.000	0.003	0.96	0.00	0.05	1.02	0.00	1.02	0.00	0.00E+00	3.26E-03
	LHD2	0.020	0.029	0.000	0.41	0.02	0.00	0.43	0.01	0.42	0.00	1.80E-05	1.35E-03
	T7 Tractor	0.008	0.002	0.000	3.29	0.07	0.00	3.36	0.10	3.26	0.01	3.14E-04	1.05E-02

Table 18b: Onroad Mobile Sources - Fugitive VOC Emissions

Pollutant	Vehicle Type	Hot Soak EF (g/trip)	Running Loss EF (g/mile)	Diurnal EF (g/veh/day)	Total Hot Soak (lb/yr)	Total Running Loss (lb/yr)	Total Diurnal (lb/yr)	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)
VOC	LDT1	0.37	0.68	4.24	6.1	169.0	35.0	210.02	0.00	210.02	0.67
	LHD2	-	-	-	-	-	-	-	-	-	-
	T7 Tractor	-	-	-	-	-	-	-	-	-	-

Table 18c: Onroad Mobile Sources - Fugitive PM Emissions

Pollutant	Vehicle Type	Tire Wear (g/mile)	Brake Wear (g/mile)	Total Tire Wear (lb/yr)	Total Brake Wear	Total Emissions (lb/yr)	Onsite Emissions (lb/yr)	Offsite Emissions (lb/yr)	Total Emissions (lb/day)
PM10	LDT1	0.0080	0.0085	1.98	2.09	4.07	0.00	4.07	0.013
	LHD2	0.0120	0.0910	0.25	1.90	2.15	0.03	2.12	0.007
	T7 Tractor	0.0360	0.0874	14.27	34.63	48.90	1.42	47.48	0.157
PM2.5	LDT1	0.0020	0.0030	0.49	0.73	1.23	0.00	1.23	0.004
	LHD2	0.0030	0.0319	0.06	0.67	0.73	0.01	0.72	0.002
	T7 Tractor	0.0090	0.0306	3.57	12.12	15.69	0.46	15.23	0.050

Table 18d: Summary of Criteria Pollutant Emissions from Onroad Operations Vehicles

Type	NO_x (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SO_x (lb/yr)	PM_{10} (lb/yr)	$PM_{2.5}$ (lb/yr)
Exhaust	928.15	53.27	1606.07	2.65	5.06	4.81
Fugitive	---	210.02	---	---	55.13	17.64
Total (Lb/Yr)	928.15	263.29	1606.07	2.65	60.19	22.45
Total (Lb/day)	2.97	0.84	5.15	0.01	0.19	0.07
Total (TPY)	0.46	0.13	0.80	0.001	0.03	0.01

Table 18e: Onroad Mobile Sources - Greenhouse Gas Exhaust Emissions

Pollutant	Vehicle Type	Running Exhaust EF (g/mile)	Idle EF (g/veh/day)	Start EF (g/trip)	Total Running Exhaust (MT/yr)	Total Idle (MT/yr)	Total Start (MT/yr)	Total Emissions (MT/yr)
CO2	LDT1	377.335	0.000	90.387	42.4	0.00E+00	6.77E-01	43
	LHD2	636.055	212.543	0.000	6.0	6.63E-02	0.00E+00	6.10
	T7 Tractor	1544.504	1410.663	0.000	278.0	1.85E+01	0.00E+00	296
CH4	LDT1	0.016	0.000	0.101	0.0	0.00E+00	7.55E-04	0
	LHD2	0.005	0.006	0.000	0.0	1.74E-06	0.00E+00	0.00
	T7 Tractor	0.000	0.029	0.000	0.0	3.86E-04	0.00E+00	0
N2O	LDT1	0.017	0.000	0.029	0.0	0.00E+00	2.20E-04	0
	LHD2	0.103	0.034	0.000	0.0	1.07E-05	0.00E+00	0.00
	T7 Tractor	0.400	0.227	0.000	0.1	2.98E-03	0.00E+00	0
HFC	LDT1	0.000	N/A	N/A	0.0	N/A	N/A	0
	LHD2	0.001	N/A	N/A	0.0	N/A	N/A	0.00
	T7 Tractor	0.001	N/A	N/A	0.0	N/A	N/A	0
CO2e	LDT1							44
	LHD2							6.48
	T7 Tractor							319
							Total	**369**

Table 18f: GHG Emissions from Onroad Mobile Source Activity

CO_2	CH_4	N_2O	Total CO_2e
(MT/Yr)	(Kg/Yr)	(Kg/Yr)	(MT/Yr)
346	3.05	78.09	369

Table 18g: Global Warming Potential, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265
HFC[1]	12,400

1. Conservatively using GWP for HFC-23, the HFC with the highest GWP

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 19: Onroad Mobile Source Paved Road Dust

Table 19a: Paved Road PM_{10} Emission Factors[1]

Vehicle	Average Vehicle Weight (ton)	Pollutant	Freeway (lb/VMT)	Major (lb/VMT)	Collector (lb/VMT)	Local (lb/VMT)	Rural/Onsite (lb/VMT)
		sL (g/m^2)^2 -->	0.020	0.035	0.035	0.320	1.600
Fleet Average	2.40	PM10	1.48E-04	2.46E-04	2.46E-04	1.84E-03	7.97E-03
		PM2.5	3.70E-05	6.15E-05	6.15E-05	4.61E-04	1.99E-03

$E = k\ (sL)^{0.91} \times (W)^{1.02} * C_f$

Variable	Value	UOM
k (PM10)	1.00	g/VMT
k(PM2.5)	0.25	g/VMT
Rain Days[3]	49	day/yr
C_f	0.966	

Table 19b: Fraction of VMT by Functional Type of Roadway[2]

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 4

Table 19c: Summary of Onroad VMT by Phase and Road Type

EMFAC Vehicle Type	Activity	Unit of Measure	Freeway	Major	Collector	Local	Rural	Total Offsite	Onsite	Total VMT
LDT1	Employee	VMT/day	119.70	140.29	99.32	0.72	6.00	366	0	366
		VMT/Yr	37,346	43,771	30,989	225	1,872	112,320	0	112,320
LHD2	Delivery of Office Supplies	VMT/day	9.98	11.69	8.28	0.06	0.50	31	0.4	31
		VMT/Yr	3,112	3,648	2,582	19	156	9,360	125	9,485
T7 Tractor	Ship Raw Material	VMT/day	116.38	136.40	96.57	0.70	17.50	368	14	382
		VMT/Yr	36,309	42,555	30,128	218	5,460	109,200	4,368	113,568
T7 Tractor	Ship Finished Compost	VMT/day	69.83	81.84	57.94	0.42	3.50	214	2.8	216
		VMT/Yr	21,785	25,533	18,077	131	1,092	65,520	874	66,394

Table 19d: Entrained Road Dust Emissions from Travel on Paved Roads (lb/day)

EMFAC Vehicle	Activity	Pollutant	Freeway	Major	Collector	Local	Rural	Onsite	Total
LDT1	Employee	PM10	1.77E-02	3.45E-02	2.44E-02	1.33E-03	4.78E-02	0.00E+00	1.26E-01
		PM2.5	4.42E-03	8.63E-03	6.11E-03	3.32E-04	1.20E-02	0.00E+00	3.15E-02
LHD2	Delivery of Office Supplies	PM10	1.47E-03	2.88E-03	2.04E-03	1.11E-04	3.99E-03	3.19E-03	1.37E-02
		PM2.5	3.69E-04	7.19E-04	5.09E-04	2.77E-05	9.97E-04	7.97E-04	3.42E-03
T7 Tractor	Ship Raw Material	PM10	1.72E-02	3.36E-02	2.38E-02	1.29E-03	1.40E-01	1.12E-01	3.27E-01
		PM2.5	4.30E-03	8.39E-03	5.94E-03	3.23E-04	3.49E-02	2.79E-02	8.18E-02
T7 Tractor	Ship Finished Compost	PM10	1.03E-02	2.01E-02	1.43E-02	7.74E-04	2.79E-02	2.23E-02	9.57E-02
		PM2.5	2.58E-03	5.03E-03	3.56E-03	1.94E-04	6.98E-03	5.58E-03	2.39E-02
Total	All	PM10	0.05	0.09	0.06	0.00	0.22	0.14	0.56
		PM2.5	0.01	0.02	0.02	0.00	0.05	0.03	0.14

Table 19e: Entrained Road Dust Emissions from Travel on Paved Roads (lb/yr)

EMFAC Vehicle	Activity	Pollutant	Freeway	Major	Collector	Local	Rural	Onsite	Total
LDT1	Employee	PM10	5.52	10.77	7.63	0.41	14.93	0.00	39.26
		PM2.5	1.38	2.69	1.91	0.10	3.73	0.00	9.81
LHD2	Delivery of Office Supplies	PM10	0.46	0.90	0.64	0.03	1.24	1.00	4.27
		PM2.5	0.12	0.22	0.16	0.01	0.31	0.25	1.07
T7 Tractor	Ship Raw Material	PM10	5.37	10.47	7.41	0.40	43.54	34.83	102.03
		PM2.5	1.34	2.62	1.85	0.10	10.88	8.71	25.51
T7 Tractor	Ship Finished Compost	PM10	3.22	6.28	4.45	0.24	8.71	6.97	29.87
		PM2.5	0.81	1.57	1.11	0.06	2.18	1.74	7.47
Total	All	PM10	14.57	28.42	20.12	1.09	68.42	42.79	175.42
		PM2.5	3.64	7.11	5.03	0.27	17.10	10.70	43.85

Notes:

1. Methodology per AP-42, 13.2.1 Paved Roads
2. SJVAPCD, Appendix A: Comments and Responses Rule 9510 and 3180 December 15, 2005
3. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
4. Rural is assumed to be 0.25 miles per one-way trip.

Data and Parameters

Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 20: Fugitive Dust From Travel on Unpaved Roads

Table 20a: Unpaved Road Emission Factors[1]

EMFAC Vehicle Type	Activity	PM Emission Factors[2,3] (lb/VMT)	
		PM10	PM2.5
LDT1	Employee	0.6895	0.0690
LHD2	Delivery of Office Supplies	1.1462	0.1146
T7 Tractor	Ship Raw Material	1.8839	0.1884
T7 Tractor	Ship Finished Compost	2.0667	0.2067

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[4]	24.3	day/year

Table 20b: Vehicle Miles Travelled for Transport of Personnel, Supplies, Materials and Product

EMFAC Vehicle Type	Activity	Vehicle Weight (ton)			No. of days	Veh/day	Trips/Day	Trips/Year	One-way Miles per Trip	Total VMT[5] (mi/day)	Total VMT[5] (mi/yr)
		Gross	Empty	Average							
LDT1	Employee	1.88	1.88	1.88	312	12	2	7,488	0.00	0	0
LHD2	Delivery of Office Supplies	7.50	4.10	5.80	312	1	2	624	0.20	0.4	125
T7 Tractor	Ship Raw Material	23.50	11.50	17.50	312	35	2	21,840	0.20	14.0	4,368
T7 Tractor	Ship Finished Compost	31.50	11.50	21.50	312	7	2	4,368	0.20	2.8	874

Table 20c: Entrained Road Dust from Unpaved Roads

EMFAC Vehicle Type	Activity	Uncontrolled (lb/day)		Controlled (lb/day)		Uncontrolled (lb/yr)		Controlled (lb/yr)	
		PM10	PM2.5	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
LDT1	Employee	0.00	0.00	0.00	0.00	0	0	0	0
LHD2	Delivery of Office Supplies	0.46	0.05	0.12	0.01	143	14	36	4
T7 Tractor	Ship Raw Material	26.37	2.64	6.65	0.66	8,229	823	2,074	207
T7 Tractor	Ship Finished Compost	5.79	0.58	1.46	0.15	1,805	181	455	45
Total		32.6	3.3	8.22	0.82	10,177	1,018	2,565	256
Total (ton/yr)						5.1	0.5	1.3	0.1

Overall Control Efficiency[6]	75%
Control for watering	55%
Control for vehicle speed	44%

Notes:

1. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
2. MISCELLANEOUS PROCESS METHODOLOGY 7.9 Entrained Road Travel, Paved Road Dust (Revised and updated, November 2016), https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-9_2016.pdf
3. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
4. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
5. Assume onsite roads are unpaved, offsite roads are paved.
6. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2

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Table 21: Offroad Equipment - Criteria Pollutant and GHG Emissions

Table 21a: Emission Factors[1]

Unit Count	Offroad Equipment	Typical Model (or Equivalent)	Engine Tier and Information		NOx (g/BHp-hr)	VOC (g/BHp-hr)	CO (g/BHp-hr)	SOx (g/BHp-hr)	PM10 (g/BHp-hr)	PM2.5 (g/BHp-hr)	CO2 (kg/gal)	CH4 (g/gal)	N2O (g/gal)
			Tier	BHp									
1	Fuel Truck	Freightliner M2106	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Tractors	Massey Fergusen, 7619	4f	200	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Excavator	Caterpillar 326	4f	201	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
3	Loader	Caterpillar, 962K	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
0	Windrow Turner	Scarab	4f	250	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Water Truck	International, 7400 6x4	4f	350	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083
1	Sweeper Truck	Freightliner M2	4f	240	0.30	0.14	2.60	0.005	0.010	0.010	10.206	0.414	0.083

Table 21b: Total Criteria Pollutant Emissions from Offroad Equipment

Unit	Offroad Equipment	Typical Model	Engine Characteristics			Criteria Pollutant Exhaust Emissions (lb/day)					
			BHp	Op Load	Hr/Day	NOx	VOC	CO	SOx	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	350	0.38	2.00	0.18	0.08	1.52	0.00	0.01	0.01
1	Tractors	Massey Fergusen, 7619	200	0.37	10.00	0.49	0.23	4.24	0.01	0.02	0.02
1	Excavator	Caterpillar 326	201	0.38	10.00	0.51	0.24	4.38	0.01	0.02	0.02
3	Loader	Caterpillar, 962K	250	0.36	10.00	1.79	0.83	15.48	0.03	0.06	0.06
0	Windrow Turner	Scarab	250	0.42	10.00	0.00	0.00	0.00	0.00	0.00	0.00
1	Water Truck	International, 7400 6x4	350	0.38	10.00	0.88	0.41	7.62	0.01	0.03	0.03
1	Sweeper Truck	Freightliner M2	240	0.46	10.00	0.73	0.34	6.33	0.01	0.02	0.02
Total Emissions from offroad equipment (lb/day)						4.57	2.13	39.57	0.07	0.15	0.15

Table 21c: Total Criteria Pollutant Emissions from Offroad Equipment

Unit	Offroad Equipment	Typical Model	Engine Characteristics			Criteria Pollutant Exhaust Emissions (lb/yr)					
			BHp	Op Load[1]	Hr/Yr	NOx	VOC	CO	SOx	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	350	0.38	624	54.89	25.61	475.70	0.90	1.83	1.83
1	Tractors	Massey Fergusen, 7619	200	0.37	3,120	152.70	71.26	1,323.39	2.50	5.09	5.09
1	Excavator	Caterpillar 326	201	0.38	3,120	157.61	73.55	1,365.95	2.58	5.25	5.25
3	Loader	Caterpillar, 962K	250	0.36	3,120	557.14	260.00	4,828.57	9.10	18.57	18.57
0	Windrow Turner	Scarab	250	0.42	3,120	0.00	0.00	0.00	0.00	0.00	0.00
1	Water Truck	International, 7400 6x4	350	0.38	3,120	274.44	128.07	2,378.52	4.48	9.15	9.15
1	Sweeper Truck	Freightliner M2	240	0.46	3,120	227.81	106.31	1,974.35	3.72	7.59	7.59
Total Emissions from offroad equipment (lb/yr)						1,424.59	664.81	12,346.48	23.28	47.49	47.49
Total Emissions from offroad equipment (TPY)						0.71	0.33	6.17	0.01	0.02	0.02

Table 21d: Offroad Equipment - GHG Emissions[2]

Unit Count	Offroad Equipment	Typical Model (or Equivalent)	Engine Information				Fuel (gal/yr)	CO2 (MT/yr)	CH4 (kg/yr)	N2O (kg/yr)	CO2e (MT/Yr)
			Tier	BHp	Hr/Yr	Op Load[1]					
1	Fuel Truck	Freightliner M2106	4f	350	624	0.38	4,240	43	1.76	0.35	43
1	Tractors	Massey Fergusen, 7619	4f	200	3,120	0.37	11,797	120	4.88	0.98	121
1	Excavator	Caterpillar 326	4f	201	3,120	0.38	12,176	124	5.04	1.01	125
3	Loader	Caterpillar, 962K	4f	250	3,120	0.36	43,042	439	17.82	3.56	441
0	Windrow Turner	Scarab	4f	250	3,120	0.42	0	0	0.00	0.00	0
1	Water Truck	International, 7400 6x4	4f	350	3,120	0.38	21,202	216	8.78	1.76	217
1	Sweeper Truck	Freightliner M2	4f	240	3,120	0.46	17,600	180	7.29	1.46	180
Total							110,058	1,123	46	9.11	1,127

Table 21e: Brake Specific Fuel Consumption (BSFC) Conversion

Parameter	Value	Unit of Measure	Basis
BSFC	7000	btu/hp-hr	Per EPA AP-42 Table 3,3-1, Footnote a
Heat Content	137,000	btu/gal	SDS
Density	7.05	lb/gal	SDS
Heat Content	19,433	Btu/lb	calculated
BSFC	0.3602	lb/hp-hr	calculated

Table 21f: Global Warming Potentials, IPCC AR5

Pollutant	GWP
CO2	1
CH4	28
N2O	265

Data and Parameters

Operating Days	312	day/yr

Notes:

1. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-12
2. Solid, gaseous, liquid and biomass fuels: Federal Register (2009) EPA; 40 CFR Parts 86, 87, 89 et al; Mandatory Reporting of Greenhouse Gases; Final Rule , 30Oct09, 261 pp. Tables C-1 and C-2 at FR pp. 56409-56410. Revised emission factors for selected fuels: Federal Register (2010) EPA; 40 CFR Part 98; Mandatory Reporting of Greenhouse Gases; Final Rule, 17Dec10, 81 pp. With Amendments from Memo: Table of Final 2013 Revisions to the Greenhouse Gas Reporting Rule (PDF) to 40 CFR part 98, subpart C: Table C–1 to Subpart C—Default CO2 Emission Factors and High Heat Values for Various Types of Fuel and Table C–2 to Subpart C—Default CH4 and N2O Emission Factors for Various Types of Fuel.

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Table 22: Fugitive Dust From Offroad Equipment Travel on Unpaved Areas and Haul Roads[1]

Table 22a: EPA Predictive Emission Factors for Offroad Equipment[2]

No. of Units	Equipment	Typical	PM Emission Factors[3] (lb/VMT)	
			PM10	PM2.5
1	Fuel Truck	Freightliner M2106	2.1106	0.2111
1	Tractors	Massey Fergusen, 7619	2.1106	0.2111
1	Excavator	Caterpillar 326	2.1106	0.2111
3	Loader	Caterpillar, 962K	2.1106	0.2111
0	Windrow Turner	Scarab	2.1106	0.2111
1	Water Truck[4]	International, 7400 6x4	0.0000	0.0000
1	Sweeper Truck[4]	Freightliner M2	0.0000	0.0000

Variable	Value	UOM
Road Silt Content	6.4	%
Rain Days[5]	24.3	day/year

Table 22b: Onsite Equipment Tonnage, Operating Hours, and VMT

No. of Units	Equipment Description and Use		GVW (tons)	Empty (tons)	Average (tons)	Operating Hours (hr/day)	Operating Hours (hr/yr)	Ave. Speed (MPH)	Total Travel (VMT/day)	Total Travel (VMT/yr)
1	Fuel Truck	Freightliner M2106	31.5	11.5	22.5	2.0	624	2.0	4.0	1,248
1	Tractors	Massey Fergusen, 7619	7.9	7.9	22.5	10.0	3,120	0.3	3.0	936
1	Excavator	Caterpillar 326	28.6	28.6	22.5	10.0	3,120	0.3	3.0	936
3	Loader	Caterpillar, 962K	22.5	22.5	22.5	10.0	3,120	0.3	9.0	2,808
0	Windrow Turner	Scarab	20.0	20.0	22.5	10.0	3,120	0.3	0.0	0
1	Water Truck[4]	International, 7400 6x4	31.5	11.5	22.5	10.0	3,120	3.0	30.0	9,360
1	Sweeper Truck[4]	Freightliner M2	16.5	16.5	22.5	10.0	3,120	3.0	30.0	9,360

Table 22c: Offroad Equipment Unpaved Road Dust Emissions

No. of	Equipment Description and Use		Uncontrolled (lb/day)		Controlled (lb/day)		Uncontrolled (lb/yr)		Controlled (lb/yr)	
			PM10	PM2.5	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
1	Fuel Truck	Freightliner M2106	8.44	0.84	2.13	0.21	2,634	263	664	66
1	Tractors	Massey Fergusen, 7619	6.33	0.63	1.60	0.16	1,976	198	498	50
1	Excavator	Caterpillar 326	6.33	0.63	1.60	0.16	1,976	198	498	50
3	Loader	Caterpillar, 962K	19.00	1.90	4.79	0.48	5,927	593	1,493	149
0	Windrow Turner	Scarab	0.00	0.00	0.00	0.00	0	0	0	0
1	Water Truck[4]	International, 7400 6x4	0.00	0.00	0.00	0.00	0	0	0	0
1	Sweeper Truck[4]	Freightliner M2	0.00	0.00	0.00	0.00	0	0	0	0
Total Dust from Equip. On Unpaved Areas (Lb/Day or Lb/Year)			40.10	4.01	10.11	1.01	12,512	1,251	3,153	315
Total Dust from Equip. On Unpaved Areas (Ton/Year)			---	---	---	---	6.3	0.6	1.6	0.2

Overall Control Efficiency[6]	75%
Control for watering	55%
Control for vehicle speed	44%

Notes:

1. Although compost surfaces are paved, because the compost processing areas are expected to have compost residuals covering the active surfaces, the unpaved road calculations are used to esti
2. EPA AP-42 5th Edition, Chapter 13, Section 13.2.2, Equation 1a.
3. Because daily emissions are being calculated, and it does not rain daily, the rain correction factor has been omitted from the calculation.
4. Entrained road dust is assumed to be negligible for the water truck due to watering and the sweeper truck due to watering and sweeping.
5. User Guide for CalEEMod Version 2022.1, Appendix G, Table G-2, Average of Los Angeles Airport and San Jose Airport.
6. Assumes twice daily watering and limiting travel speed to 25 mph;
http://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/fugitive-dust/fugitive-dust-table-xi-d.doc?sfvrsn=2
7. Chow, Judith C., et. al., "Evaluation of Regenerative-air Vacuum Street Sweeping on Geological Contributions to PM10", Journal of the Air & Waste Management Association, published online 06

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Table 23: Summary of Emissions

Table 23a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
18. Onroad Vehicle Exhaust	2.97	0.84	5.15	0.01	0.19	0.07
19. Onroad Vehicle Paved Road Dust	---	---	---	---	0.56	0.14
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	8.22	0.82
21. Offroad Equipment Exhaust	4.57	2.13	39.57	0.07	0.15	0.15
22. Offroad Equipment Unpaved Dust	---	---	---	---	10.11	1.01
Total	7.54	2.97	44.72	0.08	19.23	2.20

Table 23b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
18. Onroad Vehicle Exhaust	928	263	1606	3	60	22
19. Onroad Vehicle Paved Road Dust	---	---	---	---	175	44
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	2,565	256
21. Offroad Equipment Exhaust	1,425	665	12,346	23	47	47
22. Offroad Equipment Unpaved Dust	---	---	---	---	3,153	315
Total	2,353	928	13,953	26	6,001	686
Total (TPY)	1.18	0.46	6.98	0.01	3.00	0.34

Table 23c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	HFC (MT/yr)	CO2e (MT/Yr)
18. Onroad Vehicle Exhaust	346	0.0031	0.0781	0.0002	369
19. Onroad Vehicle Paved Road Dust	---	---	---	---	---
20. Onroad Vehicle Unpaved Road Dust	---	---	---	---	---
21. Offroad Equipment Exhaust	1123	0.0456	0.0091	---	1127
22. Offroad Equipment Unpaved Dust	---	---	---	---	---
Total	**1469**	**0.0486**	**0.0872**	**0.0002**	**1,496**

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Table 24: Diesel and Gasoline Vehicle TAC Emissions

Table 24a: DPM Emissions

Vehicle	PM10 Emissions (lb/hr)		PM10 Emissions (lb/day)		PM10 Emissions (lb/yr)	
	Onsite Exhaust	Nearsite Exhaust[1,2]	Onsite Exhaust	Nearsite Exhaust[1,2]	Onsite Exhaust	Nearsite Exhaust[1,2]
LHD2	1.88E-05	2.36E-05	1.88E-05	2.36E-05	0.006	0.007
T7 Tractor	3.28E-05	5.47E-05	3.28E-04	5.47E-04	0.10	0.171
Fuel Truck	2.93E-03	0.00E+00	5.86E-03	0	1.83	0
Tractors	1.63E-03	0.00E+00	1.63E-02	0	5.09	0
Excavator	1.68E-03	0.00E+00	1.68E-02	0	5.25	0
Loader	5.95E-03	0.00E+00	5.95E-02	0	18.57	0
Windrow Turner	0.00E+00	0.00E+00	0.00E+00	0	0.00	0
Water Truck	2.93E-03	0.00E+00	2.93E-02	0	9.15	0
Sweeper Truck	2.43E-03	0.00E+00	2.43E-02	0	7.59	0
Total PM10 = DPM	1.76E-02	7.82E-05	1.53E-01	5.70E-04	47.59	0.178

Table 24b: Gasoline Vehicle Mileage and Fuel Consumption

Parameter	Onsite	Near-site[3]
VMT/Day	0.00	6.00
Fuel Consumption (gal/day)	0.000	0.370

Average Fuel Economy Light Truck[4] 16.20 MPG

Table 24c: TAC Emissions from Onroad Gasoline Vehicles

TAC	CAS#	Emission Factor[5] (lb/1000-gal)	Onsite (lb/day)	Near-site (lb/day)	Total (lb/day)	Onsite (lb/yr)	Near-site (lb/yr)	Total lb/yr)	Onsite (lb/hr)	Near-site (lb/hr)	Total (lb/hr)
1,2,4-Trimethylbenzene	95636	5.89E-01	0.000E+00	2.181E-04	2.18E-04	0.000E+00	6.806E-02	6.81E-02	0.00E+00	2.18E-04	2.18E-04
1,3-Butadiene	106990	3.24E-01	0.000E+00	1.200E-04	1.20E-04	0.000E+00	3.744E-02	3.74E-02	0.00E+00	1.20E-04	1.20E-04
Acetaldehyde	75070	1.47E-01	0.000E+00	5.444E-05	5.44E-05	0.000E+00	1.699E-02	1.70E-02	0.00E+00	5.44E-05	5.44E-05
Acrolein	107028	8.25E-02	0.000E+00	3.056E-05	3.06E-05	0.000E+00	9.533E-03	9.53E-03	0.00E+00	3.06E-05	3.06E-05
Benzene	71432	1.57E+00	0.000E+00	5.815E-04	5.81E-04	0.000E+00	1.814E-01	1.81E-01	0.00E+00	5.81E-04	5.81E-04
Chlorine	7782505	4.55E-01	0.000E+00	1.685E-04	1.69E-04	0.000E+00	5.258E-02	5.26E-02	0.00E+00	1.69E-04	1.69E-04
Copper	7440508	3.30E-03	0.000E+00	1.222E-06	1.22E-06	0.000E+00	3.813E-04	3.81E-04	0.00E+00	1.22E-06	1.22E-06
Ethylbenzene	100414	6.42E-01	0.000E+00	2.378E-04	2.38E-04	0.000E+00	7.419E-02	7.42E-02	0.00E+00	2.38E-04	2.38E-04
Formaldehyde	50000	1.01E+00	0.000E+00	3.741E-04	3.74E-04	0.000E+00	1.167E-01	1.17E-01	0.00E+00	3.74E-04	3.74E-04
Hexane	110543	9.42E-01	0.000E+00	3.489E-04	3.49E-04	0.000E+00	1.089E-01	1.09E-01	0.00E+00	3.49E-04	3.49E-04
Manganese	7439965	3.30E-03	0.000E+00	1.222E-06	1.22E-06	0.000E+00	3.813E-04	3.81E-04	0.00E+00	1.22E-06	1.22E-06
Methanol (Methylalcohol)	67561	2.42E-01	0.000E+00	8.963E-05	8.96E-05	0.000E+00	2.796E-02	2.80E-02	0.00E+00	8.96E-05	8.96E-05
Methyl Ethyl Ketone (2-butanone)	78933	1.18E-02	0.000E+00	4.370E-06	4.37E-06	0.000E+00	1.364E-03	1.36E-03	0.00E+00	4.37E-06	4.37E-06
Methyl tert-butyl ether	1634044	1.15E+00	0.000E+00	4.259E-04	4.26E-04	0.000E+00	1.329E-01	1.33E-01	0.00E+00	4.26E-04	4.26E-04
m-Xylene	108383	2.17E+00	0.000E+00	8.037E-04	8.04E-04	0.000E+00	2.508E-01	2.51E-01	0.00E+00	8.04E-04	8.04E-04
Naphthalene	91203	2.95E-02	0.000E+00	1.093E-05	1.09E-05	0.000E+00	3.409E-03	3.41E-03	0.00E+00	1.09E-05	1.09E-05
Nickel	7440020	3.30E-03	0.000E+00	1.222E-06	1.22E-06	0.000E+00	3.813E-04	3.81E-04	0.00E+00	1.22E-06	1.22E-06
o-Xylene	95476	7.54E-01	0.000E+00	2.793E-04	2.79E-04	0.000E+00	8.713E-02	8.71E-02	0.00E+00	2.79E-04	2.79E-04
Styrene	100425	7.07E-02	0.000E+00	2.619E-05	2.62E-05	0.000E+00	8.170E-03	8.17E-03	0.00E+00	2.62E-05	2.62E-05
Toluene	108883	3.50E+00	0.000E+00	1.296E-03	1.30E-03	0.000E+00	4.044E-01	4.04E-01	0.00E+00	1.30E-03	1.30E-03

Data and Parameters

Fuel Truck Hr/Day	2	
Offorad Diesel Vehicle Operating Hr/Day	10	assuming vehicles are running onsite for this many hours in a day
Haul Truck Operating Hr/Day	10	assuming vehicles are running onsite or within 1/4 mile for this many hours in a day
Employee/Business Vehicle Operating Hr/Day	1	assuming vehicles are running onsite or within 1/4 mile for this many hours in a day
Operating Days day/yr	312	

Notes:

1. Nearsite mileage is estimated based on the total offsite distance multipiled by a ratio of 0.25 miles divided by the one-way trip length.
2. Offroad equipment operates onsite only.
3. Near site mileage is calculated based on the total number of gasoline vehicle trips per year divided by the operating days per year, multiplied by 0.25 miles (one way) multiplied by 2 (two way trip).
4. https://en.wikipedia.org/wiki/Fuel_efficiency
5. SJVAPCD, AB 2588 “Hot Spots” Air Toxics Profiles, March 27, 2017, District Toxic Profile ID 176, Gasoline-Fired Portable Catalyst ICE

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Table 25: TAC from Paved Road Dust

Table 25a: Criteria Pollutant Information

Pollutant	Onsite (lb/hr)	Near-site[1] (lb/hr)	Onsite (lb/day)	Near-site[1] (lb/day)	Onsite (lb/yr)	Near-site[1] (lb/yr)
PM10	0.0137	0.0219	0.14	0.22	42.79	68.42
Total (Onsite & Near-site)		0.03564				111.21

Table 25b: TAC from Paved Road Dust

TAC	Wt.	Total TAC Emissions		Onsite TAC Emissions		Near-site TAC Emissions	
		lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
Arsenic	0.000013	4.63E-07	1.45E-03	1.78E-07	5.56E-04	2.85E-07	8.89E-04
Cadmium	0.000003	1.07E-07	3.34E-04	4.11E-08	1.28E-04	6.58E-08	2.05E-04
Hexavalent Chromium	0.00000085	3.03E-08	9.45E-05	1.17E-08	3.64E-05	1.86E-08	5.82E-05
Cobalt	0.000023	8.20E-07	2.56E-03	3.15E-07	9.84E-04	5.04E-07	1.57E-03
Copper	0.000148	5.28E-06	1.65E-02	2.03E-06	6.33E-03	3.25E-06	1.01E-02
Lead	0.000124	4.42E-06	1.38E-02	1.70E-06	5.31E-03	2.72E-06	8.48E-03
Manganese	0.0008	2.85E-05	8.90E-02	1.10E-05	3.42E-02	1.75E-05	5.47E-02
Nickel	0.000012	4.28E-07	1.33E-03	1.65E-07	5.14E-04	2.63E-07	8.21E-04
Mercury	0.000009	3.21E-07	1.00E-03	1.23E-07	3.85E-04	1.97E-07	6.16E-04
Selenium	0.000002	7.13E-08	2.22E-04	2.74E-08	8.56E-05	4.39E-08	1.37E-04
Vanadium (Fume Or Dust)	0.000071	2.53E-06	7.90E-03	9.74E-07	3.04E-03	1.56E-06	4.86E-03

Data and Parameters

Operating Hr/Day	10	assuming vehicles are running for this many hours in a day
Operating Days	312	day/yr

Notes:

1. Nearsite emissions include emissions up to 1/4 mile offsite. Nearsite PM10 emissions are calculated in Table 4 as "Rural" emissions.
2. CARB speciation profile for Paved Roads (#471):
https://ww2.arb.ca.gov/speciation-profiles-used-carb-modeling
3. Hexavalent chromium is assumed to be 5% of total chromium per SJVAPCD guidance.

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Table 26: TAC from Offroad Vehicles Operation on Unpaved Surfaces

Table 26a: Offroad Equipment Entrained Dust Emissions, PM10

Source	lb/hr	lb/day	lb/yr
Unpaved Road Dust from Onroad Vehicles	0.82	8.22	2,565
Unpaved Road Dust from Offroad Vehicles	1.01	10.11	3,153
Total PM10	1.83	18.33	5,718

Table 26b: TAC from Vehicle/Equipment Travel on Unpaved Surfaces

TAC	Concentration[1]	Total TAC Emissions		Onroad Vehicle TAC Emissions		Offroad Vehicle TAC Emissions	
		(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)
Arsenic	6.20E-06	1.14E-05	3.54E-02	5.10E-06	1.59E-02	6.27E-06	1.95E-02
Cadmium	2.00E-06	3.67E-06	1.14E-02	1.64E-06	5.13E-03	2.02E-06	6.31E-03
Hexavalent Chromium	2.45E-06	4.49E-06	1.40E-02	2.01E-06	6.28E-03	2.48E-06	7.72E-03
Cobalt	8.80E-06	1.61E-05	5.03E-02	7.23E-06	2.26E-02	8.89E-06	2.77E-02
Copper	6.90E-05	1.26E-04	3.95E-01	5.67E-05	1.77E-01	6.97E-05	2.18E-01
Lead	2.00E-04	3.67E-04	1.14E+00	1.64E-04	5.13E-01	2.02E-04	6.31E-01
Manganese	4.40E-04	8.06E-04	2.52E+00	3.62E-04	1.13E+00	4.45E-04	1.39E+00
Nickel	9.50E-05	1.74E-04	5.43E-01	7.81E-05	2.44E-01	9.60E-05	3.00E-01
Mercury	1.00E-06	1.83E-06	5.72E-03	8.22E-07	2.56E-03	1.01E-06	3.15E-03
Selenium	1.00E-06	1.83E-06	5.72E-03	8.22E-07	2.56E-03	1.01E-06	3.15E-03

Data and Parameters

Operating Hr/Day	10	assuming vehicles are running for this many hours in a day, including fuel truck
Operating Days	312	day/yr

Notes:

1. SJVAPCD Toxic Emission Factors for fugitive dust from "PM10 based Emissions from Operations generating Dust from Greenwaste Composting" (June 7, 2016), accessed: https://www.valleyair.org/busind/pto/emission_factors/emission_factors_idx.htm

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Table 27: Summary of TAC Emissions from Mobile Sources

Table 27a: Summary of TAC Emissions from Mobile Sources, lb/yr

Activity	CAS No.	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total
Diesel PM	9901	1.08E-01	1.78E-01	4.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.78E+01
1,2,4-Trimethylbenzene	95636	0.00E+00	6.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.81E-02
1,3-Butadiene	106990	0.00E+00	3.74E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-02
Acetaldehyde	75070	0.00E+00	1.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-02
Acrolein	107028	0.00E+00	9.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.53E-03
Benzene	71432	0.00E+00	1.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-01
Chlorine	7782505	0.00E+00	5.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.26E-02
Copper	7440508	0.00E+00	3.81E-04	0.00E+00	6.33E-03	1.01E-02	1.77E-01	2.18E-01	4.11E-01
Ethylbenzene	100414	0.00E+00	7.42E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.42E-02
Formaldehyde	50000	0.00E+00	1.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-01
Hexane	110543	0.00E+00	1.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-01
Manganese	7439965	0.00E+00	3.81E-04	0.00E+00	3.42E-02	5.47E-02	1.13E+00	1.39E+00	2.61E+00
Methanol (Methylalcohol)	67561	0.00E+00	2.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-02
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	1.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E-03
Methyl tert-butyl ether	1634044	0.00E+00	1.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-01
m-Xylene	108383	0.00E+00	2.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-01
Naphthalene	91203	0.00E+00	3.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.41E-03
Nickel	7440020	0.00E+00	3.81E-04	0.00E+00	5.14E-04	8.21E-04	2.44E-01	3.00E-01	5.45E-01
o-Xylene	95476	0.00E+00	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.71E-02
Styrene	100425	0.00E+00	8.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.17E-03
Toluene	108883	0.00E+00	4.04E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.04E-01
Arsenic	7440382	0.00E+00	0.00E+00	0.00E+00	5.56E-04	8.89E-04	1.59E-02	1.95E-02	3.69E-02
Cadmium	7440439	0.00E+00	0.00E+00	0.00E+00	1.28E-04	2.05E-04	5.13E-03	6.31E-03	1.18E-02
Hexavalent Chromium	18540299	0.00E+00	0.00E+00	0.00E+00	3.64E-05	5.82E-05	6.28E-03	7.72E-03	1.41E-02
Cobalt	7440484	0.00E+00	0.00E+00	0.00E+00	9.84E-04	1.57E-03	2.26E-02	2.77E-02	5.29E-02
Lead	7439921	0.00E+00	0.00E+00	0.00E+00	5.31E-03	8.48E-03	5.13E-01	6.31E-01	1.16E+00
Mercury	7439976	0.00E+00	0.00E+00	0.00E+00	3.85E-04	6.16E-04	2.56E-03	3.15E-03	6.72E-03
Selenium	7782492	0.00E+00	0.00E+00	0.00E+00	8.56E-05	1.37E-04	2.56E-03	3.15E-03	5.94E-03
Vanadium (Fume Or Dust)	7440622	0.00E+00	0.00E+00	0.00E+00	3.04E-03	4.86E-03	0.00E+00	0.00E+00	7.90E-03

Table 27b: Summary of TAC Emissions from Mobile Sources, lb/hr

Activity	CAS No.	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total
Diesel PM	9901	5.16E-05	7.82E-05	1.76E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.77E-02
1,2,4-Trimethylbenzene	95636	0.00E+00	2.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-04
1,3-Butadiene	106990	0.00E+00	1.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-04
Acetaldehyde	75070	0.00E+00	5.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.44E-05
Acrolein	107028	0.00E+00	3.06E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-05
Benzene	71432	0.00E+00	5.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.81E-04
Chlorine	7782505	0.00E+00	1.69E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-04
Copper	7440508	0.00E+00	1.22E-06	0.00E+00	2.03E-06	3.25E-06	5.67E-05	6.97E-05	1.33E-04
Ethylbenzene	100414	0.00E+00	2.38E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.38E-04
Formaldehyde	50000	0.00E+00	3.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-04
Hexane	110543	0.00E+00	3.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.49E-04
Manganese	7439965	0.00E+00	1.22E-06	0.00E+00	1.10E-05	1.75E-05	3.62E-04	4.45E-04	8.36E-04
Methanol (Methylalcohol)	67561	0.00E+00	8.96E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.96E-05
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	4.37E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.37E-06
Methyl tert-butyl ether	1634044	0.00E+00	4.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-04
m-Xylene	108383	0.00E+00	8.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.04E-04
Naphthalene	91203	0.00E+00	1.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05
Nickel	7440020	0.00E+00	1.22E-06	0.00E+00	1.65E-07	2.63E-07	7.81E-05	9.60E-05	1.76E-04
o-Xylene	95476	0.00E+00	2.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-04
Styrene	100425	0.00E+00	2.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-05
Toluene	108883	0.00E+00	1.30E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-03
Arsenic	7440382	0.00E+00	0.00E+00	0.00E+00	1.78E-07	2.85E-07	5.10E-06	6.27E-06	1.18E-05
Cadmium	7440439	0.00E+00	0.00E+00	0.00E+00	4.11E-08	6.58E-08	1.64E-06	2.02E-06	3.77E-06
Hexavalent Chromium	18540299	0.00E+00	0.00E+00	0.00E+00	1.17E-08	1.86E-08	2.01E-06	2.48E-06	4.52E-06
Cobalt	7440484	0.00E+00	0.00E+00	0.00E+00	3.15E-07	5.04E-07	7.23E-06	8.89E-06	1.69E-05
Lead	7439921	0.00E+00	0.00E+00	0.00E+00	1.70E-06	2.72E-06	1.64E-04	2.02E-04	3.71E-04
Mercury	7439976	0.00E+00	0.00E+00	0.00E+00	1.23E-07	1.97E-07	8.22E-07	1.01E-06	2.15E-06
Selenium	7782492	0.00E+00	0.00E+00	0.00E+00	2.74E-08	4.39E-08	8.22E-07	1.01E-06	1.90E-06
Vanadium (Fume Or Dust)	7440622	0.00E+00	0.00E+00	0.00E+00	9.74E-07	1.56E-06	0.00E+00	0.00E+00	2.53E-06

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Table 28: Summary of Criteria Pollutant and GHG Emissions

Table 28a: Summary of Daily Criteria Pollutant Emissions

Activity	NOx (lb/day)	VOC (lb/day)	CO (lb/day)	SOx (lb/day)	PM10 (lb/day)	PM2.5 (lb/day)
11. Composting Criteria and GHG	6.36	54.93	35.35	0.05	1.77	0.71
23. Mobile Criteria and GHG	7.54	2.97	44.72	0.08	19.23	2.20
Total	13.90	57.90	80.07	0.13	21.00	2.91

Table 28b: Summary of Annual Criteria Pollutant Emissions

Activity	NOx (lb/yr)	VOC (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)
11. Composting Criteria and GHG	1,098	19,630	10,107	14	545	192
23. Mobile Criteria and GHG	2,353	928	13,953	26	6,001	686
Total	3,451	20,559	24,059	39	6,546	877
Total (TPY)	1.73	10.28	12.03	0.02	3.27	0.44

Table 28c: Summary of Annual GHG Emissions

Activity	CO2 (MT/yr)	CH4 (MT/yr)	N2O (MT/yr)	HFC (MT/yr)	CO2e (MT/Yr)
11. Composting Criteria and GHG	653	90.74	6.81	N/A	4,996
23. Mobile Criteria and GHG	1,469	0.0486	0.0872	0.0002	1,496
Total	**2,122**	**90.79**	**6.90**	**0.0002**	**6,492**

Table 29: Summary of TAC Emissions

Table 29a: Summary of TAC Emissions, lb/yr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine
Arsenic	7440382	1.03E-03	3.46E-04	1.70E-03	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
Cadmium	7440439	3.33E-04	1.12E-04	5.50E-04	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
Hexavalent Chromium	18540299	4.08E-04	1.37E-04	6.73E-04	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
Cobalt	7440484	1.47E-03	4.92E-04	2.42E-03	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
Copper	7440508	1.15E-02	3.86E-03	1.90E-02	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
Lead	7439921	3.33E-02	1.12E-02	5.50E-02	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
Manganese	7439965	7.33E-02	2.46E-02	1.21E-01	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
Mercury	7439976	1.67E-04	5.59E-05	2.75E-04	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
Nickel	7440020	1.58E-02	5.31E-03	2.61E-02	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
Selenium	7782492	1.67E-04	5.59E-05	2.75E-04	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
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	8.25E+01	5.82E+02	9.67E+01	1.94E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	4.21E+00	1.79E+00	5.46E-01	1.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	1.13E+01	2.09E+00	6.60E-01	5.84E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	8.96E+02	3.46E+02	2.53E+01	7.44E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	2.19E+00	8.70E-01	7.83E-01	7.44E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	2.24E+00	1.29E+00	4.85E-01	7.56E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	2.18E+00	3.01E+00	1.16E+00	3.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	1.85E+00	6.69E-01	2.40E-01	6.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	3.42E+00	1.31E+00	4.47E-01	1.16E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	3.04E+00	2.82E+00	7.21E-01	1.03E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	2.84E+00	4.33E+00	5.17E-01	9.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	7.86E+01	2.56E+00	5.75E-01	8.36E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	9.68E+02	3.93E+02	2.75E+01	3.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	5.36E+02	6.30E+02	3.37E+01	7.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	2.81E+00	5.75E+00	1.00E+00	1.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	9.45E-01	4.74E+01	2.87E+01	2.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	2.98E+00	2.84E+00	5.67E-01	1.01E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	2.64E+00	5.07E+00	2.27E+00	2.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	1.45E+02	2.42E+01	6.86E-01	8.36E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	3.15E+00	3.51E+00	1.11E+00	2.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	1.00E+03	3.51E+03	3.90E+02	7.60E+00	1.35E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.53E+00	6.53E+00	6.53E+00	6.53E+00
1,2,4-Trimethylbenzene	95636	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	0.00E+00	0.00E+00	0.00E+00
1,3-Butadiene	106990	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	0.00E+00	0.00E+00	0.00E+00
Acrolein	107028	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	0.00E+00	0.00E+00	0.00E+00
Chlorine	7782505	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	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	50000	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	0.00E+00	0.00E+00	0.00E+00
Methyl tert-butyl ether	1634044	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	0.00E+00	0.00E+00	0.00E+00
m-Xylene	108383	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	0.00E+00	0.00E+00	0.00E+00
o-Xylene	95476	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	0.00E+00	0.00E+00	0.00E+00
Vanadium (Fume Or Dust)	7440622	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	0.00E+00	0.00E+00	0.00E+00

Table 29b: Summary of TAC Emissions, lb/hr

Activity	CAS No.	Grinding and Screening	Material Handling	Wind Erosion	Feedstock Storage	Composting	Curing	Finished Storage	Mulch Colorizer	Grinder Engine	Screen Engine	Stacker Engine	Colorizer Engine
Arsenic	7440382	3.31E-07	1.11E-07	1.95E-07	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
Cadmium	7440439	1.07E-07	3.58E-08	6.28E-08	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
Hexavalent Chromium	18540299	1.31E-07	4.39E-08	7.69E-08	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
Cobalt	7440484	4.70E-07	1.58E-07	2.76E-07	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
Copper	7440508	3.68E-06	1.24E-06	2.17E-06	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
Lead	7439921	1.07E-05	3.58E-06	6.28E-06	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
Manganese	7439965	2.35E-05	7.88E-06	1.38E-05	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
Mercury	7439976	5.34E-08	1.79E-08	3.14E-08	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
Nickel	7440020	5.07E-06	1.70E-06	2.98E-06	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
Selenium	7782492	5.34E-08	1.79E-08	3.14E-08	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
Acetone	67641	0.00E+00	0.00E+00	0.00E+00	9.42E-03	6.65E-02	1.10E-02	2.22E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	106467	0.00E+00	0.00E+00	0.00E+00	4.81E-04	2.04E-04	6.23E-05	1.63E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2-Propanol (Isopropylalcohol, IPA)	67630	0.00E+00	0.00E+00	0.00E+00	1.29E-03	2.38E-04	7.53E-05	6.67E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	75070	0.00E+00	0.00E+00	0.00E+00	1.02E-01	3.94E-02	2.89E-03	8.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Allyl Chloride (3-Chloropropene)	107051	0.00E+00	0.00E+00	0.00E+00	2.50E-04	9.93E-05	8.94E-05	8.49E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	71432	0.00E+00	0.00E+00	0.00E+00	2.56E-04	1.47E-04	5.54E-05	8.63E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbondisulfide	75150	0.00E+00	0.00E+00	0.00E+00	2.49E-04	3.44E-04	1.33E-04	3.54E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroethane	75003	0.00E+00	0.00E+00	0.00E+00	2.11E-04	7.63E-05	2.74E-05	7.12E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	67663	0.00E+00	0.00E+00	0.00E+00	3.90E-04	1.50E-04	5.10E-05	1.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	100414	0.00E+00	0.00E+00	0.00E+00	3.47E-04	3.22E-04	8.23E-05	1.17E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylene Dichloride (1,2-dichloroethane)	107062	0.00E+00	0.00E+00	0.00E+00	3.24E-04	4.94E-04	5.91E-05	1.10E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexane	110543	0.00E+00	0.00E+00	0.00E+00	8.97E-03	2.92E-04	6.56E-05	9.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methanol (Methylalcohol)	67561	0.00E+00	0.00E+00	0.00E+00	1.11E-01	4.49E-02	3.14E-03	3.55E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Ethyl Ketone (2-butanone)	78933	0.00E+00	0.00E+00	0.00E+00	6.12E-02	7.19E-02	3.85E-03	7.99E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Naphthalene	91203	0.00E+00	0.00E+00	0.00E+00	3.21E-04	6.57E-04	1.14E-04	1.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Propene (Propylene)	115071	0.00E+00	0.00E+00	0.00E+00	1.08E-04	5.42E-03	3.28E-03	3.14E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Styrene	100425	0.00E+00	0.00E+00	0.00E+00	3.40E-04	3.25E-04	6.48E-05	1.16E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	108883	0.00E+00	0.00E+00	0.00E+00	3.01E-04	5.79E-04	2.60E-04	3.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	108054	0.00E+00	0.00E+00	0.00E+00	1.66E-02	2.77E-03	7.84E-05	9.54E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	1330207	0.00E+00	0.00E+00	0.00E+00	3.60E-04	4.01E-04	1.27E-04	2.35E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	7664417	0.00E+00	0.00E+00	0.00E+00	1.14E-01	4.01E-01	4.45E-02	8.68E-04	5.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Diesel PM	9901	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-03	2.09E-03	2.09E-03	2.09E-03
1,2,4-Trimethylbenzene	95636	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	0.00E+00	0.00E+00	0.00E+00
1,3-Butadiene	106990	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	0.00E+00	0.00E+00	0.00E+00
Acrolein	107028	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	0.00E+00	0.00E+00	0.00E+00
Chlorine	7782505	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	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	50000	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	0.00E+00	0.00E+00	0.00E+00
Methyl tert-butyl ether	1634044	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	0.00E+00	0.00E+00	0.00E+00
m-Xylene	108383	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	0.00E+00	0.00E+00	0.00E+00
o-Xylene	95476	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	0.00E+00	0.00E+00	0.00E+00
Vanadium (Fume Or Dust)	7440622	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	0.00E+00	0.00E+00	0.00E+00

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Table 29: Summary of TAC Emissions

Table 29a: Summary of TAC Emissions, lb

Activity	Emergency Generator	Fire Pump	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total, Stationary Sources	Total, Mobile Sources	Total
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.56E-04	8.89E-04	1.59E-02	1.95E-02	3.08E-03	3.69E-02	4.00E-02
Cadmium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-04	2.05E-04	5.13E-03	6.31E-03	9.94E-04	1.18E-02	1.28E-02
Hexavalent Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.64E-05	5.82E-05	6.28E-03	7.72E-03	1.22E-03	1.41E-02	1.53E-02
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.84E-04	1.57E-03	2.26E-02	2.77E-02	4.38E-03	5.29E-02	5.72E-02
Copper	0.00E+00	0.00E+00	0.00E+00	3.81E-04	0.00E+00	6.33E-03	1.01E-02	1.77E-01	2.18E-01	3.43E-02	4.11E-01	4.46E-01
Lead	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.31E-03	8.48E-03	5.13E-01	6.31E-01	9.94E-02	1.16E+00	1.26E+00
Manganese	0.00E+00	0.00E+00	0.00E+00	3.81E-04	0.00E+00	3.42E-02	5.47E-02	1.13E+00	1.39E+00	2.19E-01	2.61E+00	2.82E+00
Mercury	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.85E-04	6.16E-04	2.56E-03	3.15E-03	4.97E-04	6.72E-03	7.22E-03
Nickel	0.00E+00	0.00E+00	0.00E+00	3.81E-04	0.00E+00	5.14E-04	8.21E-04	2.44E-01	3.00E-01	4.72E-02	5.45E-01	5.92E-01
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.56E-05	1.37E-04	2.56E-03	3.15E-03	4.97E-04	5.94E-03	6.44E-03
Acetone	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	7.81E+02	0.00E+00	7.81E+02
1,4-Dichlorobenzene	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	7.97E+00	0.00E+00	7.97E+00
2-Propanol (Isopropylalcohol, IPA)	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	1.46E+01	0.00E+00	1.46E+01
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	1.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E+03	1.70E-02	1.27E+03
Allyl Chloride (3-Chloropropene)	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	4.59E+00	0.00E+00	4.59E+00
Benzene	0.00E+00	0.00E+00	0.00E+00	1.81E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.77E+00	1.81E-01	4.95E+00
Carbondisulfide	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	9.46E+00	0.00E+00	9.46E+00
Chloroethane	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	3.38E+00	0.00E+00	3.38E+00
Chloroform	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	6.34E+00	0.00E+00	6.34E+00
Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	7.42E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.61E+00	7.42E-02	7.68E+00
Ethylene Dichloride (1,2-dichloroethane)	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	8.64E+00	0.00E+00	8.64E+00
Hexane	0.00E+00	0.00E+00	0.00E+00	1.09E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.26E+01	1.09E-01	8.27E+01
Methanol (Methylalcohol)	0.00E+00	0.00E+00	0.00E+00	2.80E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E+03	2.80E-02	1.39E+03
Methyl Ethyl Ketone (2-butanone)	0.00E+00	0.00E+00	0.00E+00	1.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E+03	1.36E-03	1.20E+03
Naphthalene	0.00E+00	0.00E+00	0.00E+00	3.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E+01	3.41E-03	1.08E+01
Propene (Propylene)	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	1.05E+02	0.00E+00	1.05E+02
Styrene	0.00E+00	0.00E+00	0.00E+00	8.17E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E+00	8.17E-03	7.41E+00
Toluene	0.00E+00	0.00E+00	0.00E+00	4.04E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E+01	4.04E-01	1.32E+01
Vinyl acetate	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	1.71E+02	0.00E+00	1.71E+02
Xylenes	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	9.83E+00	0.00E+00	9.83E+00
Ammonia	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	5.04E+03	0.00E+00	5.04E+03
Diesel PM	7.34E+00	1.47E+01	1.08E-01	1.78E-01	4.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.82E+01	4.78E+01	9.59E+01
1,2,4-Trimethylbenzene	0.00E+00	0.00E+00	0.00E+00	6.81E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.81E-02	6.81E-02
1,3-Butadiene	0.00E+00	0.00E+00	0.00E+00	3.74E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-02	3.74E-02
Acrolein	0.00E+00	0.00E+00	0.00E+00	9.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.53E-03	9.53E-03
Chlorine	0.00E+00	0.00E+00	0.00E+00	5.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.26E-02	5.26E-02
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	1.17E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-01	1.17E-01
Methyl tert-butyl ether	0.00E+00	0.00E+00	0.00E+00	1.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-01	1.33E-01
m-Xylene	0.00E+00	0.00E+00	0.00E+00	2.51E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-01	2.51E-01
o-Xylene	0.00E+00	0.00E+00	0.00E+00	8.71E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.71E-02	8.71E-02
Vanadium (Fume Or Dust)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-03	4.86E-03	0.00E+00	0.00E+00	0.00E+00	7.90E-03	7.90E-03

Table 29b: Summary of TAC Emissions, lb

Activity	Emergency Generator	Fire Pump	Employee Vehicle Exhaust: Onsite	Employee Vehicle Exhaust: Near-site	Offroad Vehicle Exhaust	Paved Road Dust Entrainment: Onsite	Paved Road Dust Entrainment: Near-site	Unpaved Road Dust Entrainment: Onroad Vehicles	Unpaved Road Dust Entrainment: Offroad Vehicles	Total, Stationary Sources	Total, Mobile Sources	Total
Arsenic	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-07	2.85E-07	5.10E-06	6.27E-06	6.36E-07	1.18E-05	1.25E-05
Cadmium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E-08	6.58E-08	1.64E-06	2.02E-06	2.05E-07	3.77E-06	3.98E-06
Hexavalent Chromium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-08	1.86E-08	2.01E-06	2.48E-06	2.51E-07	4.52E-06	4.77E-06
Cobalt	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-07	5.04E-07	7.23E-06	8.89E-06	9.03E-07	1.69E-05	1.78E-05
Copper	0.00E+00	0.00E+00	0.00E+00	1.22E-06	0.00E+00	2.03E-06	3.25E-06	5.67E-05	6.97E-05	7.08E-06	1.33E-04	1.40E-04
Lead	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-06	2.72E-06	1.64E-04	2.02E-04	2.05E-05	3.71E-04	3.91E-04
Manganese	0.00E+00	0.00E+00	0.00E+00	1.22E-06	0.00E+00	1.10E-05	1.75E-05	3.62E-04	4.45E-04	4.52E-05	8.36E-04	8.81E-04
Mercury	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-07	1.97E-07	8.22E-07	1.01E-06	1.03E-07	2.15E-06	2.26E-06
Nickel	0.00E+00	0.00E+00	0.00E+00	1.22E-06	0.00E+00	1.65E-07	2.63E-07	7.81E-05	9.60E-05	9.75E-06	1.76E-04	1.85E-04
Selenium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.74E-08	4.39E-08	8.22E-07	1.01E-06	1.03E-07	1.90E-06	2.01E-06
Acetone	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	8.92E-02	0.00E+00	8.92E-02
1,4-Dichlorobenzene	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	9.10E-04	0.00E+00	9.10E-04
2-Propanol (Isopropylalcohol, IPA)	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	1.67E-03	0.00E+00	1.67E-03
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	5.44E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-01	5.44E-05	1.46E-01
Allyl Chloride (3-Chloropropene)	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	5.24E-04	0.00E+00	5.24E-04
Benzene	0.00E+00	0.00E+00	0.00E+00	5.81E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.45E-04	5.81E-04	1.13E-03
Carbondisulfide	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	1.08E-03	0.00E+00	1.08E-03
Chloroethane	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	3.86E-04	0.00E+00	3.86E-04
Chloroform	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	7.23E-04	0.00E+00	7.23E-04
Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	2.38E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.69E-04	2.38E-04	1.11E-03
Ethylene Dichloride (1,2-dichloroethane)	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	9.87E-04	0.00E+00	9.87E-04
Hexane	0.00E+00	0.00E+00	0.00E+00	3.49E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.43E-03	3.49E-04	9.77E-03
Methanol (Methylalcohol)	0.00E+00	0.00E+00	0.00E+00	8.96E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-01	8.96E-05	1.59E-01
Methyl Ethyl Ketone (2-butanone)	0.00E+00	0.00E+00	0.00E+00	4.37E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E-01	4.37E-06	1.37E-01
Naphthalene	0.00E+00	0.00E+00	0.00E+00	1.09E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.23E-03	1.09E-05	1.24E-03
Propene (Propylene)	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	1.19E-02	0.00E+00	1.19E-02
Styrene	0.00E+00	0.00E+00	0.00E+00	2.62E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.45E-04	2.62E-05	8.71E-04
Toluene	0.00E+00	0.00E+00	0.00E+00	1.30E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-03	1.30E-03	2.75E-03
Vinyl acetate	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	1.95E-02	0.00E+00	1.95E-02
Xylenes	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	1.12E-03	0.00E+00	1.12E-03
Ammonia	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	5.98E+00	0.00E+00	5.98E+00
Diesel PM	3.67E-02	7.34E-02	5.16E-05	7.82E-05	1.76E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-01	1.77E-02	1.36E-01
1,2,4-Trimethylbenzene	0.00E+00	0.00E+00	0.00E+00	2.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-04	2.18E-04
1,3-Butadiene	0.00E+00	0.00E+00	0.00E+00	1.20E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-04	1.20E-04
Acrolein	0.00E+00	0.00E+00	0.00E+00	3.06E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-05	3.06E-05
Chlorine	0.00E+00	0.00E+00	0.00E+00	1.69E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.69E-04	1.69E-04
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	3.74E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.74E-04	3.74E-04
Methyl tert-butyl ether	0.00E+00	0.00E+00	0.00E+00	4.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-04	4.26E-04
m-Xylene	0.00E+00	0.00E+00	0.00E+00	8.04E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.04E-04	8.04E-04
o-Xylene	0.00E+00	0.00E+00	0.00E+00	2.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-04	2.79E-04
Vanadium (Fume Or Dust)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.74E-07	1.56E-06	0.00E+00	0.00E+00	0.00E+00	2.53E-06	2.53E-06

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Table 30: Reduction from Baseline

Table 30: GHG Emissions Reduction from Baseline

Annual Throughput (ton/yr)	Compost Emission Reduction Factor (MT CO2e/ton feed)[1]	GHG Emissions Reduction (MT CO2e)
25,000	0.56	14,000

1. CARB, Method for Estimating Greenhouse Gas Emission Reductions From Diversion of Organic Waste From Landfills to Compost Facilities, 2017

ATTACHMENT 3 – HEALTH RISK ASSESSMENT

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Scenario 1

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Summary of Prioritization Scores (PS) by Receptor Distance
Scenario 1

Table 1: Prioritization Scores by Risk Category and Distance

Receptor Distance (m)	Cancer Risk PS	Worker Cancer Risk PS	Chronic Risk PS	Acute Risk PS
50	177.67	53.30	1.83	1.90
100	44.42	13.33	0.46	0.47
200	11.10	3.33	0.11	0.12
500	1.78	0.53	0.02	0.02
610	1.19	0.36	0.01	0.01
1610	0.17	0.05	0.00	0.00

Table 2: Prioritization Scores by Air District Thresholds, Risk Category, and Distance

Air District	Risk Categories			Calculated Receptor Distance (m) for Corresponding Risk Category:			
	PS Threshold Category	PS Cancer Risk Thresholds	PS Chronic/Acute Risk Threshold	Residential Cancer Risk	Worker Cancer Risk	Chronic Risk	Acute Risk
Bay Area Air District, SJVAPCD, SCAQMD	High	≥10	≥10	≤210.8	≤115.4	≤21.4	≤21.8
	Intermediate	≥1 and <10	≥1 and <10	>210.8 and ≤666.5	>115.4 and ≤365	>21.4 and ≤67.6	>21.8 and ≤68.8
	Low	<1	<1	>666.5	>365	>67.6	>68.8
SDAPCD	High	≥100	≥10	≤66.6	≤36.5	≤21.4	≤21.8
	Intermediate	≥1 and <100	≥1 and <10	>66.6 and ≤666.5	>36.5 and ≤365	>21.4 and ≤67.6	>21.8 and ≤68.8
	Low	<1	<1	>666.5	>365	>67.6	>68.8

References:

Cancer Prioritzation Thresholds

BAAQMD, SJVAPCD and SCAQMD use CAPCOA thresholds for cancer PS
https://capcoa.org/capcoa-prioritization-guidelines/

TS ≥ 10	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 10	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

SDAPCD Cancer Score Evaluation:

TS ≥ 100	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 100	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

Other district's threshold are at:
https://ww2.arb.ca.gov/ab-2588-district-prioritization-scores-and-risk-threshold-levels

Chronic/Acute Prioritzation Thresholds

BAAQMD, SJVAPCD, SCAQMD, and SDAPCD use CAPCOA thresholds for non-cancer PS
Chronic/Acute Score Evaluation:

TS ≥ 10	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 10	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

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Scenario 1

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	177.67
TOTAL WORKER CANCER SCORE:	53.30
TOTAL CHRONIC SCORE:	1.83
TOTAL ACUTE SCORE:	1.90

Table 3: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.68E-02	5.22E-06	0.13	0.43	0%	0.02	1%	0.04	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	5.35E-03	1.66E-06	0.05	0.17	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	6.42E-03	1.99E-06	2.22	7.41	4%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.41E-02	7.48E-06	0.43	1.43	1%					7.7E-03		
Copper	7440508	1.87E-01	5.90E-05						0.00	0%			1.0E+02
Lead	7439921	5.27E-01	1.64E-04	0.01	0.05	0%					1.2E-05		
Manganese	7439965	1.19E+00	3.69E-04				0.23	12%				9.0E-02	
Mercury	7439976	3.05E-03	9.53E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.48E-01	7.78E-05	0.15	0.50	0%	0.30	17%	0.58	31%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.70E-03	8.40E-07				0.00	0%				2.0E+01	
Acetone	67641	2.76E+03	3.15E-01										
1,4-Dichlorobenzene	106467	1.16E+01	1.32E-03	0.29	0.98	1%	0.04	2%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.57E+01	1.80E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.84E+03	2.11E-01	11.51	38.36	22%	0.23	12%	0.67	35%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	7.79E+00	8.89E-04	0.11	0.36	0%					6.0E-06		
Benzene	71432	8.41E+00	1.33E-03	0.56	1.88	1%	0.05	3%	0.07	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	1.88E+01	2.15E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	4.62E+00	5.28E-04				0.00	0%				3.0E+04	
Chloroform	67663	8.87E+00	1.01E-03	0.11	0.36	0%	0.00	0%	0.01	1%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	1.58E+01	1.96E-03	0.09	0.30	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	2.09E+01	2.38E-03	1.01	3.38	2%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	4.44E+01	5.29E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	2.07E+03	2.36E-01				0.01	0%	0.01	1%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	2.87E+03	3.28E-01						0.04	2%			1.3E+04
Naphthalene	91203	2.86E+01	3.28E-03	2.25	7.50	4%	0.05	3%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	3.16E+02	3.61E-02				0.00	0%				3.0E+03	
Styrene	100425	1.52E+01	1.76E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	3.18E+01	4.47E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.58E+02	1.80E-02				0.01	1%				2.0E+02	
Xylenes	1330207	2.06E+01	2.35E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	8.20E+03	9.36E-01				0.70	38%	0.44	23%		2.0E+02	3.2E+03
Diesel PM	9901	4.96E+01	1.34E-01	34.36	114.53	64%	0.17	9%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.01	0.03	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.01	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.01	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 4: Receptor Distances

Receptor	D = source to receptor distance (meters)	RP = receptor proximity adjustment factor	Receptor Definition[1]
Cancer/chronic resident/sensitive	50	1.000	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	50	1.000	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	50	1.000	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:

Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:

Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:

CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 1

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	44.42
TOTAL WORKER CANCER SCORE:	13.33
TOTAL CHRONIC SCORE:	0.46
TOTAL ACUTE SCORE:	0.47

Table 5: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.68E-02	5.22E-06	0.03	0.11	0%	0.00	1%	0.01	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	5.35E-03	1.66E-06	0.01	0.04	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	6.42E-03	1.99E-06	0.56	1.85	4%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.41E-02	7.48E-06	0.11	0.36	1%					7.7E-03		
Copper	7440508	1.87E-01	5.90E-05						0.00	0%			1.0E+02
Lead	7439921	5.27E-01	1.64E-04	0.00	0.01	0%					1.2E-05		
Manganese	7439965	1.19E+00	3.69E-04				0.06	12%				9.0E-02	
Mercury	7439976	3.05E-03	9.53E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.48E-01	7.78E-05	0.04	0.12	0%	0.08	17%	0.15	31%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.70E-03	8.40E-07				0.00	0%				2.0E+01	
Acetone	67641	2.76E+03	3.15E-01										
1,4-Dichlorobenzene	106467	1.16E+01	1.32E-03	0.07	0.25	1%	0.01	2%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.57E+01	1.80E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.84E+03	2.11E-01	2.88	9.59	22%	0.06	12%	0.17	35%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	7.79E+00	8.89E-04	0.03	0.09	0%					6.0E-06		
Benzene	71432	8.41E+00	1.33E-03	0.14	0.47	1%	0.01	3%	0.02	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	1.88E+01	2.15E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	4.62E+00	5.28E-04				0.00	0%				3.0E+04	
Chloroform	67663	8.87E+00	1.01E-03	0.03	0.09	0%	0.00	0%	0.00	1%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	1.58E+01	1.96E-03	0.02	0.08	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	2.09E+01	2.38E-03	0.25	0.84	2%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	4.44E+01	5.29E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	2.07E+03	2.36E-01				0.00	0%	0.00	1%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	2.87E+03	3.28E-01						0.01	2%			1.3E+04
Naphthalene	91203	2.86E+01	3.28E-03	0.56	1.87	4%	0.01	3%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	3.16E+02	3.61E-02				0.00	0%				3.0E+03	
Styrene	100425	1.52E+01	1.76E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	3.18E+01	4.47E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.58E+02	1.80E-02				0.00	1%				2.0E+02	
Xylenes	1330207	2.06E+01	2.35E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	8.20E+03	9.36E-01				0.18	38%	0.11	23%		2.0E+02	3.2E+03
Diesel PM	9901	4.96E+01	1.34E-01	8.59	28.63	64%	0.04	9%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.00	0.01	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.00	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 6: Receptor Distances

Receptor	D = source to receptor distance (meters)	RP = receptor proximity adjustment factor	Receptor Definition[1]
Cancer/chronic resident/sensitive	100	0.250	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	100	0.250	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	100	0.250	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:

Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:

Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:

CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 1

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE: 11.10
TOTAL WORKER CANCER SCORE: 3.33
TOTAL CHRONIC SCORE: 0.11
TOTAL ACUTE SCORE: 0.12

Table 7: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.68E-02	5.22E-06	0.01	0.03	0%	0.00	1%	0.00	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	5.35E-03	1.66E-06	0.00	0.01	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	6.42E-03	1.99E-06	0.14	0.46	4%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.41E-02	7.48E-06	0.03	0.09	1%					7.7E-03		
Copper	7440508	1.87E-01	5.90E-05						0.00	0%			1.0E+02
Lead	7439921	5.27E-01	1.64E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	1.19E+00	3.69E-04				0.01	12%				9.0E-02	
Mercury	7439976	3.05E-03	9.53E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.48E-01	7.78E-05	0.01	0.03	0%	0.02	17%	0.04	31%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.70E-03	8.40E-07				0.00	0%				2.0E+01	
Acetone	67641	2.76E+03	3.15E-01										
1,4-Dichlorobenzene	106467	1.16E+01	1.32E-03	0.02	0.06	1%	0.00	2%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.57E+01	1.80E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.84E+03	2.11E-01	0.72	2.40	22%	0.01	12%	0.04	35%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	7.79E+00	8.89E-04	0.01	0.02	0%					6.0E-06		
Benzene	71432	8.41E+00	1.33E-03	0.04	0.12	1%	0.00	3%	0.00	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	1.88E+01	2.15E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	4.62E+00	5.28E-04				0.00	0%				3.0E+04	
Chloroform	67663	8.87E+00	1.01E-03	0.01	0.02	0%	0.00	0%	0.00	1%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	1.58E+01	1.96E-03	0.01	0.02	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	2.09E+01	2.38E-03	0.06	0.21	2%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	4.44E+01	5.29E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	2.07E+03	2.36E-01				0.00	0%	0.00	1%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	2.87E+03	3.28E-01						0.00	2%			1.3E+04
Naphthalene	91203	2.86E+01	3.28E-03	0.14	0.47	4%	0.00	3%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	3.16E+02	3.61E-02				0.00	0%				3.0E+03	
Styrene	100425	1.52E+01	1.76E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	3.18E+01	4.47E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.58E+02	1.80E-02				0.00	1%				2.0E+02	
Xylenes	1330207	2.06E+01	2.35E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	8.20E+03	9.36E-01				0.04	38%	0.03	23%		2.0E+02	3.2E+03
Diesel PM	9901	4.96E+01	1.34E-01	2.15	7.16	64%	0.01	9%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.00	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 8: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	200	0.063	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	200	0.063	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	200	0.063	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 1

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	1.78
TOTAL WORKER CANCER SCORE:	0.53
TOTAL CHRONIC SCORE:	0.02
TOTAL ACUTE SCORE:	0.02

Table 9: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.68E-02	5.22E-06	0.00	0.00	0%	0.00	1%	0.00	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	5.35E-03	1.66E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	6.42E-03	1.99E-06	0.02	0.07	4%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.41E-02	7.48E-06	0.00	0.01	1%					7.7E-03		
Copper	7440508	1.87E-01	5.90E-05						0.00	0%			1.0E+02
Lead	7439921	5.27E-01	1.64E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	1.19E+00	3.69E-04				0.00	12%				9.0E-02	
Mercury	7439976	3.05E-03	9.53E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.48E-01	7.78E-05	0.00	0.00	0%	0.00	17%	0.01	31%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.70E-03	8.40E-07				0.00	0%				2.0E+01	
Acetone	67641	2.76E+03	3.15E-01										
1,4-Dichlorobenzene	106467	1.16E+01	1.32E-03	0.00	0.01	1%	0.00	2%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.57E+01	1.80E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.84E+03	2.11E-01	0.12	0.38	22%	0.00	12%	0.01	35%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	7.79E+00	8.89E-04	0.00	0.00	0%					6.0E-06		
Benzene	71432	8.41E+00	1.33E-03	0.01	0.02	1%	0.00	3%	0.00	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	1.88E+01	2.15E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	4.62E+00	5.28E-04				0.00	0%				3.0E+04	
Chloroform	67663	8.87E+00	1.01E-03	0.00	0.00	0%	0.00	0%	0.00	1%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	1.58E+01	1.96E-03	0.00	0.00	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	2.09E+01	2.38E-03	0.01	0.03	2%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	4.44E+01	5.29E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	2.07E+03	2.36E-01				0.00	0%	0.00	1%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	2.87E+03	3.28E-01						0.00	2%			1.3E+04
Naphthalene	91203	2.86E+01	3.28E-03	0.02	0.07	4%	0.00	3%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	3.16E+02	3.61E-02				0.00	0%				3.0E+03	
Styrene	100425	1.52E+01	1.76E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	3.18E+01	4.47E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.58E+02	1.80E-02				0.00	1%				2.0E+02	
Xylenes	1330207	2.06E+01	2.35E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	8.20E+03	9.36E-01				0.01	38%	0.00	23%		2.0E+02	3.2E+03
Diesel PM	9901	4.96E+01	1.34E-01	0.34	1.15	64%	0.00	9%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.00	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 10: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	500	0.010	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	500	0.010	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	500	0.010	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 1

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE: 1.19
TOTAL WORKER CANCER SCORE: 0.36
TOTAL CHRONIC SCORE: 0.01
TOTAL ACUTE SCORE: 0.01

Table 11: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.68E-02	5.22E-06	0.00	0.00	0%	0.00	1%	0.00	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	5.35E-03	1.66E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	6.42E-03	1.99E-06	0.01	0.05	4%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.41E-02	7.48E-06	0.00	0.01	1%					7.7E-03		
Copper	7440508	1.87E-01	5.90E-05						0.00	0%			1.0E+02
Lead	7439921	5.27E-01	1.64E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	1.19E+00	3.69E-04				0.00	12%				9.0E-02	
Mercury	7439976	3.05E-03	9.53E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.48E-01	7.78E-05	0.00	0.00	0%	0.00	17%	0.00	31%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.70E-03	8.40E-07				0.00	0%				2.0E+01	
Acetone	67641	2.76E+03	3.15E-01										
1,4-Dichlorobenzene	106467	1.16E+01	1.32E-03	0.00	0.01	1%	0.00	2%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.57E+01	1.80E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.84E+03	2.11E-01	0.08	0.26	22%	0.00	12%	0.00	35%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	7.79E+00	8.89E-04	0.00	0.00	0%					6.0E-06		
Benzene	71432	8.41E+00	1.33E-03	0.00	0.01	1%	0.00	3%	0.00	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	1.88E+01	2.15E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	4.62E+00	5.28E-04				0.00	0%				3.0E+04	
Chloroform	67663	8.87E+00	1.01E-03	0.00	0.00	0%	0.00	0%	0.00	1%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	1.58E+01	1.96E-03	0.00	0.00	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	2.09E+01	2.38E-03	0.01	0.02	2%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	4.44E+01	5.29E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	2.07E+03	2.36E-01				0.00	0%	0.00	1%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	2.87E+03	3.28E-01						0.00	2%			1.3E+04
Naphthalene	91203	2.86E+01	3.28E-03	0.02	0.05	4%	0.00	3%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	3.16E+02	3.61E-02				0.00	0%				3.0E+03	
Styrene	100425	1.52E+01	1.76E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	3.18E+01	4.47E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.58E+02	1.80E-02				0.00	1%				2.0E+02	
Xylenes	1330207	2.06E+01	2.35E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	8.20E+03	9.36E-01				0.00	38%	0.00	23%		2.0E+02	3.2E+03
Diesel PM	9901	4.96E+01	1.34E-01	0.23	0.77	64%	0.00	9%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.00	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 12: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	610	0.007	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	610	0.007	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	610	0.007	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 1

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	0.17
TOTAL WORKER CANCER SCORE:	0.05
TOTAL CHRONIC SCORE:	0.00
TOTAL ACUTE SCORE:	0.00

Table 13: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.68E-02	5.22E-06	0.00	0.00	0%	0.00	1%	0.00	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	5.35E-03	1.66E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	6.42E-03	1.99E-06	0.00	0.01	4%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.41E-02	7.48E-06	0.00	0.00	1%					7.7E-03		
Copper	7440508	1.87E-01	5.90E-05						0.00	0%			1.0E+02
Lead	7439921	5.27E-01	1.64E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	1.19E+00	3.69E-04				0.00	12%				9.0E-02	
Mercury	7439976	3.05E-03	9.53E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.48E-01	7.78E-05	0.00	0.00	0%	0.00	17%	0.00	31%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.70E-03	8.40E-07				0.00	0%				2.0E+01	
Acetone	67641	2.76E+03	3.15E-01										
1,4-Dichlorobenzene	106467	1.16E+01	1.32E-03	0.00	0.00	1%	0.00	2%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.57E+01	1.80E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.84E+03	2.11E-01	0.01	0.04	22%	0.00	12%	0.00	35%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	7.79E+00	8.89E-04	0.00	0.00	0%					6.0E-06		
Benzene	71432	8.41E+00	1.33E-03	0.00	0.00	1%	0.00	3%	0.00	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	1.88E+01	2.15E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	4.62E+00	5.28E-04				0.00	0%				3.0E+04	
Chloroform	67663	8.87E+00	1.01E-03	0.00	0.00	0%	0.00	0%	0.00	1%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	1.58E+01	1.96E-03	0.00	0.00	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	2.09E+01	2.38E-03	0.00	0.00	2%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	4.44E+01	5.29E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	2.07E+03	2.36E-01				0.00	0%	0.00	1%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	2.87E+03	3.28E-01						0.00	2%			1.3E+04
Naphthalene	91203	2.86E+01	3.28E-03	0.00	0.01	4%	0.00	3%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	3.16E+02	3.61E-02				0.00	0%				3.0E+03	
Styrene	100425	1.52E+01	1.76E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	3.18E+01	4.47E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.58E+02	1.80E-02				0.00	1%				2.0E+02	
Xylenes	1330207	2.06E+01	2.35E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	8.20E+03	9.36E-01				0.00	38%	0.00	23%		2.0E+02	3.2E+03
Diesel PM	9901	4.96E+01	1.34E-01	0.03	0.11	64%	0.00	9%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.00	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 14: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	1610	0.001	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	1610	0.001	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	1610	0.001	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer} = total score, sum of scores for all compounds for which a unit risk value is available
c = specific carcinogenic compound
E_c = facility-wide or device emissions of substance c, (lbs/yr)
P_c = unit risk factor for substance c, µg/m³
RP = facility-wide or device receptor proximity adjustment factor
7700 = carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$ = total score, sum of scores for all substances with chronic RELs
TS_{acute} = total score, sum of scores for all substances with acute RELs
tc = toxic compound with a chronic REL
ta = toxic compound with an acute REL
E_{tc} = annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta} = maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc} = REL of substance tc, (µg/m³)
P_{ta} = REL of substance ta, (µg/m³)
RP = facility-wide or device receptor proximity adjustment factor
150 = normalization factor
1500 = normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)
Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 2

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Summary of Prioritization Scores (PS) by Receptor Distance
Scenario 2

Table 1: Prioritization Scores by Risk Category and Distance

Receptor Distance (m)	Cancer Risk PS	Worker Cancer Risk PS	Chronic Risk PS	Acute Risk PS
50	134.81	40.44	0.98	1.00
100	33.70	10.11	0.25	0.25
200	8.43	2.53	0.06	0.06
500	1.35	0.40	0.01	0.01
610	0.91	0.27	0.01	0.01
1610	0.13	0.04	0.00	0.00

Table 2: Prioritization Scores by Air District Thresholds, Risk Category, and Distance

Air District	Risk Categories			Calculated Receptor Distance (m) for Corresponding Risk Category:			
	PS Threshold Category	PS Cancer Risk Thresholds	PS Chronic/Acute Risk Threshold	Residential Cancer Risk	Worker Cancer Risk	Chronic Risk	Acute Risk
Bay Area Air District, SJVAPCD, SCAQMD	High	≥10	≥10	≤183.6	≤100.6	≤15.7	≤15.8
	Intermediate	≥1 and <10	≥1 and <10	>183.6 and ≤580.5	>100.6 and ≤318	>15.7 and ≤49.5	>15.8 and ≤50
	Low	<1	<1	>580.5	>318	>49.5	>50
SDAPCD	High	≥100	≥10	≤58.1	≤31.8	≤15.7	≤15.8
	Intermediate	≥1 and <100	≥1 and <10	>58.1 and ≤580.5	>31.8 and ≤318	>15.7 and ≤49.5	>15.8 and ≤50
	Low	<1	<1	>580.5	>318	>49.5	>50

References:

Cancer Prioritzation Thresholds

BAAQMD, SJVAPCD and SCAQMD use CAPCOA thresholds for cancer PS
https://capcoa.org/capcoa-prioritization-guidelines/

TS ≥ 10	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 10	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

SDAPCD Cancer Score Evaluation:

TS ≥ 100	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 100	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

Other district's threshold are at:
https://ww2.arb.ca.gov/ab-2588-district-prioritization-scores-and-risk-threshold-levels

Chronic/Acute Prioritzation Thresholds

BAAQMD, SJVAPCD, SCAQMD, and SDAPCD use CAPCOA thresholds for non-cancer PS
Chronic/Acute Score Evaluation:

TS ≥ 10	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 10	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	134.81
TOTAL WORKER CANCER SCORE:	40.44
TOTAL CHRONIC SCORE:	0.98
TOTAL ACUTE SCORE:	1.00

Table 3: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.56E-02	4.82E-06	0.12	0.40	0%	0.02	2%	0.04	4%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	4.96E-03	1.54E-06	0.05	0.16	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	5.93E-03	1.84E-06	2.05	6.85	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.23E-02	6.92E-06	0.40	1.32	1%					7.7E-03		
Copper	7440508	1.73E-01	5.46E-05						0.00	0%			1.0E+02
Lead	7439921	4.87E-01	1.51E-04	0.01	0.04	0%					1.2E-05		
Manganese	7439965	1.10E+00	3.41E-04				0.21	21%				9.0E-02	
Mercury	7439976	2.86E-03	8.89E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.29E-01	7.17E-05	0.14	0.46	0%	0.28	29%	0.54	54%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.50E-03	7.77E-07				0.00	0%				2.0E+01	
Acetone	67641	5.84E+02	6.67E-02										
1,4-Dichlorobenzene	106467	4.12E+00	4.70E-04	0.10	0.35	0%	0.01	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	6.95E+00	7.93E-04				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	6.58E+02	7.52E-02	4.10	13.68	10%	0.08	8%	0.24	24%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	2.50E+00	2.85E-04	0.03	0.12	0%					6.0E-06		
Benzene	71432	2.74E+00	6.86E-04	0.18	0.61	0%	0.02	2%	0.04	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	5.45E+00	6.22E-04				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.72E+00	1.96E-04				0.00	0%				3.0E+04	
Chloroform	67663	3.24E+00	3.70E-04	0.04	0.13	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	4.51E+00	6.68E-04	0.03	0.09	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	5.39E+00	6.16E-04	0.26	0.87	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	3.44E+01	4.15E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	7.24E+02	8.27E-02				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	7.46E+02	8.51E-02						0.01	1%			1.3E+04
Naphthalene	91203	7.03E+00	8.09E-04	0.55	1.84	1%	0.01	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	7.23E+01	8.25E-03				0.00	0%				3.0E+03	
Styrene	100425	4.33E+00	5.11E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	8.32E+00	1.78E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	7.83E+01	8.94E-03				0.01	1%				2.0E+02	
Xylenes	1330207	5.78E+00	6.60E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	1.96E+03	2.24E-01				0.17	17%	0.11	11%		2.0E+02	3.2E+03
Diesel PM	9901	4.67E+01	1.32E-01	32.36	107.86	80%	0.16	16%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.01	0.03	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.01	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.01	1%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 4: Receptor Distances

Receptor	D = source to receptor distance (meters)	RP = receptor proximity adjustment factor	Receptor Definition[1]
Cancer/chronic resident/sensitive	50	1.000	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	50	1.000	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	50	1.000	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:

Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:

Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:

CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	33.70
TOTAL WORKER CANCER SCORE:	10.11
TOTAL CHRONIC SCORE:	0.25
TOTAL ACUTE SCORE:	0.25

Table 5: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.56E-02	4.82E-06	0.03	0.10	0%	0.00	2%	0.01	4%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	4.96E-03	1.54E-06	0.01	0.04	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	5.93E-03	1.84E-06	0.51	1.71	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.23E-02	6.92E-06	0.10	0.33	1%					7.7E-03		
Copper	7440508	1.73E-01	5.46E-05						0.00	0%			1.0E+02
Lead	7439921	4.87E-01	1.51E-04	0.00	0.01	0%					1.2E-05		
Manganese	7439965	1.10E+00	3.41E-04				0.05	21%				9.0E-02	
Mercury	7439976	2.86E-03	8.89E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.29E-01	7.17E-05	0.03	0.11	0%	0.07	29%	0.13	54%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.50E-03	7.77E-07				0.00	0%				2.0E+01	
Acetone	67641	5.84E+02	6.67E-02										
1,4-Dichlorobenzene	106467	4.12E+00	4.70E-04	0.03	0.09	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	6.95E+00	7.93E-04				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	6.58E+02	7.52E-02	1.03	3.42	10%	0.02	8%	0.06	24%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	2.50E+00	2.85E-04	0.01	0.03	0%					6.0E-06		
Benzene	71432	2.74E+00	6.86E-04	0.05	0.15	0%	0.00	2%	0.01	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	5.45E+00	6.22E-04				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.72E+00	1.96E-04				0.00	0%				3.0E+04	
Chloroform	67663	3.24E+00	3.70E-04	0.01	0.03	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	4.51E+00	6.68E-04	0.01	0.02	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	5.39E+00	6.16E-04	0.07	0.22	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	3.44E+01	4.15E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	7.24E+02	8.27E-02				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	7.46E+02	8.51E-02						0.00	1%			1.3E+04
Naphthalene	91203	7.03E+00	8.09E-04	0.14	0.46	1%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	7.23E+01	8.25E-03				0.00	0%				3.0E+03	
Styrene	100425	4.33E+00	5.11E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	8.32E+00	1.78E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	7.83E+01	8.94E-03				0.00	1%				2.0E+02	
Xylenes	1330207	5.78E+00	6.60E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	1.96E+03	2.24E-01				0.04	17%	0.03	11%		2.0E+02	3.2E+03
Diesel PM	9901	4.67E+01	1.32E-01	8.09	26.96	80%	0.04	16%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.00	0.01	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.00	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.00	1%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 6: Receptor Distances

Receptor	D = source to receptor distance (meters)	RP = receptor proximity adjustment factor	Receptor Definition[1]
Cancer/chronic resident/sensitive	100	0.250	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	100	0.250	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	100	0.250	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:

Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:

Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:

CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 2

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	8.43
TOTAL WORKER CANCER SCORE:	2.53
TOTAL CHRONIC SCORE:	0.06
TOTAL ACUTE SCORE:	0.06

Table 7: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.56E-02	4.82E-06	0.01	0.02	0%	0.00	2%	0.00	4%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	4.96E-03	1.54E-06	0.00	0.01	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	5.93E-03	1.84E-06	0.13	0.43	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.23E-02	6.92E-06	0.02	0.08	1%					7.7E-03		
Copper	7440508	1.73E-01	5.46E-05						0.00	0%			1.0E+02
Lead	7439921	4.87E-01	1.51E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	1.10E+00	3.41E-04				0.01	21%				9.0E-02	
Mercury	7439976	2.86E-03	8.89E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.29E-01	7.17E-05	0.01	0.03	0%	0.02	29%	0.03	54%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.50E-03	7.77E-07				0.00	0%				2.0E+01	
Acetone	67641	5.84E+02	6.67E-02										
1,4-Dichlorobenzene	106467	4.12E+00	4.70E-04	0.01	0.02	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	6.95E+00	7.93E-04				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	6.58E+02	7.52E-02	0.26	0.86	10%	0.01	8%	0.01	24%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	2.50E+00	2.85E-04	0.00	0.01	0%					6.0E-06		
Benzene	71432	2.74E+00	6.86E-04	0.01	0.04	0%	0.00	2%	0.00	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	5.45E+00	6.22E-04				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.72E+00	1.96E-04				0.00	0%				3.0E+04	
Chloroform	67663	3.24E+00	3.70E-04	0.00	0.01	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	4.51E+00	6.68E-04	0.00	0.01	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	5.39E+00	6.16E-04	0.02	0.05	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	3.44E+01	4.15E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	7.24E+02	8.27E-02				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	7.46E+02	8.51E-02						0.00	1%			1.3E+04
Naphthalene	91203	7.03E+00	8.09E-04	0.03	0.11	1%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	7.23E+01	8.25E-03				0.00	0%				3.0E+03	
Styrene	100425	4.33E+00	5.11E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	8.32E+00	1.78E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	7.83E+01	8.94E-03				0.00	1%				2.0E+02	
Xylenes	1330207	5.78E+00	6.60E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	1.96E+03	2.24E-01				0.01	17%	0.01	11%		2.0E+02	3.2E+03
Diesel PM	9901	4.67E+01	1.32E-01	2.02	6.74	80%	0.01	16%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.00	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.00	1%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 8: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	200	0.063	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	200	0.063	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	200	0.063	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 2

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	1.35
TOTAL WORKER CANCER SCORE:	0.40
TOTAL CHRONIC SCORE:	0.01
TOTAL ACUTE SCORE:	0.01

Table 9: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.56E-02	4.82E-06	0.00	0.00	0%	0.00	2%	0.00	4%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	4.96E-03	1.54E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	5.93E-03	1.84E-06	0.02	0.07	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.23E-02	6.92E-06	0.00	0.01	1%					7.7E-03		
Copper	7440508	1.73E-01	5.46E-05						0.00	0%			1.0E+02
Lead	7439921	4.87E-01	1.51E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	1.10E+00	3.41E-04				0.00	21%				9.0E-02	
Mercury	7439976	2.86E-03	8.89E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.29E-01	7.17E-05	0.00	0.00	0%	0.00	29%	0.01	54%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.50E-03	7.77E-07				0.00	0%				2.0E+01	
Acetone	67641	5.84E+02	6.67E-02										
1,4-Dichlorobenzene	106467	4.12E+00	4.70E-04	0.00	0.00	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	6.95E+00	7.93E-04				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	6.58E+02	7.52E-02	0.04	0.14	10%	0.00	8%	0.00	24%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	2.50E+00	2.85E-04	0.00	0.00	0%					6.0E-06		
Benzene	71432	2.74E+00	6.86E-04	0.00	0.01	0%	0.00	2%	0.00	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	5.45E+00	6.22E-04				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.72E+00	1.96E-04				0.00	0%				3.0E+04	
Chloroform	67663	3.24E+00	3.70E-04	0.00	0.00	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	4.51E+00	6.68E-04	0.00	0.00	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	5.39E+00	6.16E-04	0.00	0.01	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	3.44E+01	4.15E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	7.24E+02	8.27E-02				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	7.46E+02	8.51E-02						0.00	1%			1.3E+04
Naphthalene	91203	7.03E+00	8.09E-04	0.01	0.02	1%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	7.23E+01	8.25E-03				0.00	0%				3.0E+03	
Styrene	100425	4.33E+00	5.11E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	8.32E+00	1.78E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	7.83E+01	8.94E-03				0.00	1%				2.0E+02	
Xylenes	1330207	5.78E+00	6.60E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	1.96E+03	2.24E-01				0.00	17%	0.00	11%		2.0E+02	3.2E+03
Diesel PM	9901	4.67E+01	1.32E-01	0.32	1.08	80%	0.00	16%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.00	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.00	1%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 10: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	500	0.010	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	500	0.010	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	500	0.010	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 2

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE: 0.91
TOTAL WORKER CANCER SCORE: 0.27
TOTAL CHRONIC SCORE: 0.01
TOTAL ACUTE SCORE: 0.01

Table 11: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.56E-02	4.82E-06	0.00	0.00	0%	0.00	2%	0.00	4%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	4.96E-03	1.54E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	5.93E-03	1.84E-06	0.01	0.05	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.23E-02	6.92E-06	0.00	0.01	1%					7.7E-03		
Copper	7440508	1.73E-01	5.46E-05						0.00	0%			1.0E+02
Lead	7439921	4.87E-01	1.51E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	1.10E+00	3.41E-04				0.00	21%				9.0E-02	
Mercury	7439976	2.86E-03	8.89E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.29E-01	7.17E-05	0.00	0.00	0%	0.00	29%	0.00	54%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.50E-03	7.77E-07				0.00	0%				2.0E+01	
Acetone	67641	5.84E+02	6.67E-02										
1,4-Dichlorobenzene	106467	4.12E+00	4.70E-04	0.00	0.00	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	6.95E+00	7.93E-04				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	6.58E+02	7.52E-02	0.03	0.09	10%	0.00	8%	0.00	24%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	2.50E+00	2.85E-04	0.00	0.00	0%					6.0E-06		
Benzene	71432	2.74E+00	6.86E-04	0.00	0.00	0%	0.00	2%	0.00	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	5.45E+00	6.22E-04				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.72E+00	1.96E-04				0.00	0%				3.0E+04	
Chloroform	67663	3.24E+00	3.70E-04	0.00	0.00	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	4.51E+00	6.68E-04	0.00	0.00	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	5.39E+00	6.16E-04	0.00	0.01	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	3.44E+01	4.15E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	7.24E+02	8.27E-02				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	7.46E+02	8.51E-02						0.00	1%			1.3E+04
Naphthalene	91203	7.03E+00	8.09E-04	0.00	0.01	1%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	7.23E+01	8.25E-03				0.00	0%				3.0E+03	
Styrene	100425	4.33E+00	5.11E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	8.32E+00	1.78E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	7.83E+01	8.94E-03				0.00	1%				2.0E+02	
Xylenes	1330207	5.78E+00	6.60E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	1.96E+03	2.24E-01				0.00	17%	0.00	11%		2.0E+02	3.2E+03
Diesel PM	9901	4.67E+01	1.32E-01	0.22	0.72	80%	0.00	16%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.00	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.00	1%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 12: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	610	0.007	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	610	0.007	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	610	0.007	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 2

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	0.13
TOTAL WORKER CANCER SCORE:	0.04
TOTAL CHRONIC SCORE:	0.00
TOTAL ACUTE SCORE:	0.00

Table 13: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.56E-02	4.82E-06	0.00	0.00	0%	0.00	2%	0.00	4%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	4.96E-03	1.54E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	5.93E-03	1.84E-06	0.00	0.01	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.23E-02	6.92E-06	0.00	0.00	1%					7.7E-03		
Copper	7440508	1.73E-01	5.46E-05						0.00	0%			1.0E+02
Lead	7439921	4.87E-01	1.51E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	1.10E+00	3.41E-04				0.00	21%				9.0E-02	
Mercury	7439976	2.86E-03	8.89E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.29E-01	7.17E-05	0.00	0.00	0%	0.00	29%	0.00	54%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.50E-03	7.77E-07				0.00	0%				2.0E+01	
Acetone	67641	5.84E+02	6.67E-02										
1,4-Dichlorobenzene	106467	4.12E+00	4.70E-04	0.00	0.00	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	6.95E+00	7.93E-04				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	6.58E+02	7.52E-02	0.00	0.01	10%	0.00	8%	0.00	24%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	2.50E+00	2.85E-04	0.00	0.00	0%					6.0E-06		
Benzene	71432	2.74E+00	6.86E-04	0.00	0.00	0%	0.00	2%	0.00	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	5.45E+00	6.22E-04				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.72E+00	1.96E-04				0.00	0%				3.0E+04	
Chloroform	67663	3.24E+00	3.70E-04	0.00	0.00	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	4.51E+00	6.68E-04	0.00	0.00	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	5.39E+00	6.16E-04	0.00	0.00	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	3.44E+01	4.15E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	7.24E+02	8.27E-02				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	7.46E+02	8.51E-02						0.00	1%			1.3E+04
Naphthalene	91203	7.03E+00	8.09E-04	0.00	0.00	1%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	7.23E+01	8.25E-03				0.00	0%				3.0E+03	
Styrene	100425	4.33E+00	5.11E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	8.32E+00	1.78E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	7.83E+01	8.94E-03				0.00	1%				2.0E+02	
Xylenes	1330207	5.78E+00	6.60E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	1.96E+03	2.24E-01				0.00	17%	0.00	11%		2.0E+02	3.2E+03
Diesel PM	9901	4.67E+01	1.32E-01	0.03	0.10	80%	0.00	16%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.00	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.00	1%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 14: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	1610	0.001	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	1610	0.001	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	1610	0.001	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer} = total score, sum of scores for all compounds for which a unit risk value is available
c = specific carcinogenic compound
E_c = facility-wide or device emissions of substance c, (lbs/yr)
P_c = unit risk factor for substance c, µg/m³
RP = facility-wide or device receptor proximity adjustment factor
7700 = carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$ = total score, sum of scores for all substances with chronic RELs
TS_{acute} = total score, sum of scores for all substances with acute RELs
tc = toxic compound with a chronic REL
ta = toxic compound with an acute REL
E_{tc} = annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta} = maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc} = REL of substance tc, (µg/m³)
P_{ta} = REL of substance ta, (µg/m³)
RP = facility-wide or device receptor proximity adjustment factor
150 = normalization factor
1500 = normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)
Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Summary of Prioritization Scores (PS) by Receptor Distance
Scenario 3

Table 1: Prioritization Scores by Risk Category and Distance

Receptor Distance (m)	Cancer Risk PS	Worker Cancer Risk PS	Chronic Risk PS	Acute Risk PS
50	130.38	39.12	0.95	0.94
100	32.60	9.78	0.24	0.23
200	8.15	2.44	0.06	0.06
500	1.30	0.39	0.01	0.01
610	0.88	0.26	0.01	0.01
1610	0.13	0.04	0.00	0.00

Table 2: Prioritization Scores by Air District Thresholds, Risk Category, and Distance

Air District	Risk Categories			Calculated Receptor Distance (m) for Corresponding Risk Category:			
	PS Threshold Category	PS Cancer Risk Thresholds	PS Chronic/Acute Risk Threshold	Residential Cancer Risk	Worker Cancer Risk	Chronic Risk	Acute Risk
Bay Area Air District, SJVAPCD, SCAQMD	High	≥10	≥10	≤180.5	≤98.9	≤15.4	≤15.3
	Intermediate	≥1 and <10	≥1 and <10	>180.5 and ≤570.9	>98.9 and ≤312.7	>15.4 and ≤48.7	>15.3 and ≤48.4
	Low	<1	<1	>570.9	>312.7	>48.7	>48.4
SDAPCD	High	≥100	≥10	≤57.1	≤31.3	≤15.4	≤15.3
	Intermediate	≥1 and <100	≥1 and <10	>57.1 and ≤570.9	>31.3 and ≤312.7	>15.4 and ≤48.7	>15.3 and ≤48.4
	Low	<1	<1	>570.9	>312.7	>48.7	>48.4

References:

Cancer Prioritzation Thresholds

BAAQMD, SJVAPCD and SCAQMD use CAPCOA thresholds for cancer PS
https://capcoa.org/capcoa-prioritization-guidelines/

TS ≥ 10	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 10	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

SDAPCD Cancer Score Evaluation:

TS ≥ 100	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 100	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

Other district's threshold are at:
https://ww2.arb.ca.gov/ab-2588-district-prioritization-scores-and-risk-threshold-levels

Chronic/Acute Prioritzation Thresholds

BAAQMD, SJVAPCD, SCAQMD, and SDAPCD use CAPCOA thresholds for non-cancer PS
Chronic/Acute Score Evaluation:

TS ≥ 10	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 10	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	130.38
TOTAL WORKER CANCER SCORE:	39.12
TOTAL CHRONIC SCORE:	0.95
TOTAL ACUTE SCORE:	0.94

Table 3: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.56E-02	4.82E-06	0.12	0.40	0%	0.02	2%	0.04	4%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	4.96E-03	1.54E-06	0.05	0.16	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	5.93E-03	1.84E-06	2.05	6.85	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.23E-02	6.92E-06	0.40	1.32	1%					7.7E-03		
Copper	7440508	1.73E-01	5.46E-05						0.00	0%			1.0E+02
Lead	7439921	4.87E-01	1.51E-04	0.01	0.04	0%					1.2E-05		
Manganese	7439965	1.10E+00	3.41E-04				0.21	22%				9.0E-02	
Mercury	7439976	2.86E-03	8.89E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.29E-01	7.17E-05	0.14	0.46	0%	0.28	30%	0.54	58%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.50E-03	7.77E-07				0.00	0%				2.0E+01	
Acetone	67641	3.12E+02	3.57E-02										
1,4-Dichlorobenzene	106467	3.19E+00	3.64E-04	0.08	0.27	0%	0.01	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	5.85E+00	6.68E-04				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	5.10E+02	5.82E-02	3.18	10.60	8%	0.06	7%	0.19	20%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	1.83E+00	2.09E-04	0.03	0.08	0%					6.0E-06		
Benzene	71432	2.03E+00	6.05E-04	0.14	0.45	0%	0.01	1%	0.03	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	3.78E+00	4.32E-04				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.35E+00	1.54E-04				0.00	0%				3.0E+04	
Chloroform	67663	2.53E+00	2.89E-04	0.03	0.10	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	3.09E+00	5.06E-04	0.02	0.06	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	3.46E+00	3.95E-04	0.17	0.56	0%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	3.31E+01	4.00E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	5.56E+02	6.35E-02				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	4.80E+02	5.48E-02						0.01	1%			1.3E+04
Naphthalene	91203	4.33E+00	5.01E-04	0.34	1.13	1%	0.01	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	4.18E+01	4.78E-03				0.00	0%				3.0E+03	
Styrene	100425	2.97E+00	3.55E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	5.38E+00	1.45E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	6.83E+01	7.80E-03				0.01	1%				2.0E+02	
Xylenes	1330207	3.93E+00	4.49E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	1.96E+03	2.24E-01				0.17	18%	0.11	11%		2.0E+02	3.2E+03
Diesel PM	9901	4.67E+01	1.32E-01	32.36	107.86	83%	0.16	17%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.01	0.03	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.01	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.01	1%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 4: Receptor Distances

Receptor	D = source to receptor distance (meters)	RP = receptor proximity adjustment factor	Receptor Definition[1]
Cancer/chronic resident/sensitive	50	1.000	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	50	1.000	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	50	1.000	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:

Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:

Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:

CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	32.60
TOTAL WORKER CANCER SCORE:	9.78
TOTAL CHRONIC SCORE:	0.24
TOTAL ACUTE SCORE:	0.23

Table 5: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.56E-02	4.82E-06	0.03	0.10	0%	0.00	2%	0.01	4%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	4.96E-03	1.54E-06	0.01	0.04	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	5.93E-03	1.84E-06	0.51	1.71	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.23E-02	6.92E-06	0.10	0.33	1%					7.7E-03		
Copper	7440508	1.73E-01	5.46E-05						0.00	0%			1.0E+02
Lead	7439921	4.87E-01	1.51E-04	0.00	0.01	0%					1.2E-05		
Manganese	7439965	1.10E+00	3.41E-04				0.05	22%				9.0E-02	
Mercury	7439976	2.86E-03	8.89E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.29E-01	7.17E-05	0.03	0.11	0%	0.07	30%	0.13	58%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.50E-03	7.77E-07				0.00	0%				2.0E+01	
Acetone	67641	3.12E+02	3.57E-02										
1,4-Dichlorobenzene	106467	3.19E+00	3.64E-04	0.02	0.07	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	5.85E+00	6.68E-04				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	5.10E+02	5.82E-02	0.79	2.65	8%	0.02	7%	0.05	20%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	1.83E+00	2.09E-04	0.01	0.02	0%					6.0E-06		
Benzene	71432	2.03E+00	6.05E-04	0.03	0.11	0%	0.00	1%	0.01	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	3.78E+00	4.32E-04				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.35E+00	1.54E-04				0.00	0%				3.0E+04	
Chloroform	67663	2.53E+00	2.89E-04	0.01	0.03	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	3.09E+00	5.06E-04	0.00	0.01	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	3.46E+00	3.95E-04	0.04	0.14	0%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	3.31E+01	4.00E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	5.56E+02	6.35E-02				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	4.80E+02	5.48E-02						0.00	1%			1.3E+04
Naphthalene	91203	4.33E+00	5.01E-04	0.08	0.28	1%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	4.18E+01	4.78E-03				0.00	0%				3.0E+03	
Styrene	100425	2.97E+00	3.55E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	5.38E+00	1.45E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	6.83E+01	7.80E-03				0.00	1%				2.0E+02	
Xylenes	1330207	3.93E+00	4.49E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	1.96E+03	2.24E-01				0.04	18%	0.03	11%		2.0E+02	3.2E+03
Diesel PM	9901	4.67E+01	1.32E-01	8.09	26.96	83%	0.04	17%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.00	0.01	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.00	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.00	1%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 6: Receptor Distances

Receptor	D = source to receptor distance (meters)	RP = receptor proximity adjustment factor	Receptor Definition[1]
Cancer/chronic resident/sensitive	100	0.250	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	100	0.250	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	100	0.250	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:

Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:

Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:

CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
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SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	8.15
TOTAL WORKER CANCER SCORE:	2.44
TOTAL CHRONIC SCORE:	0.06
TOTAL ACUTE SCORE:	0.06

Table 7: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.56E-02	4.82E-06	0.01	0.02	0%	0.00	2%	0.00	4%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	4.96E-03	1.54E-06	0.00	0.01	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	5.93E-03	1.84E-06	0.13	0.43	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.23E-02	6.92E-06	0.02	0.08	1%					7.7E-03		
Copper	7440508	1.73E-01	5.46E-05						0.00	0%			1.0E+02
Lead	7439921	4.87E-01	1.51E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	1.10E+00	3.41E-04				0.01	22%				9.0E-02	
Mercury	7439976	2.86E-03	8.89E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.29E-01	7.17E-05	0.01	0.03	0%	0.02	30%	0.03	58%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.50E-03	7.77E-07				0.00	0%				2.0E+01	
Acetone	67641	3.12E+02	3.57E-02										
1,4-Dichlorobenzene	106467	3.19E+00	3.64E-04	0.01	0.02	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	5.85E+00	6.68E-04				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	5.10E+02	5.82E-02	0.20	0.66	8%	0.00	7%	0.01	20%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	1.83E+00	2.09E-04	0.00	0.01	0%					6.0E-06		
Benzene	71432	2.03E+00	6.05E-04	0.01	0.03	0%	0.00	1%	0.00	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	3.78E+00	4.32E-04				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.35E+00	1.54E-04				0.00	0%				3.0E+04	
Chloroform	67663	2.53E+00	2.89E-04	0.00	0.01	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	3.09E+00	5.06E-04	0.00	0.00	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	3.46E+00	3.95E-04	0.01	0.03	0%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	3.31E+01	4.00E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	5.56E+02	6.35E-02				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	4.80E+02	5.48E-02						0.00	1%			1.3E+04
Naphthalene	91203	4.33E+00	5.01E-04	0.02	0.07	1%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	4.18E+01	4.78E-03				0.00	0%				3.0E+03	
Styrene	100425	2.97E+00	3.55E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	5.38E+00	1.45E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	6.83E+01	7.80E-03				0.00	1%				2.0E+02	
Xylenes	1330207	3.93E+00	4.49E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	1.96E+03	2.24E-01				0.01	18%	0.01	11%		2.0E+02	3.2E+03
Diesel PM	9901	4.67E+01	1.32E-01	2.02	6.74	83%	0.01	17%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.00	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.00	1%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 8: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	200	0.063	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	200	0.063	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	200	0.063	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 3

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	1.30
TOTAL WORKER CANCER SCORE:	0.39
TOTAL CHRONIC SCORE:	0.01
TOTAL ACUTE SCORE:	0.01

Table 9: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.56E-02	4.82E-06	0.00	0.00	0%	0.00	2%	0.00	4%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	4.96E-03	1.54E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	5.93E-03	1.84E-06	0.02	0.07	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.23E-02	6.92E-06	0.00	0.01	1%					7.7E-03		
Copper	7440508	1.73E-01	5.46E-05						0.00	0%			1.0E+02
Lead	7439921	4.87E-01	1.51E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	1.10E+00	3.41E-04				0.00	22%				9.0E-02	
Mercury	7439976	2.86E-03	8.89E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.29E-01	7.17E-05	0.00	0.00	0%	0.00	30%	0.01	58%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.50E-03	7.77E-07				0.00	0%				2.0E+01	
Acetone	67641	3.12E+02	3.57E-02										
1,4-Dichlorobenzene	106467	3.19E+00	3.64E-04	0.00	0.00	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	5.85E+00	6.68E-04				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	5.10E+02	5.82E-02	0.03	0.11	8%	0.00	7%	0.00	20%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	1.83E+00	2.09E-04	0.00	0.00	0%					6.0E-06		
Benzene	71432	2.03E+00	6.05E-04	0.00	0.00	0%	0.00	1%	0.00	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	3.78E+00	4.32E-04				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.35E+00	1.54E-04				0.00	0%				3.0E+04	
Chloroform	67663	2.53E+00	2.89E-04	0.00	0.00	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	3.09E+00	5.06E-04	0.00	0.00	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	3.46E+00	3.95E-04	0.00	0.01	0%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	3.31E+01	4.00E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	5.56E+02	6.35E-02				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	4.80E+02	5.48E-02						0.00	1%			1.3E+04
Naphthalene	91203	4.33E+00	5.01E-04	0.00	0.01	1%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	4.18E+01	4.78E-03				0.00	0%				3.0E+03	
Styrene	100425	2.97E+00	3.55E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	5.38E+00	1.45E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	6.83E+01	7.80E-03				0.00	1%				2.0E+02	
Xylenes	1330207	3.93E+00	4.49E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	1.96E+03	2.24E-01				0.00	18%	0.00	11%		2.0E+02	3.2E+03
Diesel PM	9901	4.67E+01	1.32E-01	0.32	1.08	83%	0.00	17%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.00	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.00	1%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 10: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	500	0.010	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	500	0.010	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	500	0.010	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 3

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE: 0.88
TOTAL WORKER CANCER SCORE: 0.26
TOTAL CHRONIC SCORE: 0.01
TOTAL ACUTE SCORE: 0.01

Table 11: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.56E-02	4.82E-06	0.00	0.00	0%	0.00	2%	0.00	4%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	4.96E-03	1.54E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	5.93E-03	1.84E-06	0.01	0.05	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.23E-02	6.92E-06	0.00	0.01	1%					7.7E-03		
Copper	7440508	1.73E-01	5.46E-05						0.00	0%			1.0E+02
Lead	7439921	4.87E-01	1.51E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	1.10E+00	3.41E-04				0.00	22%				9.0E-02	
Mercury	7439976	2.86E-03	8.89E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.29E-01	7.17E-05	0.00	0.00	0%	0.00	30%	0.00	58%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.50E-03	7.77E-07				0.00	0%				2.0E+01	
Acetone	67641	3.12E+02	3.57E-02										
1,4-Dichlorobenzene	106467	3.19E+00	3.64E-04	0.00	0.00	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	5.85E+00	6.68E-04				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	5.10E+02	5.82E-02	0.02	0.07	8%	0.00	7%	0.00	20%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	1.83E+00	2.09E-04	0.00	0.00	0%					6.0E-06		
Benzene	71432	2.03E+00	6.05E-04	0.00	0.00	0%	0.00	1%	0.00	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	3.78E+00	4.32E-04				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.35E+00	1.54E-04				0.00	0%				3.0E+04	
Chloroform	67663	2.53E+00	2.89E-04	0.00	0.00	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	3.09E+00	5.06E-04	0.00	0.00	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	3.46E+00	3.95E-04	0.00	0.00	0%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	3.31E+01	4.00E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	5.56E+02	6.35E-02				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	4.80E+02	5.48E-02						0.00	1%			1.3E+04
Naphthalene	91203	4.33E+00	5.01E-04	0.00	0.01	1%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	4.18E+01	4.78E-03				0.00	0%				3.0E+03	
Styrene	100425	2.97E+00	3.55E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	5.38E+00	1.45E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	6.83E+01	7.80E-03				0.00	1%				2.0E+02	
Xylenes	1330207	3.93E+00	4.49E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	1.96E+03	2.24E-01				0.00	18%	0.00	11%		2.0E+02	3.2E+03
Diesel PM	9901	4.67E+01	1.32E-01	0.22	0.72	83%	0.00	17%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.00	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.00	1%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 12: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	610	0.007	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	610	0.007	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	610	0.007	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 3

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE: 0.13
TOTAL WORKER CANCER SCORE: 0.04
TOTAL CHRONIC SCORE: 0.00
TOTAL ACUTE SCORE: 0.00

Table 13: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	1.56E-02	4.82E-06	0.00	0.00	0%	0.00	2%	0.00	4%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	4.96E-03	1.54E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	5.93E-03	1.84E-06	0.00	0.01	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	2.23E-02	6.92E-06	0.00	0.00	1%					7.7E-03		
Copper	7440508	1.73E-01	5.46E-05						0.00	0%			1.0E+02
Lead	7439921	4.87E-01	1.51E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	1.10E+00	3.41E-04				0.00	22%				9.0E-02	
Mercury	7439976	2.86E-03	8.89E-07				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	2.29E-01	7.17E-05	0.00	0.00	0%	0.00	30%	0.00	58%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	2.50E-03	7.77E-07				0.00	0%				2.0E+01	
Acetone	67641	3.12E+02	3.57E-02										
1,4-Dichlorobenzene	106467	3.19E+00	3.64E-04	0.00	0.00	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	5.85E+00	6.68E-04				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	5.10E+02	5.82E-02	0.00	0.01	8%	0.00	7%	0.00	20%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	1.83E+00	2.09E-04	0.00	0.00	0%					6.0E-06		
Benzene	71432	2.03E+00	6.05E-04	0.00	0.00	0%	0.00	1%	0.00	4%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	3.78E+00	4.32E-04				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.35E+00	1.54E-04				0.00	0%				3.0E+04	
Chloroform	67663	2.53E+00	2.89E-04	0.00	0.00	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	3.09E+00	5.06E-04	0.00	0.00	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	3.46E+00	3.95E-04	0.00	0.00	0%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	3.31E+01	4.00E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	5.56E+02	6.35E-02				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	4.80E+02	5.48E-02						0.00	1%			1.3E+04
Naphthalene	91203	4.33E+00	5.01E-04	0.00	0.00	1%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	4.18E+01	4.78E-03				0.00	0%				3.0E+03	
Styrene	100425	2.97E+00	3.55E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	5.38E+00	1.45E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	6.83E+01	7.80E-03				0.00	1%				2.0E+02	
Xylenes	1330207	3.93E+00	4.49E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	1.96E+03	2.24E-01				0.00	18%	0.00	11%		2.0E+02	3.2E+03
Diesel PM	9901	4.67E+01	1.32E-01	0.03	0.10	83%	0.00	17%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	4.54E-02	1.45E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	2.50E-02	8.00E-05	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	6.36E-03	2.04E-05				0.00	0%	0.00	1%		3.5E-01	2.5E+00
Chlorine	7782505	3.51E-02	1.12E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	7.78E-02	2.49E-04	0.00	0.00	0%	0.00	0%	0.00	1%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	8.86E-02	2.84E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	1.67E-01	5.36E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	5.81E-02	1.86E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	3.57E-03	1.14E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 14: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	1610	0.001	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	1610	0.001	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	1610	0.001	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer} = total score, sum of scores for all compounds for which a unit risk value is available
c = specific carcinogenic compound
E_c = facility-wide or device emissions of substance c, (lbs/yr)
P_c = unit risk factor for substance c, µg/m³
RP = facility-wide or device receptor proximity adjustment factor
7700 = carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$ = total score, sum of scores for all substances with chronic RELs
TS_{acute} = total score, sum of scores for all substances with acute RELs
tc = toxic compound with a chronic REL
ta = toxic compound with an acute REL
E_{tc} = annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta} = maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc} = REL of substance tc, (µg/m³)
P_{ta} = REL of substance ta, (µg/m³)
RP = facility-wide or device receptor proximity adjustment factor
150 = normalization factor
1500 = normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)
Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Summary of Prioritization Scores (PS) by Receptor Distance
Scenario 4

Table 1: Prioritization Scores by Risk Category and Distance

Receptor Distance (m)	Cancer Risk PS	Worker Cancer Risk PS	Chronic Risk PS	Acute Risk PS
50	396.82	119.05	4.54	7.28
100	99.21	29.76	1.14	1.82
200	24.80	7.44	0.28	0.46
500	3.97	1.19	0.05	0.07
610	2.67	0.80	0.03	0.05
1610	0.38	0.11	0.00	0.01

Table 2: Prioritization Scores by Air District Thresholds, Risk Category, and Distance

Air District	Risk Categories			Calculated Receptor Distance (m) for Corresponding Risk Category:			
	PS Threshold Category	PS Cancer Risk Thresholds	PS Chronic/Acute Risk Threshold	Residential Cancer Risk	Worker Cancer Risk	Chronic Risk	Acute Risk
Bay Area Air District, SJVAPCD, SCAQMD	High	≥10	≥10	≤315	≤172.5	≤33.7	≤42.7
	Intermediate	≥1 and <10	≥1 and <10	>315 and ≤996	>172.5 and ≤545.5	>33.7 and ≤106.6	>42.7 and ≤134.9
	Low	<1	<1	>996	>545.5	>106.6	>134.9
SDAPCD	High	≥100	≥10	≤99.6	≤54.6	≤33.7	≤42.7
	Intermediate	≥1 and <100	≥1 and <10	>99.6 and ≤996	>54.6 and ≤545.5	>33.7 and ≤106.6	>42.7 and ≤134.9
	Low	<1	<1	>996	>545.5	>106.6	>134.9

References:

Cancer Prioritzation Thresholds

BAAQMD, SJVAPCD and SCAQMD use CAPCOA thresholds for cancer PS
https://capcoa.org/capcoa-prioritization-guidelines/

TS ≥ 10	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 10	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

SDAPCD Cancer Score Evaluation:

TS ≥ 100	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 100	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

Other district's threshold are at:
https://ww2.arb.ca.gov/ab-2588-district-prioritization-scores-and-risk-threshold-levels

Chronic/Acute Prioritzation Thresholds

BAAQMD, SJVAPCD, SCAQMD, and SDAPCD use CAPCOA thresholds for non-cancer PS
Chronic/Acute Score Evaluation:

TS ≥ 10	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 10	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

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Scenario 4

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	396.82
TOTAL WORKER CANCER SCORE:	119.05
TOTAL CHRONIC SCORE:	4.54
TOTAL ACUTE SCORE:	7.28

Table 3: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.31E-02	1.35E-05	0.33	1.09	0%	0.05	1%	0.10	1%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.38E-02	4.30E-06	0.13	0.44	0%	0.01	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.65E-02	5.16E-06	5.73	19.10	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	6.16E-02	1.93E-05	1.10	3.65	1%					7.7E-03		
Copper	7440508	4.80E-01	1.51E-04						0.00	0%			1.0E+02
Lead	7439921	1.36E+00	4.23E-04	0.04	0.13	0%					1.2E-05		
Manganese	7439965	3.04E+00	9.51E-04				0.58	13%				9.0E-02	
Mercury	7439976	7.71E-03	2.42E-06				0.00	0%	0.01	0%		3.0E-02	6.0E-01
Nickel	7440020	6.39E-01	2.01E-04	0.38	1.28	0%	0.78	17%	1.50	21%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.94E-03	2.17E-06				0.00	0%				2.0E+01	
Acetone	67641	6.89E+03	7.87E-01										
1,4-Dichlorobenzene	106467	2.90E+01	3.31E-03	0.74	2.45	1%	0.10	2%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	3.93E+01	4.49E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	4.61E+03	5.27E-01	28.77	95.89	24%	0.56	12%	1.68	23%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	1.95E+01	2.22E-03	0.27	0.90	0%					6.0E-06		
Benzene	71432	2.09E+01	2.95E-03	1.40	4.67	1%	0.12	3%	0.16	2%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	4.70E+01	5.37E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.16E+01	1.32E-03				0.00	0%				3.0E+04	
Chloroform	67663	2.22E+01	2.53E-03	0.27	0.90	0%	0.00	0%	0.03	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	3.95E+01	4.74E-03	0.23	0.76	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	5.22E+01	5.96E-03	2.53	8.45	2%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	1.11E+02	1.30E-02				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	5.17E+03	5.91E-01				0.02	0%	0.03	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	7.17E+03	8.19E-01						0.09	1%			1.3E+04
Naphthalene	91203	7.16E+01	8.18E-03	5.62	18.74	5%	0.14	3%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	7.90E+02	9.02E-02				0.00	0%				3.0E+03	
Styrene	100425	3.81E+01	4.38E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	7.93E+01	1.03E-02				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	3.95E+02	4.51E-02				0.03	1%				2.0E+02	
Xylenes	1330207	5.14E+01	5.87E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	2.06E+04	7.76E+00				1.77	39%	3.64	50%		2.0E+02	3.2E+03
Diesel PM	9901	1.03E+02	1.39E-01	71.49	238.29	60%	0.35	8%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.01	0.05	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.02	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.01	0%	0.00	0%	0.01	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 4: Receptor Distances

Receptor	D = source to receptor distance (meters)	RP = receptor proximity adjustment factor	Receptor Definition[1]
Cancer/chronic resident/sensitive	50	1.000	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	50	1.000	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	50	1.000	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:

Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:

Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:

CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 4

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	99.21
TOTAL WORKER CANCER SCORE:	29.76
TOTAL CHRONIC SCORE:	1.14
TOTAL ACUTE SCORE:	1.82

Table 5: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.31E-02	1.35E-05	0.08	0.27	0%	0.01	1%	0.03	1%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.38E-02	4.30E-06	0.03	0.11	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.65E-02	5.16E-06	1.43	4.78	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	6.16E-02	1.93E-05	0.27	0.91	1%					7.7E-03		
Copper	7440508	4.80E-01	1.51E-04						0.00	0%			1.0E+02
Lead	7439921	1.36E+00	4.23E-04	0.01	0.03	0%					1.2E-05		
Manganese	7439965	3.04E+00	9.51E-04				0.14	13%				9.0E-02	
Mercury	7439976	7.71E-03	2.42E-06				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	6.39E-01	2.01E-04	0.10	0.32	0%	0.20	17%	0.38	21%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.94E-03	2.17E-06				0.00	0%				2.0E+01	
Acetone	67641	6.89E+03	7.87E-01										
1,4-Dichlorobenzene	106467	2.90E+01	3.31E-03	0.18	0.61	1%	0.02	2%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	3.93E+01	4.49E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	4.61E+03	5.27E-01	7.19	23.97	24%	0.14	12%	0.42	23%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	1.95E+01	2.22E-03	0.07	0.22	0%					6.0E-06		
Benzene	71432	2.09E+01	2.95E-03	0.35	1.17	1%	0.03	3%	0.04	2%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	4.70E+01	5.37E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.16E+01	1.32E-03				0.00	0%				3.0E+04	
Chloroform	67663	2.22E+01	2.53E-03	0.07	0.23	0%	0.00	0%	0.01	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	3.95E+01	4.74E-03	0.06	0.19	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	5.22E+01	5.96E-03	0.63	2.11	2%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	1.11E+02	1.30E-02				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	5.17E+03	5.91E-01				0.01	0%	0.01	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	7.17E+03	8.19E-01						0.02	1%			1.3E+04
Naphthalene	91203	7.16E+01	8.18E-03	1.41	4.69	5%	0.03	3%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	7.90E+02	9.02E-02				0.00	0%				3.0E+03	
Styrene	100425	3.81E+01	4.38E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	7.93E+01	1.03E-02				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	3.95E+02	4.51E-02				0.01	1%				2.0E+02	
Xylenes	1330207	5.14E+01	5.87E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	2.06E+04	7.76E+00				0.44	39%	0.91	50%		2.0E+02	3.2E+03
Diesel PM	9901	1.03E+02	1.39E-01	17.87	59.57	60%	0.09	8%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.00	0.01	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.00	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 6: Receptor Distances

Receptor	D = source to receptor distance (meters)	RP = receptor proximity adjustment factor	Receptor Definition[1]
Cancer/chronic resident/sensitive	100	0.250	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	100	0.250	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	100	0.250	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:

Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:

Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:

CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 4

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	24.80
TOTAL WORKER CANCER SCORE:	7.44
TOTAL CHRONIC SCORE:	0.28
TOTAL ACUTE SCORE:	0.46

Table 7: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.31E-02	1.35E-05	0.02	0.07	0%	0.00	1%	0.01	1%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.38E-02	4.30E-06	0.01	0.03	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.65E-02	5.16E-06	0.36	1.19	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	6.16E-02	1.93E-05	0.07	0.23	1%					7.7E-03		
Copper	7440508	4.80E-01	1.51E-04						0.00	0%			1.0E+02
Lead	7439921	1.36E+00	4.23E-04	0.00	0.01	0%					1.2E-05		
Manganese	7439965	3.04E+00	9.51E-04				0.04	13%				9.0E-02	
Mercury	7439976	7.71E-03	2.42E-06				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	6.39E-01	2.01E-04	0.02	0.08	0%	0.05	17%	0.09	21%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.94E-03	2.17E-06				0.00	0%				2.0E+01	
Acetone	67641	6.89E+03	7.87E-01										
1,4-Dichlorobenzene	106467	2.90E+01	3.31E-03	0.05	0.15	1%	0.01	2%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	3.93E+01	4.49E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	4.61E+03	5.27E-01	1.80	5.99	24%	0.04	12%	0.11	23%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	1.95E+01	2.22E-03	0.02	0.06	0%					6.0E-06		
Benzene	71432	2.09E+01	2.95E-03	0.09	0.29	1%	0.01	3%	0.01	2%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	4.70E+01	5.37E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.16E+01	1.32E-03				0.00	0%				3.0E+04	
Chloroform	67663	2.22E+01	2.53E-03	0.02	0.06	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	3.95E+01	4.74E-03	0.01	0.05	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	5.22E+01	5.96E-03	0.16	0.53	2%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	1.11E+02	1.30E-02				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	5.17E+03	5.91E-01				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	7.17E+03	8.19E-01						0.01	1%			1.3E+04
Naphthalene	91203	7.16E+01	8.18E-03	0.35	1.17	5%	0.01	3%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	7.90E+02	9.02E-02				0.00	0%				3.0E+03	
Styrene	100425	3.81E+01	4.38E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	7.93E+01	1.03E-02				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	3.95E+02	4.51E-02				0.00	1%				2.0E+02	
Xylenes	1330207	5.14E+01	5.87E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	2.06E+04	7.76E+00				0.11	39%	0.23	50%		2.0E+02	3.2E+03
Diesel PM	9901	1.03E+02	1.39E-01	4.47	14.89	60%	0.02	8%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.00	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 8: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	200	0.063	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	200	0.063	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	200	0.063	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	3.97
TOTAL WORKER CANCER SCORE:	1.19
TOTAL CHRONIC SCORE:	0.05
TOTAL ACUTE SCORE:	0.07

Table 9: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.31E-02	1.35E-05	0.00	0.01	0%	0.00	1%	0.00	1%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.38E-02	4.30E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.65E-02	5.16E-06	0.06	0.19	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	6.16E-02	1.93E-05	0.01	0.04	1%					7.7E-03		
Copper	7440508	4.80E-01	1.51E-04						0.00	0%			1.0E+02
Lead	7439921	1.36E+00	4.23E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	3.04E+00	9.51E-04				0.01	13%				9.0E-02	
Mercury	7439976	7.71E-03	2.42E-06				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	6.39E-01	2.01E-04	0.00	0.01	0%	0.01	17%	0.02	21%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.94E-03	2.17E-06				0.00	0%				2.0E+01	
Acetone	67641	6.89E+03	7.87E-01										
1,4-Dichlorobenzene	106467	2.90E+01	3.31E-03	0.01	0.02	1%	0.00	2%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	3.93E+01	4.49E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	4.61E+03	5.27E-01	0.29	0.96	24%	0.01	12%	0.02	23%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	1.95E+01	2.22E-03	0.00	0.01	0%					6.0E-06		
Benzene	71432	2.09E+01	2.95E-03	0.01	0.05	1%	0.00	3%	0.00	2%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	4.70E+01	5.37E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.16E+01	1.32E-03				0.00	0%				3.0E+04	
Chloroform	67663	2.22E+01	2.53E-03	0.00	0.01	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	3.95E+01	4.74E-03	0.00	0.01	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	5.22E+01	5.96E-03	0.03	0.08	2%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	1.11E+02	1.30E-02				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	5.17E+03	5.91E-01				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	7.17E+03	8.19E-01						0.00	1%			1.3E+04
Naphthalene	91203	7.16E+01	8.18E-03	0.06	0.19	5%	0.00	3%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	7.90E+02	9.02E-02				0.00	0%				3.0E+03	
Styrene	100425	3.81E+01	4.38E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	7.93E+01	1.03E-02				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	3.95E+02	4.51E-02				0.00	1%				2.0E+02	
Xylenes	1330207	5.14E+01	5.87E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	2.06E+04	7.76E+00				0.02	39%	0.04	50%		2.0E+02	3.2E+03
Diesel PM	9901	1.03E+02	1.39E-01	0.71	2.38	60%	0.00	8%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.00	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 10: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	500	0.010	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	500	0.010	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	500	0.010	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	2.67
TOTAL WORKER CANCER SCORE:	0.80
TOTAL CHRONIC SCORE:	0.03
TOTAL ACUTE SCORE:	0.05

Table 11: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.31E-02	1.35E-05	0.00	0.01	0%	0.00	1%	0.00	1%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.38E-02	4.30E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.65E-02	5.16E-06	0.04	0.13	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	6.16E-02	1.93E-05	0.01	0.02	1%					7.7E-03		
Copper	7440508	4.80E-01	1.51E-04						0.00	0%			1.0E+02
Lead	7439921	1.36E+00	4.23E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	3.04E+00	9.51E-04				0.00	13%				9.0E-02	
Mercury	7439976	7.71E-03	2.42E-06				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	6.39E-01	2.01E-04	0.00	0.01	0%	0.01	17%	0.01	21%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.94E-03	2.17E-06				0.00	0%				2.0E+01	
Acetone	67641	6.89E+03	7.87E-01										
1,4-Dichlorobenzene	106467	2.90E+01	3.31E-03	0.00	0.02	1%	0.00	2%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	3.93E+01	4.49E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	4.61E+03	5.27E-01	0.19	0.64	24%	0.00	12%	0.01	23%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	1.95E+01	2.22E-03	0.00	0.01	0%					6.0E-06		
Benzene	71432	2.09E+01	2.95E-03	0.01	0.03	1%	0.00	3%	0.00	2%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	4.70E+01	5.37E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.16E+01	1.32E-03				0.00	0%				3.0E+04	
Chloroform	67663	2.22E+01	2.53E-03	0.00	0.01	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	3.95E+01	4.74E-03	0.00	0.01	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	5.22E+01	5.96E-03	0.02	0.06	2%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	1.11E+02	1.30E-02				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	5.17E+03	5.91E-01				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	7.17E+03	8.19E-01						0.00	1%			1.3E+04
Naphthalene	91203	7.16E+01	8.18E-03	0.04	0.13	5%	0.00	3%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	7.90E+02	9.02E-02				0.00	0%				3.0E+03	
Styrene	100425	3.81E+01	4.38E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	7.93E+01	1.03E-02				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	3.95E+02	4.51E-02				0.00	1%				2.0E+02	
Xylenes	1330207	5.14E+01	5.87E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	2.06E+04	7.76E+00				0.01	39%	0.02	50%		2.0E+02	3.2E+03
Diesel PM	9901	1.03E+02	1.39E-01	0.48	1.60	60%	0.00	8%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.00	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 12: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	610	0.007	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	610	0.007	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	610	0.007	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE: 0.38
TOTAL WORKER CANCER SCORE: 0.11
TOTAL CHRONIC SCORE: 0.00
TOTAL ACUTE SCORE: 0.01

Table 13: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.31E-02	1.35E-05	0.00	0.00	0%	0.00	1%	0.00	1%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.38E-02	4.30E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.65E-02	5.16E-06	0.01	0.02	5%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	6.16E-02	1.93E-05	0.00	0.00	1%					7.7E-03		
Copper	7440508	4.80E-01	1.51E-04						0.00	0%			1.0E+02
Lead	7439921	1.36E+00	4.23E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	3.04E+00	9.51E-04				0.00	13%				9.0E-02	
Mercury	7439976	7.71E-03	2.42E-06				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	6.39E-01	2.01E-04	0.00	0.00	0%	0.00	17%	0.00	21%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.94E-03	2.17E-06				0.00	0%				2.0E+01	
Acetone	67641	6.89E+03	7.87E-01										
1,4-Dichlorobenzene	106467	2.90E+01	3.31E-03	0.00	0.00	1%	0.00	2%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	3.93E+01	4.49E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	4.61E+03	5.27E-01	0.03	0.09	24%	0.00	12%	0.00	23%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	1.95E+01	2.22E-03	0.00	0.00	0%					6.0E-06		
Benzene	71432	2.09E+01	2.95E-03	0.00	0.00	1%	0.00	3%	0.00	2%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	4.70E+01	5.37E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	1.16E+01	1.32E-03				0.00	0%				3.0E+04	
Chloroform	67663	2.22E+01	2.53E-03	0.00	0.00	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	3.95E+01	4.74E-03	0.00	0.00	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	5.22E+01	5.96E-03	0.00	0.01	2%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	1.11E+02	1.30E-02				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	5.17E+03	5.91E-01				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	7.17E+03	8.19E-01						0.00	1%			1.3E+04
Naphthalene	91203	7.16E+01	8.18E-03	0.01	0.02	5%	0.00	3%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	7.90E+02	9.02E-02				0.00	0%				3.0E+03	
Styrene	100425	3.81E+01	4.38E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	7.93E+01	1.03E-02				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	3.95E+02	4.51E-02				0.00	1%				2.0E+02	
Xylenes	1330207	5.14E+01	5.87E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	2.06E+04	7.76E+00				0.00	39%	0.00	50%		2.0E+02	3.2E+03
Diesel PM	9901	1.03E+02	1.39E-01	0.07	0.23	60%	0.00	8%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.00	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 14: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	1610	0.001	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	1610	0.001	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	1610	0.001	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer} = total score, sum of scores for all compounds for which a unit risk value is available
c = specific carcinogenic compound
E_c = facility-wide or device emissions of substance c, (lbs/yr)
P_c = unit risk factor for substance c, µg/m³
RP = facility-wide or device receptor proximity adjustment factor
7700 = carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$ = total score, sum of scores for all substances with chronic RELs
TS_{acute} = total score, sum of scores for all substances with acute RELs
tc = toxic compound with a chronic REL
ta = toxic compound with an acute REL
E_{tc} = annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta} = maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc} = REL of substance tc, (µg/m³)
P_{ta} = REL of substance ta, (µg/m³)
RP = facility-wide or device receptor proximity adjustment factor
150 = normalization factor
1500 = normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)
Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Summary of Prioritization Scores (PS) by Receptor Distance
Scenario 5

Table 1: Prioritization Scores by Risk Category and Distance

Receptor Distance (m)	Cancer Risk PS	Worker Cancer Risk PS	Chronic Risk PS	Acute Risk PS
50	289.68	86.90	2.43	5.05
100	72.42	21.73	0.61	1.26
200	18.10	5.43	0.15	0.32
500	2.90	0.87	0.02	0.05
610	1.95	0.58	0.02	0.03
1610	0.28	0.08	0.00	0.00

Table 2: Prioritization Scores by Air District Thresholds, Risk Category, and Distance

Air District	Risk Categories			Calculated Receptor Distance (m) for Corresponding Risk Category:			
	PS Threshold Category	PS Cancer Risk Thresholds	PS Chronic/Acute Risk Threshold	Residential Cancer Risk	Worker Cancer Risk	Chronic Risk	Acute Risk
Bay Area Air District, SJVAPCD, SCAQMD	High	≥10	≥10	≤269.1	≤147.4	≤24.6	≤35.5
	Intermediate	≥1 and <10	≥1 and <10	>269.1 and ≤851	>147.4 and ≤466.1	>24.6 and ≤77.9	>35.5 and ≤112.3
	Low	<1	<1	>851	>466.1	>77.9	>112.3
SDAPCD	High	≥100	≥10	≤85.1	≤46.6	≤24.6	≤35.5
	Intermediate	≥1 and <100	≥1 and <10	>85.1 and ≤851	>46.6 and ≤466.1	>24.6 and ≤77.9	>35.5 and ≤112.3
	Low	<1	<1	>851	>466.1	>77.9	>112.3

References:

Cancer Prioritzation Thresholds

BAAQMD, SJVAPCD and SCAQMD use CAPCOA thresholds for cancer PS
https://capcoa.org/capcoa-prioritization-guidelines/

TS ≥ 10	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 10	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

SDAPCD Cancer Score Evaluation:

TS ≥ 100	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 100	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

Other district's threshold are at:
https://ww2.arb.ca.gov/ab-2588-district-prioritization-scores-and-risk-threshold-levels

Chronic/Acute Prioritzation Thresholds

BAAQMD, SJVAPCD, SCAQMD, and SDAPCD use CAPCOA thresholds for non-cancer PS
Chronic/Acute Score Evaluation:

TS ≥ 10	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 10	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

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Scenario 5

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	289.68
TOTAL WORKER CANCER SCORE:	86.90
TOTAL CHRONIC SCORE:	2.43
TOTAL ACUTE SCORE:	5.05

Table 3: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.00E-02	1.25E-05	0.30	1.02	0%	0.05	2%	0.09	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.28E-02	3.98E-06	0.12	0.41	0%	0.01	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.53E-02	4.77E-06	5.31	17.70	6%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	5.72E-02	1.78E-05	1.02	3.39	1%					7.7E-03		
Copper	7440508	4.46E-01	1.40E-04						0.00	0%			1.0E+02
Lead	7439921	1.26E+00	3.91E-04	0.03	0.12	0%					1.2E-05		
Manganese	7439965	2.82E+00	8.81E-04				0.54	22%				9.0E-02	
Mercury	7439976	7.22E-03	2.26E-06				0.00	0%	0.01	0%		3.0E-02	6.0E-01
Nickel	7440020	5.92E-01	1.85E-04	0.36	1.19	0%	0.72	30%	1.39	28%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.44E-03	2.01E-06				0.00	0%				2.0E+01	
Acetone	67641	1.46E+03	1.67E-01										
1,4-Dichlorobenzene	106467	1.03E+01	1.18E-03	0.26	0.87	0%	0.04	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.74E+01	1.98E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.65E+03	1.88E-01	10.26	34.20	12%	0.20	8%	0.60	12%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	6.24E+00	7.12E-04	0.09	0.29	0%					6.0E-06		
Benzene	71432	6.73E+00	1.33E-03	0.45	1.50	1%	0.04	2%	0.07	1%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	1.36E+01	1.56E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	4.29E+00	4.90E-04				0.00	0%				3.0E+04	
Chloroform	67663	8.10E+00	9.24E-04	0.10	0.33	0%	0.00	0%	0.01	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	1.12E+01	1.51E-03	0.06	0.22	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	1.35E+01	1.54E-03	0.65	2.18	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	8.58E+01	1.01E-02				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	1.81E+03	2.07E-01				0.01	0%	0.01	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	1.86E+03	2.13E-01						0.02	0%			1.3E+04
Naphthalene	91203	1.76E+01	2.02E-03	1.38	4.60	2%	0.03	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	1.81E+02	2.06E-02				0.00	0%				3.0E+03	
Styrene	100425	1.08E+01	1.26E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	2.05E+01	3.59E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.96E+02	2.23E-02				0.02	1%				2.0E+02	
Xylenes	1330207	1.45E+01	1.65E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	5.04E+03	5.98E+00				0.43	18%	2.80	56%		2.0E+02	3.2E+03
Diesel PM	9901	9.59E+01	1.36E-01	66.48	221.61	77%	0.33	14%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.01	0.05	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.02	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.01	0%	0.00	0%	0.01	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 4: Receptor Distances

Receptor	D = source to receptor distance (meters)	RP = receptor proximity adjustment factor	Receptor Definition[1]
Cancer/chronic resident/sensitive	50	1.000	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	50	1.000	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	50	1.000	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:

Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:

Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:

CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 5

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	72.42
TOTAL WORKER CANCER SCORE:	21.73
TOTAL CHRONIC SCORE:	0.61
TOTAL ACUTE SCORE:	1.26

Table 5: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.00E-02	1.25E-05	0.08	0.25	0%	0.01	2%	0.02	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.28E-02	3.98E-06	0.03	0.10	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.53E-02	4.77E-06	1.33	4.42	6%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	5.72E-02	1.78E-05	0.25	0.85	1%					7.7E-03		
Copper	7440508	4.46E-01	1.40E-04						0.00	0%			1.0E+02
Lead	7439921	1.26E+00	3.91E-04	0.01	0.03	0%					1.2E-05		
Manganese	7439965	2.82E+00	8.81E-04				0.13	22%				9.0E-02	
Mercury	7439976	7.22E-03	2.26E-06				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	5.92E-01	1.85E-04	0.09	0.30	0%	0.18	30%	0.35	28%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.44E-03	2.01E-06				0.00	0%				2.0E+01	
Acetone	67641	1.46E+03	1.67E-01										
1,4-Dichlorobenzene	106467	1.03E+01	1.18E-03	0.07	0.22	0%	0.01	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.74E+01	1.98E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.65E+03	1.88E-01	2.57	8.55	12%	0.05	8%	0.15	12%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	6.24E+00	7.12E-04	0.02	0.07	0%					6.0E-06		
Benzene	71432	6.73E+00	1.33E-03	0.11	0.38	1%	0.01	2%	0.02	1%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	1.36E+01	1.56E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	4.29E+00	4.90E-04				0.00	0%				3.0E+04	
Chloroform	67663	8.10E+00	9.24E-04	0.02	0.08	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	1.12E+01	1.51E-03	0.02	0.05	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	1.35E+01	1.54E-03	0.16	0.55	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	8.58E+01	1.01E-02				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	1.81E+03	2.07E-01				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	1.86E+03	2.13E-01						0.01	0%			1.3E+04
Naphthalene	91203	1.76E+01	2.02E-03	0.34	1.15	2%	0.01	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	1.81E+02	2.06E-02				0.00	0%				3.0E+03	
Styrene	100425	1.08E+01	1.26E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	2.05E+01	3.59E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.96E+02	2.23E-02				0.00	1%				2.0E+02	
Xylenes	1330207	1.45E+01	1.65E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	5.04E+03	5.98E+00				0.11	18%	0.70	56%		2.0E+02	3.2E+03
Diesel PM	9901	9.59E+01	1.36E-01	16.62	55.40	77%	0.08	14%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.00	0.01	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.00	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 6: Receptor Distances

Receptor	D = source to receptor distance (meters)	RP = receptor proximity adjustment factor	Receptor Definition[1]
Cancer/chronic resident/sensitive	100	0.250	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	100	0.250	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	100	0.250	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:

Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:

Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:

CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 5

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	18.10
TOTAL WORKER CANCER SCORE:	5.43
TOTAL CHRONIC SCORE:	0.15
TOTAL ACUTE SCORE:	0.32

Table 7: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.00E-02	1.25E-05	0.02	0.06	0%	0.00	2%	0.01	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.28E-02	3.98E-06	0.01	0.03	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.53E-02	4.77E-06	0.33	1.11	6%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	5.72E-02	1.78E-05	0.06	0.21	1%					7.7E-03		
Copper	7440508	4.46E-01	1.40E-04						0.00	0%			1.0E+02
Lead	7439921	1.26E+00	3.91E-04	0.00	0.01	0%					1.2E-05		
Manganese	7439965	2.82E+00	8.81E-04				0.03	22%				9.0E-02	
Mercury	7439976	7.22E-03	2.26E-06				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	5.92E-01	1.85E-04	0.02	0.07	0%	0.05	30%	0.09	28%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.44E-03	2.01E-06				0.00	0%				2.0E+01	
Acetone	67641	1.46E+03	1.67E-01										
1,4-Dichlorobenzene	106467	1.03E+01	1.18E-03	0.02	0.05	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.74E+01	1.98E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.65E+03	1.88E-01	0.64	2.14	12%	0.01	8%	0.04	12%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	6.24E+00	7.12E-04	0.01	0.02	0%					6.0E-06		
Benzene	71432	6.73E+00	1.33E-03	0.03	0.09	1%	0.00	2%	0.00	1%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	1.36E+01	1.56E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	4.29E+00	4.90E-04				0.00	0%				3.0E+04	
Chloroform	67663	8.10E+00	9.24E-04	0.01	0.02	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	1.12E+01	1.51E-03	0.00	0.01	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	1.35E+01	1.54E-03	0.04	0.14	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	8.58E+01	1.01E-02				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	1.81E+03	2.07E-01				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	1.86E+03	2.13E-01						0.00	0%			1.3E+04
Naphthalene	91203	1.76E+01	2.02E-03	0.09	0.29	2%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	1.81E+02	2.06E-02				0.00	0%				3.0E+03	
Styrene	100425	1.08E+01	1.26E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	2.05E+01	3.59E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.96E+02	2.23E-02				0.00	1%				2.0E+02	
Xylenes	1330207	1.45E+01	1.65E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	5.04E+03	5.98E+00				0.03	18%	0.18	56%		2.0E+02	3.2E+03
Diesel PM	9901	9.59E+01	1.36E-01	4.16	13.85	77%	0.02	14%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.00	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 8: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	200	0.063	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	200	0.063	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	200	0.063	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 5

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	2.90
TOTAL WORKER CANCER SCORE:	0.87
TOTAL CHRONIC SCORE:	0.02
TOTAL ACUTE SCORE:	0.05

Table 9: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.00E-02	1.25E-05	0.00	0.01	0%	0.00	2%	0.00	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.28E-02	3.98E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.53E-02	4.77E-06	0.05	0.18	6%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	5.72E-02	1.78E-05	0.01	0.03	1%					7.7E-03		
Copper	7440508	4.46E-01	1.40E-04						0.00	0%			1.0E+02
Lead	7439921	1.26E+00	3.91E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	2.82E+00	8.81E-04				0.01	22%				9.0E-02	
Mercury	7439976	7.22E-03	2.26E-06				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	5.92E-01	1.85E-04	0.00	0.01	0%	0.01	30%	0.01	28%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.44E-03	2.01E-06				0.00	0%				2.0E+01	
Acetone	67641	1.46E+03	1.67E-01										
1,4-Dichlorobenzene	106467	1.03E+01	1.18E-03	0.00	0.01	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.74E+01	1.98E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.65E+03	1.88E-01	0.10	0.34	12%	0.00	8%	0.01	12%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	6.24E+00	7.12E-04	0.00	0.00	0%					6.0E-06		
Benzene	71432	6.73E+00	1.33E-03	0.00	0.02	1%	0.00	2%	0.00	1%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	1.36E+01	1.56E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	4.29E+00	4.90E-04				0.00	0%				3.0E+04	
Chloroform	67663	8.10E+00	9.24E-04	0.00	0.00	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	1.12E+01	1.51E-03	0.00	0.00	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	1.35E+01	1.54E-03	0.01	0.02	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	8.58E+01	1.01E-02				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	1.81E+03	2.07E-01				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	1.86E+03	2.13E-01						0.00	0%			1.3E+04
Naphthalene	91203	1.76E+01	2.02E-03	0.01	0.05	2%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	1.81E+02	2.06E-02				0.00	0%				3.0E+03	
Styrene	100425	1.08E+01	1.26E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	2.05E+01	3.59E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.96E+02	2.23E-02				0.00	1%				2.0E+02	
Xylenes	1330207	1.45E+01	1.65E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	5.04E+03	5.98E+00				0.00	18%	0.03	56%		2.0E+02	3.2E+03
Diesel PM	9901	9.59E+01	1.36E-01	0.66	2.22	77%	0.00	14%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.00	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 10: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	500	0.010	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	500	0.010	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	500	0.010	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 5

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	1.95
TOTAL WORKER CANCER SCORE:	0.58
TOTAL CHRONIC SCORE:	0.02
TOTAL ACUTE SCORE:	0.03

Table 11: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.00E-02	1.25E-05	0.00	0.01	0%	0.00	2%	0.00	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.28E-02	3.98E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.53E-02	4.77E-06	0.04	0.12	6%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	5.72E-02	1.78E-05	0.01	0.02	1%					7.7E-03		
Copper	7440508	4.46E-01	1.40E-04						0.00	0%			1.0E+02
Lead	7439921	1.26E+00	3.91E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	2.82E+00	8.81E-04				0.00	22%				9.0E-02	
Mercury	7439976	7.22E-03	2.26E-06				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	5.92E-01	1.85E-04	0.00	0.01	0%	0.00	30%	0.01	28%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.44E-03	2.01E-06				0.00	0%				2.0E+01	
Acetone	67641	1.46E+03	1.67E-01										
1,4-Dichlorobenzene	106467	1.03E+01	1.18E-03	0.00	0.01	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.74E+01	1.98E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.65E+03	1.88E-01	0.07	0.23	12%	0.00	8%	0.00	12%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	6.24E+00	7.12E-04	0.00	0.00	0%					6.0E-06		
Benzene	71432	6.73E+00	1.33E-03	0.00	0.01	1%	0.00	2%	0.00	1%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	1.36E+01	1.56E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	4.29E+00	4.90E-04				0.00	0%				3.0E+04	
Chloroform	67663	8.10E+00	9.24E-04	0.00	0.00	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	1.12E+01	1.51E-03	0.00	0.00	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	1.35E+01	1.54E-03	0.00	0.01	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	8.58E+01	1.01E-02				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	1.81E+03	2.07E-01				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	1.86E+03	2.13E-01						0.00	0%			1.3E+04
Naphthalene	91203	1.76E+01	2.02E-03	0.01	0.03	2%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	1.81E+02	2.06E-02				0.00	0%				3.0E+03	
Styrene	100425	1.08E+01	1.26E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	2.05E+01	3.59E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.96E+02	2.23E-02				0.00	1%				2.0E+02	
Xylenes	1330207	1.45E+01	1.65E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	5.04E+03	5.98E+00				0.00	18%	0.02	56%		2.0E+02	3.2E+03
Diesel PM	9901	9.59E+01	1.36E-01	0.45	1.49	77%	0.00	14%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.00	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 12: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	610	0.007	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	610	0.007	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	610	0.007	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 5

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	0.28
TOTAL WORKER CANCER SCORE:	0.08
TOTAL CHRONIC SCORE:	0.00
TOTAL ACUTE SCORE:	0.00

Table 13: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.00E-02	1.25E-05	0.00	0.00	0%	0.00	2%	0.00	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.28E-02	3.98E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.53E-02	4.77E-06	0.01	0.02	6%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	5.72E-02	1.78E-05	0.00	0.00	1%					7.7E-03		
Copper	7440508	4.46E-01	1.40E-04						0.00	0%			1.0E+02
Lead	7439921	1.26E+00	3.91E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	2.82E+00	8.81E-04				0.00	22%				9.0E-02	
Mercury	7439976	7.22E-03	2.26E-06				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	5.92E-01	1.85E-04	0.00	0.00	0%	0.00	30%	0.00	28%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.44E-03	2.01E-06				0.00	0%				2.0E+01	
Acetone	67641	1.46E+03	1.67E-01										
1,4-Dichlorobenzene	106467	1.03E+01	1.18E-03	0.00	0.00	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.74E+01	1.98E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.65E+03	1.88E-01	0.01	0.03	12%	0.00	8%	0.00	12%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	6.24E+00	7.12E-04	0.00	0.00	0%					6.0E-06		
Benzene	71432	6.73E+00	1.33E-03	0.00	0.00	1%	0.00	2%	0.00	1%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	1.36E+01	1.56E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	4.29E+00	4.90E-04				0.00	0%				3.0E+04	
Chloroform	67663	8.10E+00	9.24E-04	0.00	0.00	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	1.12E+01	1.51E-03	0.00	0.00	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	1.35E+01	1.54E-03	0.00	0.00	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	8.58E+01	1.01E-02				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	1.81E+03	2.07E-01				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	1.86E+03	2.13E-01						0.00	0%			1.3E+04
Naphthalene	91203	1.76E+01	2.02E-03	0.00	0.00	2%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	1.81E+02	2.06E-02				0.00	0%				3.0E+03	
Styrene	100425	1.08E+01	1.26E-03				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	2.05E+01	3.59E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.96E+02	2.23E-02				0.00	1%				2.0E+02	
Xylenes	1330207	1.45E+01	1.65E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	5.04E+03	5.98E+00				0.00	18%	0.00	56%		2.0E+02	3.2E+03
Diesel PM	9901	9.59E+01	1.36E-01	0.06	0.21	77%	0.00	14%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.00	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 14: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	1610	0.001	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	1610	0.001	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	1610	0.001	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer} = total score, sum of scores for all compounds for which a unit risk value is available
c = specific carcinogenic compound
E_c = facility-wide or device emissions of substance c, (lbs/yr)
P_c = unit risk factor for substance c, µg/m³
RP = facility-wide or device receptor proximity adjustment factor
7700 = carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$ = total score, sum of scores for all substances with chronic RELs
TS_{acute} = total score, sum of scores for all substances with acute RELs
tc = toxic compound with a chronic REL
ta = toxic compound with an acute REL
E_{tc} = annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta} = maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc} = REL of substance tc, (µg/m³)
P_{ta} = REL of substance ta, (µg/m³)
RP = facility-wide or device receptor proximity adjustment factor
150 = normalization factor
1500 = normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)
Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Summary of Prioritization Scores (PS) by Receptor Distance
Scenario 6

Table 1: Prioritization Scores by Risk Category and Distance

Receptor Distance (m)	Cancer Risk PS	Worker Cancer Risk PS	Chronic Risk PS	Acute Risk PS
50	278.61	83.58	2.34	4.89
100	69.65	20.90	0.59	1.22
200	17.41	5.22	0.15	0.31
500	2.79	0.84	0.02	0.05
610	1.87	0.56	0.02	0.03
1610	0.27	0.08	0.00	0.00

Table 2: Prioritization Scores by Air District Thresholds, Risk Category, and Distance

Air District	Risk Categories			Calculated Receptor Distance (m) for Corresponding Risk Category:			
	PS Threshold Category	PS Cancer Risk Thresholds	PS Chronic/Acute Risk Threshold	Residential Cancer Risk	Worker Cancer Risk	Chronic Risk	Acute Risk
Bay Area Air District, SJVAPCD, SCAQMD	High	≥10	≥10	≤263.9	≤144.6	≤24.2	≤34.9
	Intermediate	≥1 and <10	≥1 and <10	>263.9 and ≤834.6	>144.6 and ≤457.1	>24.2 and ≤76.6	>34.9 and ≤110.5
	Low	<1	<1	>834.6	>457.1	>76.6	>110.5
SDAPCD	High	≥100	≥10	≤83.5	≤45.7	≤24.2	≤34.9
	Intermediate	≥1 and <100	≥1 and <10	>83.5 and ≤834.6	>45.7 and ≤457.1	>24.2 and ≤76.6	>34.9 and ≤110.5
	Low	<1	<1	>834.6	>457.1	>76.6	>110.5

References:

Cancer Prioritzation Thresholds

BAAQMD, SJVAPCD and SCAQMD use CAPCOA thresholds for cancer PS
https://capcoa.org/capcoa-prioritization-guidelines/

TS ≥ 10	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 10	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

SDAPCD Cancer Score Evaluation:

TS ≥ 100	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 100	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

Other district's threshold are at:
https://ww2.arb.ca.gov/ab-2588-district-prioritization-scores-and-risk-threshold-levels

Chronic/Acute Prioritzation Thresholds

BAAQMD, SJVAPCD, SCAQMD, and SDAPCD use CAPCOA thresholds for non-cancer PS
Chronic/Acute Score Evaluation:

TS ≥ 10	High Priority - Will be subject to Risk Assessment
1 ≤ TS < 10	Intermediate Priority - May be subject to Risk Assessment based on additional factors
TS < 1	Low Priority - Will NOT be subject to Risk Assessment

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	278.61
TOTAL WORKER CANCER SCORE:	83.58
TOTAL CHRONIC SCORE:	2.34
TOTAL ACUTE SCORE:	4.89

Table 3: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.00E-02	1.25E-05	0.30	1.02	0%	0.05	2%	0.09	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.28E-02	3.98E-06	0.12	0.41	0%	0.01	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.53E-02	4.77E-06	5.31	17.70	6%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	5.72E-02	1.78E-05	1.02	3.39	1%					7.7E-03		
Copper	7440508	4.46E-01	1.40E-04						0.00	0%			1.0E+02
Lead	7439921	1.26E+00	3.91E-04	0.03	0.12	0%					1.2E-05		
Manganese	7439965	2.82E+00	8.81E-04				0.54	23%				9.0E-02	
Mercury	7439976	7.22E-03	2.26E-06				0.00	0%	0.01	0%		3.0E-02	6.0E-01
Nickel	7440020	5.92E-01	1.85E-04	0.36	1.19	0%	0.72	31%	1.39	28%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.44E-03	2.01E-06				0.00	0%				2.0E+01	
Acetone	67641	7.81E+02	8.92E-02										
1,4-Dichlorobenzene	106467	7.97E+00	9.10E-04	0.20	0.67	0%	0.03	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.46E+01	1.67E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.27E+03	1.46E-01	7.95	26.49	10%	0.16	7%	0.46	10%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	4.59E+00	5.24E-04	0.06	0.21	0%					6.0E-06		
Benzene	71432	4.95E+00	1.13E-03	0.33	1.11	0%	0.03	1%	0.06	1%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	9.46E+00	1.08E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	3.38E+00	3.86E-04				0.00	0%				3.0E+04	
Chloroform	67663	6.34E+00	7.23E-04	0.08	0.26	0%	0.00	0%	0.01	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	7.68E+00	1.11E-03	0.04	0.15	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	8.64E+00	9.87E-04	0.42	1.40	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	8.27E+01	9.77E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	1.39E+03	1.59E-01				0.01	0%	0.01	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	1.20E+03	1.37E-01						0.02	0%			1.3E+04
Naphthalene	91203	1.08E+01	1.24E-03	0.85	2.83	1%	0.02	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	1.05E+02	1.19E-02				0.00	0%				3.0E+03	
Styrene	100425	7.41E+00	8.71E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	1.32E+01	2.75E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.71E+02	1.95E-02				0.01	1%				2.0E+02	
Xylenes	1330207	9.83E+00	1.12E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	5.04E+03	5.98E+00				0.43	18%	2.80	57%		2.0E+02	3.2E+03
Diesel PM	9901	9.59E+01	1.36E-01	66.48	221.61	80%	0.33	14%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.01	0.05	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.02	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.01	0%	0.00	0%	0.01	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 4: Receptor Distances

Receptor	D = source to receptor distance (meters)	RP = receptor proximity adjustment factor	Receptor Definition[1]
Cancer/chronic resident/sensitive	50	1.000	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	50	1.000	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	50	1.000	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:

Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:

Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:

CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	69.65
TOTAL WORKER CANCER SCORE:	20.90
TOTAL CHRONIC SCORE:	0.59
TOTAL ACUTE SCORE:	1.22

Table 5: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.00E-02	1.25E-05	0.08	0.25	0%	0.01	2%	0.02	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.28E-02	3.98E-06	0.03	0.10	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.53E-02	4.77E-06	1.33	4.42	6%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	5.72E-02	1.78E-05	0.25	0.85	1%					7.7E-03		
Copper	7440508	4.46E-01	1.40E-04						0.00	0%			1.0E+02
Lead	7439921	1.26E+00	3.91E-04	0.01	0.03	0%					1.2E-05		
Manganese	7439965	2.82E+00	8.81E-04				0.13	23%				9.0E-02	
Mercury	7439976	7.22E-03	2.26E-06				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	5.92E-01	1.85E-04	0.09	0.30	0%	0.18	31%	0.35	28%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.44E-03	2.01E-06				0.00	0%				2.0E+01	
Acetone	67641	7.81E+02	8.92E-02										
1,4-Dichlorobenzene	106467	7.97E+00	9.10E-04	0.05	0.17	0%	0.01	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.46E+01	1.67E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.27E+03	1.46E-01	1.99	6.62	10%	0.04	7%	0.12	10%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	4.59E+00	5.24E-04	0.02	0.05	0%					6.0E-06		
Benzene	71432	4.95E+00	1.13E-03	0.08	0.28	0%	0.01	1%	0.02	1%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	9.46E+00	1.08E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	3.38E+00	3.86E-04				0.00	0%				3.0E+04	
Chloroform	67663	6.34E+00	7.23E-04	0.02	0.06	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	7.68E+00	1.11E-03	0.01	0.04	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	8.64E+00	9.87E-04	0.10	0.35	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	8.27E+01	9.77E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	1.39E+03	1.59E-01				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	1.20E+03	1.37E-01						0.00	0%			1.3E+04
Naphthalene	91203	1.08E+01	1.24E-03	0.21	0.71	1%	0.01	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	1.05E+02	1.19E-02				0.00	0%				3.0E+03	
Styrene	100425	7.41E+00	8.71E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	1.32E+01	2.75E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.71E+02	1.95E-02				0.00	1%				2.0E+02	
Xylenes	1330207	9.83E+00	1.12E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	5.04E+03	5.98E+00				0.11	18%	0.70	57%		2.0E+02	3.2E+03
Diesel PM	9901	9.59E+01	1.36E-01	16.62	55.40	80%	0.08	14%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.00	0.01	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.00	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 6: Receptor Distances

Receptor	D = source to receptor distance (meters)	RP = receptor proximity adjustment factor	Receptor Definition[1]
Cancer/chronic resident/sensitive	100	0.250	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	100	0.250	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	100	0.250	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:

Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:

Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:

CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	17.41
TOTAL WORKER CANCER SCORE:	5.22
TOTAL CHRONIC SCORE:	0.15
TOTAL ACUTE SCORE:	0.31

Table 7: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.00E-02	1.25E-05	0.02	0.06	0%	0.00	2%	0.01	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.28E-02	3.98E-06	0.01	0.03	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.53E-02	4.77E-06	0.33	1.11	6%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	5.72E-02	1.78E-05	0.06	0.21	1%					7.7E-03		
Copper	7440508	4.46E-01	1.40E-04						0.00	0%			1.0E+02
Lead	7439921	1.26E+00	3.91E-04	0.00	0.01	0%					1.2E-05		
Manganese	7439965	2.82E+00	8.81E-04				0.03	23%				9.0E-02	
Mercury	7439976	7.22E-03	2.26E-06				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	5.92E-01	1.85E-04	0.02	0.07	0%	0.05	31%	0.09	28%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.44E-03	2.01E-06				0.00	0%				2.0E+01	
Acetone	67641	7.81E+02	8.92E-02										
1,4-Dichlorobenzene	106467	7.97E+00	9.10E-04	0.01	0.04	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.46E+01	1.67E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.27E+03	1.46E-01	0.50	1.66	10%	0.01	7%	0.03	10%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	4.59E+00	5.24E-04	0.00	0.01	0%					6.0E-06		
Benzene	71432	4.95E+00	1.13E-03	0.02	0.07	0%	0.00	1%	0.00	1%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	9.46E+00	1.08E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	3.38E+00	3.86E-04				0.00	0%				3.0E+04	
Chloroform	67663	6.34E+00	7.23E-04	0.00	0.02	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	7.68E+00	1.11E-03	0.00	0.01	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	8.64E+00	9.87E-04	0.03	0.09	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	8.27E+01	9.77E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	1.39E+03	1.59E-01				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	1.20E+03	1.37E-01						0.00	0%			1.3E+04
Naphthalene	91203	1.08E+01	1.24E-03	0.05	0.18	1%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	1.05E+02	1.19E-02				0.00	0%				3.0E+03	
Styrene	100425	7.41E+00	8.71E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	1.32E+01	2.75E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.71E+02	1.95E-02				0.00	1%				2.0E+02	
Xylenes	1330207	9.83E+00	1.12E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	5.04E+03	5.98E+00				0.03	18%	0.18	57%		2.0E+02	3.2E+03
Diesel PM	9901	9.59E+01	1.36E-01	4.16	13.85	80%	0.02	14%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.00	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 8: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	200	0.063	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	200	0.063	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	200	0.063	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 6

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	2.79
TOTAL WORKER CANCER SCORE:	0.84
TOTAL CHRONIC SCORE:	0.02
TOTAL ACUTE SCORE:	0.05

Table 9: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.00E-02	1.25E-05	0.00	0.01	0%	0.00	2%	0.00	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.28E-02	3.98E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.53E-02	4.77E-06	0.05	0.18	6%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	5.72E-02	1.78E-05	0.01	0.03	1%					7.7E-03		
Copper	7440508	4.46E-01	1.40E-04						0.00	0%			1.0E+02
Lead	7439921	1.26E+00	3.91E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	2.82E+00	8.81E-04				0.01	23%				9.0E-02	
Mercury	7439976	7.22E-03	2.26E-06				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	5.92E-01	1.85E-04	0.00	0.01	0%	0.01	31%	0.01	28%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.44E-03	2.01E-06				0.00	0%				2.0E+01	
Acetone	67641	7.81E+02	8.92E-02										
1,4-Dichlorobenzene	106467	7.97E+00	9.10E-04	0.00	0.01	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.46E+01	1.67E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.27E+03	1.46E-01	0.08	0.26	10%	0.00	7%	0.00	10%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	4.59E+00	5.24E-04	0.00	0.00	0%					6.0E-06		
Benzene	71432	4.95E+00	1.13E-03	0.00	0.01	0%	0.00	1%	0.00	1%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	9.46E+00	1.08E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	3.38E+00	3.86E-04				0.00	0%				3.0E+04	
Chloroform	67663	6.34E+00	7.23E-04	0.00	0.00	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	7.68E+00	1.11E-03	0.00	0.00	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	8.64E+00	9.87E-04	0.00	0.01	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	8.27E+01	9.77E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	1.39E+03	1.59E-01				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	1.20E+03	1.37E-01						0.00	0%			1.3E+04
Naphthalene	91203	1.08E+01	1.24E-03	0.01	0.03	1%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	1.05E+02	1.19E-02				0.00	0%				3.0E+03	
Styrene	100425	7.41E+00	8.71E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	1.32E+01	2.75E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.71E+02	1.95E-02				0.00	1%				2.0E+02	
Xylenes	1330207	9.83E+00	1.12E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	5.04E+03	5.98E+00				0.00	18%	0.03	57%		2.0E+02	3.2E+03
Diesel PM	9901	9.59E+01	1.36E-01	0.66	2.22	80%	0.00	14%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.00	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 10: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	500	0.010	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	500	0.010	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	500	0.010	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 6

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	1.87
TOTAL WORKER CANCER SCORE:	0.56
TOTAL CHRONIC SCORE:	0.02
TOTAL ACUTE SCORE:	0.03

Table 11: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.00E-02	1.25E-05	0.00	0.01	0%	0.00	2%	0.00	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.28E-02	3.98E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.53E-02	4.77E-06	0.04	0.12	6%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	5.72E-02	1.78E-05	0.01	0.02	1%					7.7E-03		
Copper	7440508	4.46E-01	1.40E-04						0.00	0%			1.0E+02
Lead	7439921	1.26E+00	3.91E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	2.82E+00	8.81E-04				0.00	23%				9.0E-02	
Mercury	7439976	7.22E-03	2.26E-06				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	5.92E-01	1.85E-04	0.00	0.01	0%	0.00	31%	0.01	28%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.44E-03	2.01E-06				0.00	0%				2.0E+01	
Acetone	67641	7.81E+02	8.92E-02										
1,4-Dichlorobenzene	106467	7.97E+00	9.10E-04	0.00	0.00	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.46E+01	1.67E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.27E+03	1.46E-01	0.05	0.18	10%	0.00	7%	0.00	10%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	4.59E+00	5.24E-04	0.00	0.00	0%					6.0E-06		
Benzene	71432	4.95E+00	1.13E-03	0.00	0.01	0%	0.00	1%	0.00	1%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	9.46E+00	1.08E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	3.38E+00	3.86E-04				0.00	0%				3.0E+04	
Chloroform	67663	6.34E+00	7.23E-04	0.00	0.00	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	7.68E+00	1.11E-03	0.00	0.00	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	8.64E+00	9.87E-04	0.00	0.01	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	8.27E+01	9.77E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	1.39E+03	1.59E-01				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	1.20E+03	1.37E-01						0.00	0%			1.3E+04
Naphthalene	91203	1.08E+01	1.24E-03	0.01	0.02	1%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	1.05E+02	1.19E-02				0.00	0%				3.0E+03	
Styrene	100425	7.41E+00	8.71E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	1.32E+01	2.75E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.71E+02	1.95E-02				0.00	1%				2.0E+02	
Xylenes	1330207	9.83E+00	1.12E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	5.04E+03	5.98E+00				0.00	18%	0.02	57%		2.0E+02	3.2E+03
Diesel PM	9901	9.59E+01	1.36E-01	0.45	1.49	80%	0.00	14%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.00	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 12: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	610	0.007	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	610	0.007	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	610	0.007	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer}	=	total score, sum of scores for all compounds for which a unit risk value is available
c	=	specific carcinogenic compound
E_c	=	facility-wide or device emissions of substance c, (lbs/yr)
P_c	=	unit risk factor for substance c, µg/m^3
RP	=	facility-wide or device receptor proximity adjustment factor
7700	=	carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$	=	total score, sum of scores for all substances with chronic RELs
TS_{acute}	=	total score, sum of scores for all substances with acute RELs
tc	=	toxic compound with a chronic REL
ta	=	toxic compound with an acute REL
E_{tc}	=	annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta}	=	maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc}	=	REL of substance tc, (µg/m^3)
P_{ta}	=	REL of substance ta, (µg/m^3)
RP	=	facility-wide or device receptor proximity adjustment factor
150	=	normalization factor
1500	=	normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)

Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
https://www.sdapcd.org/content/dam/sdapcd/documents/permits/air-toxics/Prioritization-Procedures.pdf

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Scenario 6

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TAC Emissions and Prioritization Score

TOTAL CANCER SCORE:	0.27
TOTAL WORKER CANCER SCORE:	0.08
TOTAL CHRONIC SCORE:	0.00
TOTAL ACUTE SCORE:	0.00

Table 13: Prioritization Score by Chemical

AB2588 LISTED SUBSTANCE	CAS	ANNUAL EMISSIONS (lbs/yr)	MAX HOURLY EMISSIONS (lbs/hr)	WORKER CANCER SCORE	CANCER SCORE	% OF CANCER SCORE	CHRONIC SCORE	% OF CHRONIC SCORE	ACUTE SCORE	% OF ACUTE SCORE	UNIT RISK FACTOR $(ug/m^3)^{-1}$	CHRONIC REL (ug/m^3)	ACUTE REL (ug/m^3)
Arsenic	7440382	4.00E-02	1.25E-05	0.00	0.00	0%	0.00	2%	0.00	2%	3.3E-03	1.5E-02	2.0E-01
Cadmium	7440439	1.28E-02	3.98E-06	0.00	0.00	0%	0.00	0%			4.2E-03	2.0E-02	
Hexavalent Chromium	18540299	1.53E-02	4.77E-06	0.01	0.02	6%	0.00	0%			1.5E-01	2.0E-01	
Cobalt	7440484	5.72E-02	1.78E-05	0.00	0.00	1%					7.7E-03		
Copper	7440508	4.46E-01	1.40E-04						0.00	0%			1.0E+02
Lead	7439921	1.26E+00	3.91E-04	0.00	0.00	0%					1.2E-05		
Manganese	7439965	2.82E+00	8.81E-04				0.00	23%				9.0E-02	
Mercury	7439976	7.22E-03	2.26E-06				0.00	0%	0.00	0%		3.0E-02	6.0E-01
Nickel	7440020	5.92E-01	1.85E-04	0.00	0.00	0%	0.00	31%	0.00	28%	2.6E-04	1.4E-02	2.0E-01
Selenium	7782492	6.44E-03	2.01E-06				0.00	0%				2.0E+01	
Acetone	67641	7.81E+02	8.92E-02										
1,4-Dichlorobenzene	106467	7.97E+00	9.10E-04	0.00	0.00	0%	0.00	1%	0.00	0%	1.1E-05	5.0E+00	8.7E+03
2-Propanol (Isopropylalcohol, IPA)	67630	1.46E+01	1.67E-03				0.00	0%	0.00	0%		7.0E+03	3.2E+03
Acetaldehyde	75070	1.27E+03	1.46E-01	0.01	0.03	10%	0.00	7%	0.00	10%	2.7E-06	1.4E+02	4.7E+02
Allyl Chloride (3-Chloropropene)	107051	4.59E+00	5.24E-04	0.00	0.00	0%					6.0E-06		
Benzene	71432	4.95E+00	1.13E-03	0.00	0.00	0%	0.00	1%	0.00	1%	2.9E-05	3.0E+00	2.7E+01
Carbondisulfide	75150	9.46E+00	1.08E-03				0.00	0%	0.00	0%		8.0E+02	6.2E+03
Chloroethane	75003	3.38E+00	3.86E-04				0.00	0%				3.0E+04	
Chloroform	67663	6.34E+00	7.23E-04	0.00	0.00	0%	0.00	0%	0.00	0%	5.3E-06	3.0E+02	1.5E+02
Ethylbenzene	100414	7.68E+00	1.11E-03	0.00	0.00	0%	0.00	0%			2.5E-06	2.0E+03	
Ethylene Dichloride (1,2-dichloroethane)	107062	8.64E+00	9.87E-04	0.00	0.00	1%	0.00	0%			2.1E-05	4.0E+02	
Hexane	110543	8.27E+01	9.77E-03				0.00	0%				7.0E+03	
Methanol (Methylalcohol)	67561	1.39E+03	1.59E-01				0.00	0%	0.00	0%		4.0E+03	2.8E+04
Methyl Ethyl Ketone (2-butanone)	78933	1.20E+03	1.37E-01						0.00	0%			1.3E+04
Naphthalene	91203	1.08E+01	1.24E-03	0.00	0.00	1%	0.00	1%			3.4E-05	9.0E+00	
Propene (Propylene)	115071	1.05E+02	1.19E-02				0.00	0%				3.0E+03	
Styrene	100425	7.41E+00	8.71E-04				0.00	0%	0.00	0%		9.0E+02	2.1E+04
Toluene	108883	1.32E+01	2.75E-03				0.00	0%	0.00	0%		4.2E+02	5.0E+03
Vinyl acetate	108054	1.71E+02	1.95E-02				0.00	1%				2.0E+02	
Xylenes	1330207	9.83E+00	1.12E-03				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Ammonia	7664417	5.04E+03	5.98E+00				0.00	18%	0.00	57%		2.0E+02	3.2E+03
Diesel PM	9901	9.59E+01	1.36E-01	0.06	0.21	80%	0.00	14%			3.0E-04	5.0E+00	
1,2,4-Trimethylbenzene	95636	6.81E-02	2.18E-04				0.00	0%	0.00	0%		4.0E+00	2.4E+03
1,3-Butadiene	106990	3.74E-02	1.20E-04	0.00	0.00	0%	0.00	0%	0.00	0%	1.7E-04	2.0E+00	6.6E+02
Acrolein	107028	9.53E-03	3.06E-05				0.00	0%	0.00	0%		3.5E-01	2.5E+00
Chlorine	7782505	5.26E-02	1.69E-04				0.00	0%	0.00	0%		2.0E-01	2.1E+02
Formaldehyde	50000	1.17E-01	3.74E-04	0.00	0.00	0%	0.00	0%	0.00	0%	6.0E-06	9.0E+00	5.5E+01
Methyl tert-butyl ether	1634044	1.33E-01	4.26E-04	0.00	0.00	0%	0.00	0%			2.6E-07	8.0E+03	
m-Xylene	108383	2.51E-01	8.04E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
o-Xylene	95476	8.71E-02	2.79E-04				0.00	0%	0.00	0%		7.0E+02	2.2E+04
Vanadium (Fume Or Dust)	7440622	7.90E-03	2.53E-06						0.00	0%			3.0E+01

This table uses unit risk factors and REL's from the OEHHA/ARB revised Risk Assessment Health Values version 25268

Table 14: Receptor Distances			
Receptor	**D = source to receptor distance (meters)**	**RP = receptor proximity adjustment factor**	**Receptor Definition[1]**
Cancer/chronic resident/sensitive	1610	0.001	Closest land, property boundary, building, or watercraft used for areas of residence or areas which are under construction for residential use (Resident). Sensitive receptors include hospitals, K-12 schools, daycare, and eldercare facilities.
Acute = Short-term public access location	1610	0.001	Closest areas such as public parks or residential or work place that someone might be for 1 hour (although not including roadways or sidewalks).
Cancer offsite worker	1610	0.001	Closest land, property boundary or building which is zoned for manufacturing, retail activity, worksites, or industrial sites (light or heavy).

Notes:
1. The receptor definition may vary by district, this provides a conservative outline.

Cancer Prioritization Calculation:
Using the Emission and Potency Procedure

$$TS_{cancer} = \sum^{c} (E_c)\,(P_c)\,(RP)\,(7700)$$

TS_{cancer} = total score, sum of scores for all compounds for which a unit risk value is available
c = specific carcinogenic compound
E_c = facility-wide or device emissions of substance c, (lbs/yr)
P_c = unit risk factor for substance c, µg/m³
RP = facility-wide or device receptor proximity adjustment factor
7700 = carcinogenic (or cancer) normalization factor, and 0.3 applied for worker risk

Worker cancer PS is calculated using the SDAPCD method of applying a 0.3 factor to to the cancer PS equation

Chronic/Acute Prioritzation Calculation:
Using the Emission and Potency Procedure

$$TS_{chronic} = \sum^{tc} (E_{tc}/P_{tc})\,(RP)\,(150)$$
$$TS_{acute} = \sum^{ta} (E_{ta}/P_{ta})\,(RP)\,(1500)$$

$TS_{chronic}$ = total score, sum of scores for all substances with chronic RELs
TS_{acute} = total score, sum of scores for all substances with acute RELs
tc = toxic compound with a chronic REL
ta = toxic compound with an acute REL
E_{tc} = annual average hourly facility-wide or device emissions of tc, (lbs/hr)
E_{ta} = maximum hourly facility-wide or device emissions of ta, (lbs/hr)
P_{tc} = REL of substance tc, (µg/m³)
P_{ta} = REL of substance ta, (µg/m³)
RP = facility-wide or device receptor proximity adjustment factor
150 = normalization factor
1500 = normalization factor

RP = receptor proximity adjustment factor, based on SDAPCD guidance

For facilities with source-receptor distances greater than 50 meters the receptor proximity adjustment factor will be calculated as follows:

$$RP = 2500/D^2$$

where,

D = source to receptor distance (meters)
Note: source may be a facility or device. Each device may have its own RP. For devices that are volume sources, the outside edge of the volume source's edge should be used to determine RP.

References:
CAPCOA Air Toxic “Hot Spots” Program, Facility Prioritization Guidelines, August 2016
https://capcoa.org/capcoa-prioritization-guidelines/
SDAPCD AIR TOXICS "HOT SPOTS" PROGRAM PRIORITIZATION PROCEDURES, June 2023
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