Risk Assessment

Small and Medium Composting Facilities and Operations

Statewide, California

California Department of Resources Recovery and Recycling

Waste Permitting, Compliance, and Mitigation Division
1001 I Street
Sacramento, CA 95814

September 1, 2026

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NCE Project No. 1235.03.55

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Prepared for:

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Risk Assessment Overview

This Risk Assessment was prepared to evaluate potential risks associated with the development and operation of small and medium composting facilities and operations. The Risk Assessment qualitatively assesses the potential risks to the environment (soil, groundwater, surface water, and air quality) and human population to inform the programmatic Environmental Impact Report (EIR) required by Senate Bill (SB) 1046 to facilitate the development and operation of small and medium composting facilities and operations throughout the State.

Generally, a Risk Assessment is a systematic approach to identify, analyze, and prioritize risk based on site settings, receptors, potential exposure pathways, and adverse effects. The approach to this Risk Assessment includes looking at the environmental settings where future composting facilities and operations could be located, establishing potential receptors and exposure pathways, review of publicly available information related to potential contaminants of concern from composting activities, and assigning qualitative risk levels to composting activities. Development of the Risk Assessment relied on institutional knowledge composting activities and on existing relevant resources including established regulatory composting guidelines and regulations outlined in the State Water Resources Control Board's (SWRCB) General Waste Discharge Requirements for Commercial Composting Operations Order WQ 2020-0012-DWQ (General Order) and CalRecycle regulations pertaining to compostable material handling facilities and operations outlined in California Code of Regulations (CCR) Title 14 Chapter 3.1 Sections 17850 through 17895 (14 CCR). The Risk Assessment presents General Order and 14 CCR requirements that address and reduce risk and concludes with best management practices (BMPs) that could be implemented to further reduce and mitigate potential residual risks associated with composting operations.

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List of Abbreviations

Abbreviation	Definition
ASPs	aerated static piles
BAAQMD	Bay Area Air Quality Management District
basin plan	Regional Water Quality Control Board water quality control plan
BMPs	best management practices
CAA	Clean Air Act
CalRecycle	California Department of Resources Recovery and Recycling
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CASP	covered aerated static pile
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
cy	cubic yards
DPM	diesel particulate matter
DWR	Department of Water Resources
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
General Order	General Waste Discharge Requirements for Commercial Composting Operations
NH3	ammonia
OEHHA	Office of Environmental Health Hazard Assessment
OIMP	Odor Impact Minimization Plan
program	Small and Medium Composting Facilities and Operations
RWQCB	Regional Water Quality Control Board
SB	Senate Bill

Abbreviation	Definition
SCAQMD	South Coast Air Quality Management District
SDAPCD	San Diego Air Pollution Control District
SJVAPCD	San Joaquin Valley Air Pollution Control District
State	State of California
SWIS	Solid Waste Information System
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
tpy	tons per year
VFA	volatile fatty acids
VOCs	volatile organic compounds
WDR	Waste Discharge Requirement
14 CCR	California Code of Regulations Title 14
°C	degrees Celsius
°F	degrees Fahrenheit

1 Introduction/Purpose

With the passage and implementation of Senate Bill (SB) 1383 in 2016, the California Department of Resources Recovery and Recycling (CalRecycle), in consultation with the California Air Resources Board (CARB), developed a series of goals (and associated regulations) to reduce disposal of organic waste (statewide) by 50 percent of 2014 levels by 2020 and 75 percent by 2025. In addition, a recovery goal of at least 20 percent by 2025 of edible food in the organic waste stream was established. CalRecycle prepared an Environmental Impact Report (EIR) related to SB 1383 (certified in 2019) that programmatically evaluated the expansion of composting facilities, as well as other types of waste reduction facilities, throughout the State of California (State) in response to the established goals.

In 2024, CalRecycle prepared an evaluation of current practices and permitting related to the development of small (less than 10,000 tpy; not more than 5,000 cubic yards [cy] at any one time) composting operations and medium (less than 25,000 tpy but more than 10,000 tpy; more than 5,000 cy but not more than 12,500 cy at any one time) composting facilities that accept agricultural, green, and food material (including vegetative food material). As identified in that study, the entitlement and environmental review of small and medium compostable material handling facilities and operations has been historically approached in many different ways with some facilities and operations deemed non-discretionary (i.e., not a project under the California Environmental Quality Act [CEQA]) while others would involve preparation of either a Notice of Exemption, Negative Declaration, Mitigated Negative Declaration pursuant to CEQA requirements. This historic approach has led to challenges associated with permitting and development, following initial approval by the local jurisdiction. For context and since 2021, 10 small and 18 medium composting facilities and operations have been permitted or authorized by the solid waste local enforcement agency and recorded in CalRecycle's Solid Waste Information System (SWIS) database. To ensure that the State continues to achieve and exceed SB 1383 targets, it is reasonably foreseeable that the development of additional small and medium composting facilities is necessary, especially within more rural areas of the State.

To help facilitate the permitting and development of small and medium composting facilities and operations throughout the State, a programmatic EIR is being prepared. An objective of the program is to develop a consistent approach and to facilitate the permitting and regulatory approval process for these small and medium composting facilities and operations. The purpose of this Risk Assessment is to qualitatively assess the potential risks associated with the development and operation of small and medium composting facilities and operations to inform preparation of the programmatic EIR. This Risk Assessment looks at publicly available information related to potential contaminants of concern from the development and operations of compost facilities and operations, identifies potential exposure pathways for those identified contaminants to affect various media including soil, water, and air. Development of the Risk Assessment relied heavily on existing relevant resources including established regulatory composting guidelines and regulations outlined in the State Water Resources Control Board's (SWRCB) General Waste Discharge Requirements for Commercial Composting Operations Order WQ 2020-0012-DWQ (General Order; SWRCB 2020) and CalRecycle regulations pertaining to compostable material handling facilities and operations outlined in California Code of Regulations (CCR) Title 14 Chapter 3.1 Sections 17850 through 17895 (14 CCR). The Risk Assessment concludes with BMPs that could be implemented to reduce and mitigate potential risks associated with the operation of composting facilities and operations.

2 Program Description and Composting Options

2.1 Program Description

Based on the projected need for additional organic waste recycling capacity to achieve and maintain SB 1383 targets, it is estimated that capacity for approximately 506,000 additional tons of compostable material will be necessary by 2034 (CalRecycle n.d). Considering that composting facilities may be located where their target capacity may not be achieved, an additional 25% of capacity need has been applied to the estimated need for a total program volume of 632,500 tpy.

To provide adequate capacity for the forecasted increase in compostable material by 2034, it is estimated that the program may result in an additional 15 small composting operations and 25 medium composting facilities across California. This estimate is derived based on the average permitted capacity for small and medium composting facilities and operations since 2021 (i.e., over the last 5 years). It is also considered likely that small and medium composting facilities and operations would be developed beyond 2034, which are reflected as part of the total potential program development below. Table 2-1 provides estimates for key components of each facility and operation to be developed, the program by 2034, and the entire program.

Table 2-1. Small and Medium Composting Facilities and Operations Program

Per Facility	**Small**	**Medium**	
Allowable On-site capacity (at one time)	Up to 5,000 cy	5,000 – 12,500 cy	
Annual tonnage (tpy)	10,000	25,000	
Average acreage per facility	5	11	
Feedstock Type	Agricultural material, Green material, Vegetative food material	Agricultural material, Green material, Vegetative food material, Food material	
Program by 2034	**Small**	**Medium**	**Total**
# of Facilities	15	25	40
# of Facilities per Year (average)	Up to 3	Up to 4	Up to 7
Total acres of development	75	275	350
Annual tonnage (tpy)	150,000	625,000	775,000
Program Total			
# of Facilities	30	50	80

# of Facilities per Year (average)	Up to 3	Up to 4	Up to 7
Total acres of development	150	550	700
Annual tonnage (tpy)	300,000	1,250,000	1,550,000

Source: Data provided by CalRecycle 2026.

As noted in Table 2-1 and since 2021 (i.e., within a 5-year period), solid waste local enforcement agencies have permitted or authorized 10 small and 18 medium composting facilities and operations. Carrying forward that same ratio for small/medium composting facilities and operations over a similar 5-year period, up to 8 small composting operations and 13 medium composting facilities would be permitted or authorized. This would then translate into the projected development of 15 small and 25 medium composting activities by 2034 with additional development of composting facilities and operations beyond 2034 (as shown in Table 2-1). In addition, the program would allow for consistency of approach and mitigation of potentially significant impacts (through implementation of the BMPs and mitigation measures presented herein), which would be anticipated to streamline permitting of facilities developed under the program.

While micro-scale composting activities (i.e., backyard or community garden composting) is encouraged by CalRecycle to increase diversion from landfills, such activities are not subject to CalRecycle/Local Enforcement Agency oversight and are not expected to have a meaningful impact to the development of this Risk Assessment.

2.2 Overview of Commercial Composting Options Considered

This Risk Assessment evaluates the potential risk associated with the 2 basic and most commonly implemented commercial-scale composting methods: windrows and aerated static piles (ASPs). Most facilities/operations (except biosolids and manure composting facilities) start the composting process by grinding, shredding, or otherwise reducing the size of the incoming feedstock (i.e., the stream of organic waste being processed at a facility). Most facilities/operations remove physical contaminants, such as plastic, metal, and glass from incoming feedstock. After feedstock preparation, the materials are moved to the active composting phase.

- **Windrows** are elongated piles of material that can range from 8 to 20 feet wide, up to 10 feet tall, and hundreds of feet long. A machine that straddles the pile turns the windrow by moving along its length, churning the material, breaking up clumps, fluffing the pile, and moving materials to and from the pile core. This action enables all feedstock to be subject to the high internal temperatures of the pile, which reduces pathogens. Fluffing up the pile helps air reach into the pile core, facilitating high temperatures and rapid decomposition. Turning can also be accomplished with front end loaders.
- **Aerated Static Pile** composting, increasingly common in California, uses electric fans to push or pull air through the piles during the active composting phase. Positive aeration occurs when ambient air is blown into the pile; negative aeration occurs when air is drawn through the pile. ASPs are engineered to reduce pollutants such as volatile organic compounds (VOCs) and ammonia. Positive aeration systems may use fabric covers or a thick top layer of finished, unscreened compost that acts a biofilter and are often referred to as covered aerated static pile (CASP) composting. Negative aeration systems discharge air from the piles through a dedicated system that further reduces pollutants. Negative aeration systems

are typically equipped with filtration systems that filter emissions and air prior to discharge to the atmosphere. Therefore, this Risk Assessment assumes negative aeration systems are equipped with emission filtration systems.

Composting occurs in 2 basic phases:

- **Active phase:** Composting begins when temperatures exceed 122 degrees Fahrenheit (°F) or 50 degrees Celsius (°C) and continues as temperatures rise to more than 131°F or 55°C, beginning the Process to Further Reduce Pathogens (14 CCR, Section 17868.3). This stage may last up to a month for windrow composting and can be completed more rapidly for ASP composting. The active phase continues while compost matures. Temperatures decline but are still above ambient levels.
- **Curing phase:** After the initial high-temperature active phase, some facilities/operations cure compost to reduce organic acids and reduce phytotoxic compounds. The length of curing time varies considerably by facility.

After the composting process is completed, the finished compost is screened for size and for contaminants, before being sold. Any material that is screened out is often reprocessed or discarded if it is a physical contaminant. Finished composted material is then sold s as a soil amendment for agricultural, landscaping, and horticulture uses. Conventional and organic agricultural operations use most of the compost produced in California; however, it is also bagged and sold or given away to the general public, nurseries, and landscapers.

In-vessel composting is not evaluated for potential risk because it is less common than the methods discussed above and because there is naturally less environmental risk with composting within a containment structure like a vessel.

2.3 Feedstock Considered

Feedstock varies slightly between small and medium composting facilities/operations. For small composting operations, the Risk Assessment assumes feedstock will consist of agricultural material, green material, and vegetative food material. Medium composting facilities assume feedstock will consist of agricultural material, green material, food material, and vegetative food material,

3 Environmental Settings

The program area occurs throughout the State. Based on CalRecycle records, many commercial composting facilities/operations currently operating within the State are located in and around metropolitan centers (Los Angeles, Bay Area, San Diego, and Sacramento) and/or in the San Joaquin Valley. Facilities located outside of major urban areas are primarily located closer to large agricultural areas where compost is used. The location of existing and permitted composting facilities and operations are known within California; however, decisions by future project proponents regarding the precise location of a new composting facility or operation would be speculative at this time. Furthermore, due to local planning, political (i.e., the willingness of jurisdictions to address local opposition to new or expanded facilities/operations), and economic influences, attempting to predict future project approvals about the specific location and design of future composting facilities and operations undertaken in response to SB 1383 and other requirements would also be speculative.

Given the large program area (statewide), the unknown locations of future small and medium compositing facilities and operations, and the large variability of environmental and geographic settings present in California, there are a wide range of environmental settings small and medium composting facilities and operations can be sited. To practicably assess risk, this Risk Assessment looks at general composting activities described in Section 2.2 and how those operations potentially affect various media such as soil, water, and air.

3.1 Geology, Hydrogeology and Air

The potential area of development for the additional composting facilities and operations includes the entire state of California. Considering the geologic, geographic, and resource diversity within the State presents challenges in evaluating and assigning risk. As a result, the Risk Assessment considers specific soil, hydrogeologic (groundwater), surface water, and air quality scenarios that could represent potential risk as a result of small/medium composting facilities and operations.

3.1.1 Geology

There are 11 recognized naturally defined geologic regions, known as geomorphic provinces, in California that each display a distinct landscape. These geomorphic provinces vary from low-lying basins consisting of thousands of feet of accumulated sediment to high-elevation mountainous topography with little to no accumulated sediment to variations in between. The geology of each province influences the types of soil present, the hydrogeology of how groundwater flows through the subsurface, and how surface water travels across the landscape.

Types of soil and rocks found in California can be wide-ranging and highly variable depending on the bedrock they originate from, the depositional environment, and the geomorphic process to which they are constantly exposed. Soil can include fine grained sediments such as clays and silts, coarse grained sediments like sands and gravels, or a combination thereof. The complex geologic history of California provides a diverse range of bedrock including igneous rocks such as granite and basalt, metamorphic rocks such as schist and marble, and sedimentary rocks such as limestone and sandstone. For the purposes of this Risk Assessment, the various soil and bedrock types found in California will collectively be referred to as soil and will refer to the top tens of feet of the subsurface because this depth will have the most effect on and be the most affected by composting activities.

Infiltration of leachate generated at a facility into and through the vadose zone is one of the pathways considered. There are many characteristics of soil that affect the fate and transport of composting related contaminants through the vadose zone (unsaturated zone) including grain size, mineral composition, and moisture content. Of the various characteristics of soil that can influence the fate and transport of leachate, the percolation rate is likely the biggest contributor and therefore used as a proxy for assigning risk to soil and groundwater from composting activities. The greater the percolation rate, the greater the ability of soil to transmit leachate. Soil types such as clays, silts, and unfractured bedrock have lower percolation rates and are typically found to retard flow into and/or through the subsurface. Soil types such as coarse sands, gravels, and fractured bedrock typically have higher percolation rates allowing leachate to move relatively faster into and/or through the subsurface. The approach of using percolation rates as a proxy is consistent with the SWRCB's General Order that uses percolation rate for establishing criteria for siting a composting facility and operation to protect water quality. For the purposes of this Risk Assessment, this analysis uses the guidance of the General Order to evaluate risk from small and medium composting facilities and operations.

3.1.2 Hydrogeology (Groundwater and Surface Water)

Statewide water quality is managed by the SWRCB who delegates authority and responsibility to 9 Regional Water Quality Control Boards (RWQCBs). The RWQCB boundaries are geographically differentiated based on watershed and water quality requirements because of the diverse hydrogeologic conditions across the State. Water resources consist of groundwater and surface water including rivers, streams, lakes, reservoirs, wetlands, and coastal water. Groundwater is held within the pore spaces of soil such as sands, gravels, and other sediments commonly referred to as alluvium and within fractured permeable rocks. These natural subsurface storages of groundwater are known as aquifers. The Department of Water Resources (DWR) has identified 515 alluvial groundwater basins across the State, which encompasses over 40% of the State's area (DWR 2026: H-44). Depth to groundwater can range from shallow depths, less than 10 feet like commonly observed in the Bay Area of Northern California, to greater depths of tens to hundreds of feet, like commonly observed in the Central Valley or in desert environments.

The RWQCBs protect water quality across the State by designating current and potential future beneficial uses of groundwater and surface water, establishing water quality objectives, and implementing water quality control plans (basin plans). Common beneficial uses of groundwater include municipal and domestic water supply, agricultural use, industrial water supply, and surface water replenishment. Common beneficial uses of surface waters include municipal and domestic water supply, agricultural supply, industrial water supply, ecological and wildlife habitats, recreational uses, flood protection, groundwater recharge, and water quality enhancement. Water quality objectives are established in the basin plans to set water quality standards that protect beneficial uses. To ensure those water quality standards are met, the RWQCBs issue permits known as Waste Discharge Requirements (WDRs) to regulate land use activities that discharge or have the potential to discharge waste to land, groundwater, or surface water that could degrade water quality. Common land use activities that require a WDR include agricultural and forestry operations, industrial facilities, wastewater treatment plants, landfills, and composting facilities/operations. Many factors influence risk to water quality, such as type and volume of waste, depth to groundwater, distance to surface water, site-specific rainfall amounts, and soil type. To promote composting activities and streamline the permitting process, the SWRQCB developed the General Order to protect water quality statewide by establishing guidelines that consider risk to water from composting activities. The General Order establishes percolation rate and minimum depth to groundwater criteria and setback distances to surface water bodies and water supply wells for siting of compost facilities and operations. For the

purposes of this Risk Assessment, this analysis relies upon the guidance of the General Order to evaluate risk to groundwater and surface water from small and medium composting facilities and operations.

3.1.3 Air Contaminants

Program activities may occur in any of California's 15 air basins and within the jurisdiction of any of California's 35 local air districts. The ambient concentrations of air contaminants within these basins are established by the concentration of emissions released by the sources of air contaminants and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions within California are influenced by such natural factors as topography, meteorology, and climate as well as the concentration of emissions released by existing air contaminant sources. Air pollution can also move freely within and between air basins; therefore, air pollution generated in one basin may degrade the air quality within an adjacent basin. Air quality within California is regulated by the U.S. Environmental Protection Agency (EPA), CARB, and local air districts through and in compliance with a variety of federal, state, regional, and local regulations, including the federal Clean Air Act (CAA), California Clean Air Act (CCAA), and air district rules and regulations pertaining to ambient air quality standards (both national and state). For the purposes of this Risk Assessment, this analysis uses the guidance of and evaluates potential risks associated with Bay Area Air Quality Management District (BAAQMD), South Coast Air Quality Management District (SCAQMD), San Joaquin Valley Air Pollution Control District (SJVAPCD), and San Diego Air Pollution Control District (SDAPCD).

Within the context of this Risk Assessment, the potential risks of a particular set of air contaminants is considered. Toxic Air Contaminants (TACs) are air contaminants that may cause adverse health effects, including cancer and non-cancer health impacts. Diesel particulate matter (DPM), a common TAC emitted by diesel-fueled vehicles and equipment, is often the primary contributor to health risk impacts from facility operations. Long-term exposure to elevated TAC concentrations may increase cancer risk and contribute to respiratory and other chronic health effects.

3.1.4 Odors

An odor is the sensation that the human brain generates in response to certain chemicals breathed in through the nose. The perception of odor depends on both the characteristics and concentration of the odorant and the characteristics of the person smelling the odorant. An objectionable odor to one person can be tolerable to another.

The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of (and distance to) sensitive receptors. Offensive odors can be unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose individuals to objectionable odors are deemed to have a significant impact. Typical facilities that generate odors include wastewater treatment facilities, sanitary landfills, composting facilities, petroleum refineries, chemical manufacturing plants, and food processing facilities.

Many compounds formed during composting are "odorous," which are considered offensive by at least some people. Several individual compounds that can be emitted from a compost facility stand out as odorous, such as ammonia and hydrogen sulfide. However, because of the large number of chemical species involved with composting, odorous compounds are frequently identified by categories of similar chemicals. The primary

categories associated with organic materials present in the feedstock and byproducts of decomposition include mercaptans, organic sulfides, ammonia, amines, indoles, volatile fatty acids (VFAs), terpenes, alcohols, ketones and aldehydes. Mercaptans, organic sulfides, and hydrogen sulfide are compounds that contain sulfur. Amines, indoles, and ammonia are nitrogen-based compounds. VFAs are most closely associated with carbohydrates and lipids (i.e., fats and oils). The remaining groups are common organic compounds with volatile members.

3.2 Geography

California geography consists of mountainous terrain, arid low-land and high-land deserts, coastal and alpine forests, deltaic landscapes, and large valleys resulting in different climates found within the State. These varying climates can have large temperature differences and significant annual precipitation amounts within relatively proximity to each other. Local geographic, geologic, hydrogeologic, and meteorological conditions can affect how contaminants are transported, dispersed, transformed, and removed from the environment, ultimately influencing contaminant concentrations at receptor locations. Factors such as distance from the source, prevailing wind patterns, atmospheric conditions, terrain, land use, soil and hydrogeologic conditions, and release characteristics may affect the distribution of contaminants in the surrounding area. The State is also home to large metropolitan areas with millions of residents as well as smaller rural communities. To meet the program's goal of 40 new composting facilities and operations by 2034, the development of small and medium composting facilities and operations will likely occur in both urban and rural areas. These new composting facilities and operations may be constructed to expand existing solid waste operations/facilities or may consist of new sites constructed on vacant native land and/or on vacant land previously used for other purposes. This Risk Assessment evaluates risk associated with the construction and operation of compositing facilities in urban and rural areas as well as native and previously developed land.

The Prioritization Score methodology used in the air quality portion of this Risk Assessment does not account for geographic features such as local terrain, topography, meteorology, or other factors that may influence contaminant dispersion. The methodology is intended to provide a conservative screening-level assessment of potential health impacts and does not incorporate local dispersion characteristics. These site-specific factors can be evaluated through refined air dispersion modeling.

3.3 Receptors

Receptors considered for this Risk Assessment are divided into 2 categories, 1) the environment and 2) human population. The environmental receptors include soil, groundwater, surface water, and air. Evaluation of risk to receptors looks at how composting activities could potentially affect the environment (soil, water, and air) and how human receptors may be exposed to the potentially contaminated environment. Risk to soil from composting activities is considered limited in extent to soil at the facility. Therefore, risk from contaminated soil is only considered for facility workers.

With respect to the human population category and specific to air quality and odors, the assessment is primarily oriented towards facility workers. This Risk Assessment evaluates potential air quality/odor risks to several receptor types. The methodology follows the Emissions and Potency Procedure in the California Air Pollution Control Officers Association's (CAPCOA's) guidelines, where emission data are combined with applicable Office of Environmental Health Hazard Assessment (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 SDAPCD's 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 other sensitive receptor locations. Other 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 (i.e., commercial office and retail). 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.

4 Exposure Pathways

Contaminants associated with compost and the operation of a compost activity can migrate into the environment in a variety of ways including direct contact, leaching, wind dispersion, and run-off discharge into surface water which can then ultimately be exposed to the human population through dermal contact, inhalation, and ingestion and potentially cause adverse effects. The following sections discuss potential exposure pathways to each environmental media from composting facilities and operations and how contaminated environmental media can result in human exposure.

4.1 Soil

Soil can be impacted by feedstock from direct contact and leachate from feedstock moving the through the soil column. Humans can be exposed to contaminated soil through direct contact, ingestion, and inhalation of dust.

4.2 Water

4.2.1 Groundwater

Groundwater can be exposed to contaminants associated with the operation of a composting activity from leachate migrating through the subsurface. Exposure pathways from contaminated groundwater to humans consist of ingestion and direct contact from contaminant plume migration to water supply wells.

4.2.2 Surface Water

Exposure of surface water bodies to contaminants associated with the operation of a composting activity consist of run-off of leachate and stormwater that has contacted feedstock, discharge of contaminated groundwater into surface water bodies, and wind dispersion of contaminated soil, compost, and feedstock particulates. Humans can be exposed to contaminated surface water through direct contact and ingestion.

4.3 Air

Exposure of affected air quality and odors from the operation of a composting activity to the human population can occur through inhalation. However, with respect to air quality and odors, the Prioritization Score methodology does not evaluate exposure pathways and instead considers contaminant potency, toxicity, emission rates, and proximity to receptors.

5 Evaluation of Risk to the Environment and Human Health

The following sections discuss potential risks to the environment and human health based on the exposure pathways discussed above and consider commercial composting options including windrow, ASP, and CASP, and the contaminants typically associated with the feedstock considered under this program (agricultural material, green material, and food material (including vegetative food material)). Because specific locations or facility designs are unknown, this Risk Assessment evaluates the general operations of small and medium composting facilities and operations and identifies potential risk to the environment and human health. The current regulatory permitting requirements for the development and operation of composting facilities in the State were reviewed to evaluate how they addressed the identified risks. These regulatory frameworks include the SWRQCB General Order and 14 CCR Chapter 3.1 Sections 17850 through 17895 for soil, groundwater and surface water, and BAAQMD, SCAQMD, SJVAPCD, and SDAPCD for air quality and odors.

Small composting operations under this program may receive feedstock consisting of agricultural material, green material and vegetative food material, andmedium composting facilities may receive the same feedstocks with the addition of food material. The source and type of feedstock are the primary factors in which contaminants may be found in composting materials. Contaminants commonly associated with agricultural material, green material, food material, and vegetative food material feedstocks include plastics, metals, pesticides, nutrients and salts, and pathogens (Chm2Hill 2004: 11 and Governo 2003: 23). The contaminants for both the small and medium composting facilities and operations are generally the same, however, there is greater potential for pathogens to be present at medium composting facilities due to the food material they can receive.

5.1 Environment (Soil and Water) Risk Assessment

The most significant risk to soil and water comes from leachate generated during composting. Leachate is the liquid from feedstock and compost material that is generated either from the moisture of the feedstock and compost or from water that contacts and passes through the feedstock and compost material. Leachate may contain dissolved metals, salts, plastics, suspended solids, and pathogens. The risk of leachate contaminating the environment is the mobilization of contaminants present in leachate as it drains from feedstock and compost piles and can be of greater concern in localities that receive higher amounts of precipitation, have shallow groundwater, have soil with high permeability, or during storm events. This discussion considers the degree to which existing regulation, especially the General Order, addresses risk.

The General Order uses a tiered system to classify composting facilities based on potential risk to the environment. The General Order classifies composting activities into 2 tiers (Tier 1 and Tier 2) based on volume and type of feedstock, proximity to surface water and water supply wells, and depth to groundwater versus soil percolation rates. Tier 1 composting activities are considered less likely to affect water quality than Tier 2 composting activities. Assuming small composting operations meet the minimum setback distance to surface water and water supply wells of 100 feet and the soil percolation rate and minimum depth to groundwater criteria, they would classify as a Tier 1 composting activity. If they cannot meet the minimum setback distance and soil percolation rate and minimum depth to groundwater, they would be classified as a Tier 2 composting activity. Medium composting facilities would fall under Tier 2 because they could accept food material. The different requirements between Tier 1 and Tier 2 composting activities and how they address potential risk are discussed further in the following sections.

5.1.1 Soil

Soil can be contaminated from composting operations by leachate migrating into the underlying surface soil and, to a lesser extent, from direct contact between the surface soil and feedstock and compost material. Composting activities generally will not be a source of widespread soil contamination and will likely be limited to localized areas where feedstock and compost are stored. Windrow, ASP, and CASP composting methodologies are commonly performed on areas of bare soil. The repeated long-term use of these areas can contribute to the accumulation of plastics, metals, pesticides, nutrients, and pathogens on shallow and surficial soil, and into deeper subsurface soil from leachate. Soil with low percolation rates will have low risk from leachate infiltration and soil with high percolation rates will have high risk from leachate infiltration. Additionally, poor facility surface drainage may promote leachate to pond and infiltrate into the subsurface. Ponding in compost storage and process areas with high percolation rates can create conditions conducive to contaminant migration into the subsurface. If left unmitigated, risk to soil at composting facilities and operations facilities will be present.

Exposed surface soil that may contain contaminants can be subject to increased erosion during precipitation and storm events. Stormwater that enters a facility as run-on and leaves a facility as run-off has the potential risk to mobile soil contaminated by the operation of a composting activity. If a minimal amount of stormwater is able to contact soil, the risk of contaminated soil erosion is low. If a large amount of stormwater is able to contact soil, the risk of contaminated soil erosion is high.

The General Order focuses on protection of groundwater and surface water. However, compliance with requirements of Tier 1 and Tier 2 composting activities would address the potential risk to soil from composting activities. These include:

- Design of facilities and operations to manage a 25-year, 24-hour peak storm event at a minimum to prevent or limit sediment laden stormwater run-on and/or run-off.
- Grade working surfaces to facilitate drainage and minimize ponding by sloping or crowning composting pads to reduce infiltration.
- For Tier 1 composting activities, meet the soil percolation rate and minimum depth to groundwater criteria.
- For Tier 2 composting activities, surfaces and drainage ditches to be constructed of compacted fine grained soil (like clay), asphaltic-concrete, or equivalent.
- Requires routine inspection and monitoring of all facility and operation drainage systems and engineered working surfaces.

These General Order requirements address the risk to soil by requiring adequate facility drainage to minimize ponding on composting pads to limit the infiltration of leachate into the subsurface, ensuring facilities can handle stormwater run-on and run-off from a moderately-sized precipitation event, and establishing minimum soil and depth to groundwater criteria that must be met to demonstrate low risk. If the minimum soil and depth to groundwater criteria cannot be met, then an engineered surface with low percolation rates must be constructed.

5.1.2 Water

The primary objective of the General Order is to protect water quality, both surface water and groundwater. The potential risks to surface water and groundwater are identified within the following applicable sections, Surface Water and Groundwater.. The requirements of the General Order were developed to be protective of water quality across the State based on geologic and hydrogeologic conditions and can be applied statewide where a composting facility and operation may be sited. Because the locations of composting facilities and operations under this program are unknown, the General Order proves to be a useful tool to provide mitigation measures to the risks identified in this Risk Assessment. Compliance with the General Order requirements by the program's future composting facilities and operations will reduce potential risk to water from composting operations.

Surface Water

Risk to surface water from small and medium composting facilities and operations comes from run-off of stormwater that has interacted with composting material or contaminated soil, and run-off of leachate. If a minimal amount of stormwater is able to contact compost material or contaminated soil, the risk to surface water from contaminated run-off is low. If a large amount of stormwater is able to contact compost material or contaminated soil, the risk to surface water from contaminated run-off is high. Improperly graded compost facilities and operations could promote run-off if graded too steeply and/or if the site is designed with inadequate drainage capacity and conveyance infrastructure. Compost facilities and operations in localities with little to no topographical relief have a low risk to surface water from contaminated run-off. Compost facilities and operations located in localities with large topographical relief have a high risk to surface water from contaminated run-off. Additionally, risk to surface water is influenced by the distance to a composting facility and operation due to potentially contaminated run-off. Compost facilities and operations sited further away than the minimum setback distance of 100 feet (per the General Order) have a low risk of affecting a surface water body from run-off. Compost facilities and operations sited closer than the minimum setback distance of 100 feet have a high risk of affecting a surface water body from run-off.

The General Order addresses these potential risks through the following requirements:

- A setback distance of at least 100 feet to the nearest surface water body.
- Facilities are to be designed and constructed to control and manage all run-off for a 25-year, 24-hour peak storm event, at a minimum.
- A Water and Wastewater Management Plan must be prepared and approved demonstrating how the facility and operation will manage run-off and run-on.
- Berms must be constructed to prevent run-off/run-on from a 25-year, 24-hour peak storm event, at a minimum. In addition, the soil percolation rate and depth to groundwater criteria for Tier 1 activities must be met, or the facility surface must be engineered with low percolation rates to prevent or limit infiltration of leachate into the subsurface.
- Drainage systems must be properly designed and constructed and must be inspected and cleaned out annually prior to wet season.
- Routine inspection and monitoring of all facility and operation drainage systems and engineered working surfaces.

The General Order addresses risk to surface water by establishing requirements that can handle wastewater as well as stormwater run-on and run-off from a moderately-sized precipitation event, and siting distances to provide a distance buffer. In addition, the General Order requires facilities to ensure on-site water management systems operate as intended through routine inspection and maintenance.

Groundwater

Risk to groundwater from small and medium composting facilities and operations comes from leachate infiltration through the subsurface and into the water table, as well as leachate reaching the water table through a preferential pathway such as a water supply well. Leachate can transport elevated levels of dissolved metals, salts, suspended solids, plastics, and pathogens into the water table that can exceed water quality objectives established in basin plans. Soil percolation rate coupled with depth to groundwater are primary factors that influence risk to groundwater quality from composting facilities and operations, as demonstrated in the General Order's soil percolation rate ranges and depth to groundwater criteria for Tier 1 activities. Soils with a low percolation rate and deep depth to groundwater have low risk to groundwater. Soils with a low percolation rate and shallow depth to groundwater have a low to moderate risk to groundwater. Soils with a high percolation rate and deep depth to groundwater have a low to moderate risk to groundwater. Soils with a high percolation rate and a shallow depth to groundwater have a high risk to groundwater.

The General Order addresses these potential risks through the following requirements:

- Facility and operation siting conditions must meet soil percolation rates and depths to groundwater criteria to be classified as Tier 1. The higher the soil percolation rate (i.e. the faster a liquid can move through soil) the deeper the required minimum depth to groundwater. For example, a soil percolation rate of less than 1 minute per inch is required to have a minimum depth to groundwater of 50 feet and a soil percolation rate of greater than 30 minutes per inch is required to have a minimum depth to groundwater of 5 feet.
- If manure is a component of the feedstock from agricultural material, a Groundwater Protection Monitoring Plan is required to monitor and identify any potential impacts to groundwater before they occur. This would include installing a network of groundwater monitoring wells that must be monitored and sampled on a routine basis.
- Composting facilities and operations that do not meet the soil percolation and depth to groundwater criteria are classified as Tier 2 and require additional engineering controls such as clay liners and geomembrane underlying compost processing areas with associated subsurface monitoring points.
- Routine inspection and monitoring of all facility and operation drainage and monitoring systems.

The General Order addresses risk to groundwater by reducing or eliminating the likelihood of leachate reaching groundwater through soil percolation rates and depth to groundwater setback limits. Required monitoring directly below engineering controls such as clay liners and geomembrane identifies leachate infiltration before reaching groundwater.

5.2 Human Health Risk Assessment

This human health risks assessment looks at potential risks from environmental media (soil, water, and air) that may be contaminated from composting facilities and operations and directly from the compost and feedstock material.

5.2.1 Air

TAC emissions from small and medium composting facilities and operations include DPM, a known carcinogen, from haul truck activity, mobile sources including front end loaders, and stationary sources such as the engines driving screens and grinders. Composting may emit TAC from the decomposition of organic waste, and material handling operations may emit TAC in the form of dust. TAC emissions are evaluated to ensure that adverse acute, chronic, and carcinogenic health risk impacts exceeding regulatory thresholds do not occur as a result of the program.

Small and medium composting facilities and operations would result in stationary source emissions of TACs. However, these composting activities would be expected to be sited within an appropriate land use (i.e., industrial) and typically would not be located within 1,000 feet of a sensitive receptor. The stationary sources would be subject to permitting as required by the applicable air district. To obtain a stationary source permit from an air district, the facility operator would have to demonstrate that operations do not expose sensitive receptors to an incremental increase in cancer risk (e.g., one that exceeds 10 in one million) or hazard index value (e.g., 1.0 or greater). Therefore, operation of a composting facilities and operations under the proposed program would likely not expose off-site sensitive receptors to TAC concentrations due to stationary source emissions. Nonetheless, because operation of small or medium compost facility and operationconstructed under the proposed program would require the operation of diesel-fueled vehicles and heavy-duty equipment, compost facilities and operations could emit mobile-source TAC emissions resulting in health risk impacts exceeding an applicable threshold of significance. Therefore, evaluation of health risk impacts due to air emissions is appropriate.

Toxics

Methodology

Because of the statewide nature of the program and the fact that it does not identify specific locations or operational designs, this air toxics risk analysis was based on a series of representative composting 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 and operations utilizing windrow, positive CASP, and negative ASP systems. Small composting operations were assumed to have an on-site capacity of up to 5,000 cy and process up to 10,000 tpy of green material, agriculture material and vegetative food material). Medium composting facilities were assumed to have an on-site capacity of up to 12,500 cy and process up to 25,000 tpy of green material, agriculture material, food material (including vegetative food material). The scenarios and associated operating assumptions are included in Appendix A. Simplified descriptions of the scenarios are listed in Table 5-1.

Table 5-1. 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

Operation of a compost facility and operaton would produce emissions of air contaminants from fuel combustion in stationary and mobile sources, decomposition of organic materials, and use of processing equipment. Toxics emissions estimates were prepared for the mobile and stationary emission sources required to operate the 6 representative composting scenarios described in Table 5-1. Emissions estimates have been prepared for the following stationary source categories:

- Stationary diesel engine exhaust criteria pollutant emissions for grinders, screens, stackers, colorizers, and emergency engines;
- Feedstock storage, composting, curing, and finished compost storage VOC, organic TAC and ammonia (NH3) 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 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 including the data and assumptions used in the calculations are provided in Appendix A.

Baseline operations for all scenarios assume that the feedstock would otherwise be sent to a landfill. For this analysis, it was assumed that TAC emissions at a compost facility and operation would be new emissions, and landfill emissions of these contaminants are not estimated. As a practical matter, the TAC emissions have localized impacts, thus emissions of these contaminants from a remote landfill would not factor into the analyses of impacts at the composting sites.

For feedstock truck trips, there are 3 possibilities: 1) the distance to a new composting facility and operation 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 and operation is greater than the distance to a landfill. In the first 2 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 and operation. 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 and operations 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 and operations facilities close to the feedstock sources.

Risk Evaluation

To assess the potential health risks from a project to sensitive receptors, the TAC emissions from the implementation of the program are assessed in accordance with regulatory guidelines. This analysis is based on the OEHHA "Hot Spot" guidance document (OEHHA 2015) and the 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 air districts identify priority compost activities 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.

As noted above, 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.

TAC emissions calculations are provided in Appendix A. 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 NH3 and organic TACs from composting activities, and toxic components of dust from material handling activities.

To assess the potential health risk from the 6 composting 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. Detailed information/results by scenario and distance are presented in Appendix B.

Each air district sets their Prioritization Score thresholds to be used for project-specific evaluations. Table 5-2 summarizes the thresholds for the 4 districts reviewed.

Table 5-2. Prioritization Score Thresholds

Air District	Prioritization Score Threshold Category	Prioritization Score Cancer Risk Thresholds	Prioritization Score Chronic/Acute Risk Threshold	Potentially Significant?
BAAQMD, SJVAPCD, and SCAQMD	High	≥10	≥10	Yes
	Intermediate	≥1 and <10	≥1 and <10	Yes
	Low	<1	<1	No
SDAPCD	High	≥100	≥10	Yes
	Intermediate	≥1 and <100	≥1 and <10	Yes
	Low	<1	<1	No

The significance of the thresholds are described below:

- High Score: Projects having a high Prioritization Score may have high risk. A refined Health Risk Assessment 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 CEQA 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 CEQA review.
- 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.

The Health Risk Assessment screening conducted for this study estimates the residential and worker cancer risk, as well as potential chronic and acute non-cancer risks, associated with the 6 scenarios. The results were then used to establish screening distances (i.e., minimum distances from source to receptor) to ensure less than significant health risks impacts to residential and worker receptors would occur. The results of this are shown in

Table 5-3 for each scenario. These distances were determined using the Prioritization Score calculation methodology. Scenarios that achieved a low priority score are assigned a significance determination of Less Than Significant, which is the same across all air districts evaluated (BAAQMD, SJVAPCD, SCAQMD, and SDAPCD), as well as most other districts.

In cases where the distance between the source (i.e., the project) and the nearest receptor is less than the distance shown in Table 5-3 (which indicates a potentially significant impact), individual project proponents should conduct Health Risk Assessment modeling pursuant to the most recent guidance published by OEHHA. Each Health Risk Assessment should incorporate TAC emissions from the proposed project sources specific to that facility, including mobile and stationary sources.

For example, under Scenario 1, if there are no residential receptors within 2,185 feet and, no worker receptors within 1,198 feet of a proposed facility, that project would be considered to have less than significant health risk impacts associated with air toxics. If there are residential receptors within 2,185 feet, or worker receptors within 1,198 feet, that project would be considered to have potentially significant health risk impacts associated with air toxics, and a project-specific Health Risk Assessment should be conducted in accordance with OEHHA and CAPCOA guidelines. The same interpretation applies to the remaining scenarios using the corresponding distances shown in the table. The results of the detailed analysis for each scenario is provided in Appendix B.

Table 5-3. 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 (feet)	Minimum Distance to Worker Receptors for Less Than Significant Impact (feet)
1 (Small Windrow Operation)	2,185	1,198
2 (Small CASP Operation)	1,906	1,043
3 (Small, Negative ASP w/ Filter Operation)	1,874	1,027
4 (Medium Windrow Facility)	3,268	1,792
5 (Medium CASP Facility)	2,792	1,528
6 (Medium, Negative ASP w/ Filter Facility)	2,740	1,500

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.

Odor

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 not be considered substantial.

With respect to operation, composting facilities and operations 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, composting technology, operating practices, meteorological conditions, and the proximity of sensitive receptors. Local jurisdictions with land use authority can and should require individual projects to be consistent with 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.

The implementation of BMPs for composting facilities and operations would help to minimize the potential for objectionable odors to be perceived off-site from small and medium composting facilities and operations. 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 and operation as a BMP to minimize odor impacts, or required as CEQA mitigation. With 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 be less than significant.

5.2.2 Soil

Because soil contamination from composting facilities and operations is likely to be limited to the immediate vicinity of compost material storage and processing, the greatest risk from contaminated soil is to facility personnel. Facility personnel are performing the feedstock receiving and processing, staging the compost piles, turning and fluffing the piles (if using the windrow methodology), and preparing the mature compost for distribution. Facility personnel could come into direct contact with contaminated surface soil accumulated in the composting storage and processing areas. Dry soil conditions could create a potential inhalation hazard from contaminated dust.

The most effective mitigation measures to protect human health from contaminated soil are to mitigate the potential risk to soil from composting activities by controlling the source of contamination and implementing the General Order requirements list above in Section 5.1.1.

5.2.3 Water (Surface and Groundwater)

Risk to human health from impacted surface water and groundwater can result from contact and ingestion during common uses such as recreational, agricultural, and domestic and municipal supply. The degree of risk is dependent upon many factors including the source and feedstock type as this will influence the potential contaminants present, the contaminant concentrations effecting water quality, the receiving water chemistry, the sensitivity of the receptors, and the exposure duration.

The most effective mitigation measures to protect human health from contaminated surface water and groundwater are to mitigate the potential risk to water from composting activities by controlling the source of contamination by implementing the General Order requirements list above in Section 5.1.2.

5.2.4 Compost and Feedstock

Feedstock and compost are the source of contamination to the environment and ultimately to human health. However, these materials can directly have adverse health effects on compost facility/operation personnel and end users of the mature compost. These risks include physical contaminants (plastics, glass, debris, etc.) present in the feedstock, the inclusion of feedstock types not covered under this program such as animal carcasses and biosolids, and elevated contaminant concentrations in feedstock before reduction during the composting process. Compost facility/operation personnel and end users may come into direct contact with these contaminants if the feedstock is improperly processed, screened, and composted. Improperly screened and processed feedstock has a high risk of exposure to physical contaminants in compost. Properly screened and processed feedstock has a low risk of exposure to physical contaminants in compost. Compost that has not gone through the Process to Further Reduce Pathogens long enough has a high risk of containing elevated pathogen levels. Compost that has gone through Process to Further Reduce Pathogens long enough has a low risk of containing elevated pathogen levels.

Composting facilities and operations are regulated by 14 CCR and are required to perform the following procedures which greatly reduce the risk associated with compost and feedstock.

- Random and routine load checks of feedstocks for contaminants (14 CCR Section 17867).
- Ensure maximum allowable metal concentrations in compost prior to distribution (14 CCR Section 17868.2).
- Pathogen reduction procedures (14 CCR Section 17868.3) including:
    - Windrow process must keep compost at a temperature of 155 °F or higher from at least 15 days
    - ASP or CASP must have at least 6 to 12 inches of insulating material and keep compost at a temperature of 155 °F or higher from at least 3 days
- Establish limits of physical contaminant concentration and processing, sorting, and sizing of feedstock (14 CCR Section 17868.3.1).
- Visual observation of incoming feedstock to identify unacceptable feedstock material (14 CCR Section 17868.5).

14 CCR addresses these risks by ensuring only acceptable feedstocks are received by composting facilities and operations through inspection and monitoring, setting physical contaminant and metal concentration levels, and ensuring compost going through the Process to Further Reduce Pathogens process long enough (depending on compost technology).

6 BMP Evaluation

The General Order and 14 CCR establish requirements that mitigate much of the risk associated with small and medium composting facilities and operations that would be covered by this program. This section discusses additional BMPs that can be considered in conjunction with General Order and 14 CCR requirements to further mitigate risk. BMPs can consist of practices, procedures, and engineering and institutional controls. The BMPs listed may be applicable to mitigate risk associated with more than one media.

- **Use of impermeable or low permeable surfaces:** Use impermeable (asphalt concrete) or low permeable surfaces (compacted clay layer) beneath areas of a facility or operation that will receive, store, and process feedstock and where composting will occur to prevent or limit infiltration of leachate into the subsurface. This should be used particularly when the soil percolation rate and minimum depth to groundwater criteria in the General Order cannot be met.
- **Scraping or cleaning surface of compost/feedstock areas:** Scrape or clean residual feedstock and compost off surface between composting cycles to mitigate potential accumulation of contaminants.
- **Watering of unpaved surfaces:** Adequately water unpaved surfaces, without oversaturating, to mitigate the generation of dust during movement of heavy equipment and facility traffic.
- **Use of detention ponds and surface drainage:** Construct surface drainage ditches around feedstock and compost pads that convey surface water and leachate to detention ponds to prevent run-off.
- **In-vessel composting:** When General Order setback distance criterion of 100 feet from nearest surface water and water supply well cannot be met, utilize in-vessel composting to mitigate run-off of leachate and stormwater that has been in contact with feedstock and compost.
- **Covering feedstock and compost piles:** Cover feedstock and compost piles to limit exposure during storm events by constructing permanent roof structures over these areas or temporarily covering with material such as visqueen, tents, or tarps.
- **Personal Protective Equipment:** Utilize personal protective equipment for facility/operation personnel that handle feedstock and compost material such as nitrile gloves, safety glasses, and face masks to limit direct contact, ingestion, and inhalation exposure.

6.1 Air Toxics

Applicants shall conduct composting activities outside of the minimum screening distances (based on size and facility type) shown in Table 5-3. In the event that a project would be sited within the minimum screening distances, that project should prepare a project-specific Health Risk Assessment to determine whether or not health risks may occur (specific to that project's site conditions). If the Health Risk Assessment modeling determines that a project under the program may result in incremental health risks associated with TAC emissions, additional measures/BMPs should be implemented to avoid or minimize impacts from operation-related TAC emissions.

- Project proponents shall consider use of a different composting method that results in lesser TAC emissions (e.g., Negative ASP with a filter versus windrows);

- Project proponents shall use additional components either as a component of the compost mix or as a surface layer to reduce on-site emissions (e.g., biochar);
- 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.

6.2 Odors

BMPs applicable to odor prevention include the following:

- Site selection: Odor impacts can be minimized by ensuring that the site selected for a new compost facility and operation is sufficiently distant from potential receptors. The SJVAPCD GAMAQI recommends a setback distance of 1 mile for a compost facility and operation 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 and operation will typically have 80% lower emission levels than a comparably sized windrow compost facility and operation. Accordingly, a 1-mile setback distance may be appropriate for a windrow compost facility and operation, but is likely unnecessary for an ASP compost facility and operation. 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 compost facility and operation.
- 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 green waste 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 2 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.
  - 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 NH3 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).

7 References

CalRecycle. n.d. SB 1383 Capacity Planning Data by County. Available: https://www2.calrecycle.ca.gov/LGCentral/datatools/reports/capacityplanning. Accessed July 8, 2026.

California Air Pollution Control Officers Association (CAPCOA). 2016. Air Toxic "Hot Spots" Program, Facility Prioritization Guidelines, August. https://capcoa.org/wp-content/uploads/2024/07/CAPCOA-Prioritization-Guidelines-August-2016-FINAL.pdf

Ch2mHill 2004. Commercial Composting Water Quality Permit Development. Oregon Department of Environmental Quality, Land Quality and Water Quality Divisions. May 12.

Department of Water Resources (DWR). 2026. California's Groundwater 2025 Update Highlights. Groundwater: The Foundation of California's Resilience. March.

Governo et al. 2003. The Compost White Paper Large-Scale Composting in Georgia. The University of Georgia College of Agricultural & Environmental Science. October.

Office of Environmental Health Hazard Assessment (OEHHA). 2015. Air Toxics Hot Spots Program, Guidance Manual for Preparation of Health Risk Assessment, February. https://oehha.ca.gov/sites/default/files/media/downloads/crnr/2015gmappendicesaf.pdf.

State Water Resources Control Board (SWRCB). 2020. General Wate Discharge Requirements for Commercial Composting Operations, State Water Resources Control Board Order WQ 2020-0012-DWQ. April 7.

Appendix A

Air Emission Calculations

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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 1/4 mile
			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 and Responses Rule 9510 and 3180 December 15, 2005
6. Rural is assumed to be 0.25 miles per one-way trip.

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 Tier and 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: Solid Waste Disposal Wastewater Treatment Ethanol Fermentation Submitted to: U.S. Environmental Protection Agency Sector Policies and Programs Division Measurement Policy Group, December 14, 2010

Table 3b: Uncontrolled Grinding and Screening PM Emission Factors

Process Operation	Emission Factor PM10(lb/ton)	Emission Factor PM2.5(lb/ton)	Note
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 PM10(lb/ton)	Emission Factor PM2.5(lb/ton)	Note
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

$E = k\ (sL)^{0.91}\ x\ (W)^{1.02} * C_f$

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 (or Equivalent)	Fuel	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									
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(tons)	Empty(tons)	Average(tons)	PM Emission Factors[35, 36] (lb/VMT)	
					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 (#471), accessed: https://ww2.arb.ca.gov/speciation-profiles-used-carb-modeling
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] (lb/lb Dust)
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: Stationary Engines - Criteria Pollutant and GHG Emissions

Table 9a: 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)
		Fuel	Tier	BHp						
Diesel Grinders	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Screens	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Stackers	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Colorizer	0	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Emergency Generator	1	Diesel	3	150	2.85	1.02	3.7	0.005	0.15	0.15
Diesel Emergency Fire Pump	1	Diesel	3	300	2.85	1.02	2.6	0.005	0.15	0.15

Table 9b: 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 9c: 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 9d: 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

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 10: TAC from Composting Dust

Table 10a: 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 10b: TAC from Material Handling and Wind Erosion

TAC	CAS	Concentration[1, 2]	Total TAC Emissions		Grinding and Screening TAC Emissions		Material Handling TAC Emissions		Wind Erosion TAC Emissions	
		(lb/lb Dust)	(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 11: Organic TAC Emissions

Table 11a: 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 11b: Feedstock Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11c: Composting TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11d: Curing TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11e: Finished Compost Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 12: NH3 Emissions

Table 12a: 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 12b: 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 13: Stationary Diesel Engine TAC Emissions

Table 13: 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 14: Summary of TAC Emissions from Composting Activities

Table 14a: 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 14b: 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 15: Onroad Mobile Sources - Vehicle Information

Table 15: 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 16: Onroad Mobile Sources Exhaust Emissions

Table 16a: 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 16b: 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 16c: 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	0.010	0.718	0.0023
	T7 Tractor	0.0090	0.0306	1.46	4.98	6.44	0.18	6.26	0.021

Table 16d: 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

Data and Parameters		
Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 17: Onroad Mobile Source Paved Road Dust

Table 17a: Paved Road PM10 Emission Factors1

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

$E = k\ (sL)^{0.91}\ x\ (W)^{1.02} * C_f$

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 17b: Fraction of VMT by Functional Type of Roadway2

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 4

Table 17c: 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	10	12	8	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	47	55	39	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	30	35	25	0.18	1.50	92	1.2	93
		VMT/Yr	9,337	10,943	7,747	56	468	28,080	374	28,454

Table 17d: 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 17e: 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 18: Fugitive Dust From Travel on Unpaved Roads

Table 18a: Unpaved Road Emission Factors1

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 18b: 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 18c: 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 19: Offroad Equipment - Criteria Pollutant Emissions

Table 19a: 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)
			Tier	BHp						
1	Fuel Truck	Freightliner M2106	4f	350	0.30	0.14	2.60	0.005	0.010	0.010
1	Tractors	Massey Fergusen, 7619	4f	200	0.30	0.14	2.60	0.005	0.010	0.010
1	Excavator	Caterpillar 326	4f	201	0.30	0.14	2.60	0.005	0.010	0.010
2	Loader	Caterpillar, 962K	4f	250	0.30	0.14	2.60	0.005	0.010	0.010
1	Windrow Turner	Scarab	4f	250	0.30	0.14	2.60	0.005	0.010	0.010
1	Water Truck	International, 7400 6x4	4f	350	0.30	0.14	2.60	0.005	0.010	0.010
1	Sweeper Truck	Freightliner M2	4f	240	0.30	0.14	2.60	0.005	0.010	0.010

Table 19b: 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 19c: 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 19d: 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

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 20: Fugitive Dust From Offroad Equipment Travel on Unpaved Areas and Haul Roads[1]

Table 20a: 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 20b: 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 20c: 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 estimate emissions.
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 Mar 2012.

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Table 21: Diesel and Gasoline Vehicle TAC Emissions

Table 21a: 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 21b: 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 21c: 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. Website: 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 22: TAC from Paved Road Dust

Table 22a: 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 22b: 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 23: TAC from Offroad Vehicles Operation on Unpaved Surfaces

Table 23a: 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 23b: 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 24: Summary of TAC Emissions from Mobile Sources

Table 24a: 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 24b: 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 25: Summary of TAC Emissions

Table 25a: 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 25b: 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 25: Summary of TAC Emissions

Table 25a: Summary of TAC Emissions, l

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 25b: Summary of TAC Emissions, I

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 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 1/4 mile
			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 and Responses Rule 9510 and 3180 December 15, 2005
6. Rural is assumed to be 0.25 miles per one-way trip.

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 Tier and 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: Solid Waste Disposal Wastewater Treatment Ethanol Fermentation Submitted to: U.S. Environmental Protection Agency Sector Policies and Programs Division Measurement Policy Group, December 14, 2010

Table 3b: Uncontrolled Grinding and Screening PM Emission Factors

Process Operation	Emission Factor PM10(lb/ton)	Emission Factor PM2.5(lb/ton)	Note
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 PM10(lb/ton)	Emission Factor PM2.5(lb/ton)	Note
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

$E = k\ (sL)^{0.91}\ x\ (W)^{1.02} * C_f$

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 (or Equivalent)	Fuel	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									
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(tons)	Empty(tons)	Average(tons)	PM Emission Factors[35, 36] (lb/VMT)	
					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 (#471), accessed: https://ww2.arb.ca.gov/speciation-profiles-used-carb-modeling
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] (lb/lb Dust)
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: Stationary Engines - Criteria Pollutant and GHG Emissions

Table 9a: 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)
		Fuel	Tier	BHp						
Diesel Grinders	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Screens	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Stackers	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Colorizer	0	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Emergency Generator	1	Diesel	3	150	2.85	1.02	3.7	0.005	0.15	0.15
Diesel Emergency Fire Pump	1	Diesel	3	300	2.85	1.02	2.6	0.005	0.15	0.15

Table 9b: 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 9c: 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 9d: 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

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 10: TAC from Composting Dust

Table 10a: 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 10b: TAC from Material Handling and Wind Erosion

TAC	CAS	Concentration[1, 2]	Total TAC Emissions		Grinding and Screening TAC Emissions		Material Handling TAC Emissions		Wind Erosion TAC Emissions	
		(lb/lb Dust)	(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 11: Organic TAC Emissions

Table 11a: 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 11b: Feedstock Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11c: Composting TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11d: Curing TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11e: Finished Compost Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 12: NH3 Emissions

Table 12a: 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 12b: 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 13: Stationary Diesel Engine TAC Emissions

Table 13: 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 14: Summary of TAC Emissions from Composting Activities

Table 14a: 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 14b: 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 15: Onroad Mobile Sources - Vehicle Information

Table 15: 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 16: Onroad Mobile Sources Exhaust Emissions

Table 16a: 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 16b: 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 16c: 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	0.010	0.718	0.0023
	T7 Tractor	0.0090	0.0306	1.46	4.98	6.44	0.18	6.26	0.021

Table 16d: 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

Data and Parameters		
Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 17: Onroad Mobile Source Paved Road Dust

Table 17a: Paved Road PM10 Emission Factors1

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

$E = k\ (sL)^{0.91}\ x\ (W)^{1.02} * C_f$

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 17b: Fraction of VMT by Functional Type of Roadway2

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 4

Table 17c: 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	10	12	8	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	47	55	39	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	30	35	25	0.18	1.50	92	1.2	93
		VMT/Yr	9,337	10,943	7,747	56	468	28,080	374	28,454

Table 17d: 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 17e: 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 18: Fugitive Dust From Travel on Unpaved Roads

Table 18a: Unpaved Road Emission Factors1

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 18b: 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 18c: 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 19: Offroad Equipment - Criteria Pollutant Emissions

Table 19a: 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)
			Tier	BHp						
1	Fuel Truck	Freightliner M2106	4f	350	0.30	0.14	2.60	0.005	0.010	0.010
1	Tractors	Massey Fergusen, 7619	4f	200	0.30	0.14	2.60	0.005	0.010	0.010
1	Excavator	Caterpillar 326	4f	201	0.30	0.14	2.60	0.005	0.010	0.010
2	Loader	Caterpillar, 962K	4f	250	0.30	0.14	2.60	0.005	0.010	0.010
0	Windrow Turner	Scarab	4f	250	0.30	0.14	2.60	0.005	0.010	0.010
1	Water Truck	International, 7400 6x4	4f	350	0.30	0.14	2.60	0.005	0.010	0.010
1	Sweeper Truck	Freightliner M2	4f	240	0.30	0.14	2.60	0.005	0.010	0.010

Table 19b: 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 19c: 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 19d: 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

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 20: Fugitive Dust From Offroad Equipment Travel on Unpaved Areas and Haul Roads[1]

Table 20a: 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 20b: 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 20c: 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 estimate emissions.
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 Mar 2012.

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Table 21: Diesel and Gasoline Vehicle TAC Emissions

Table 21a: 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 21b: 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 21c: 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. Website: 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 22: TAC from Paved Road Dust

Table 22a: 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 22b: 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 23: TAC from Offroad Vehicles Operation on Unpaved Surfaces

Table 23a: 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 23b: 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 24: Summary of TAC Emissions from Mobile Sources

Table 24a: 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 24b: 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 25: Summary of TAC Emissions

Table 25a: 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 25b: 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 25: Summary of TAC Emissions

Table 25a: Summary of TAC Emissions, l

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 25b: Summary of TAC Emissions, I

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 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 1/4 mile
			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 and Responses Rule 9510 and 3180 December 15, 2005
6. Rural is assumed to be 0.25 miles per one-way trip.

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 Tier and 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: Solid Waste Disposal Wastewater Treatment Ethanol Fermentation Submitted to: U.S. Environmental Protection Agency Sector Policies and Programs Division Measurement Policy Group, December 14, 2010

Table 3b: Uncontrolled Grinding and Screening PM Emission Factors

Process Operation	Emission Factor PM10(lb/ton)	Emission Factor PM2.5(lb/ton)	Note
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 PM10(lb/ton)	Emission Factor PM2.5(lb/ton)	Note
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

$E = k\ (sL)^{0.91}\ x\ (W)^{1.02} * C_f$

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 (or Equivalent)	Fuel	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									
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(tons)	Empty(tons)	Average(tons)	PM Emission Factors[35, 36] (lb/VMT)	
					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 (#471), accessed: https://ww2.arb.ca.gov/speciation-profiles-used-carb-modeling
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] (lb/lb Dust)
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: Stationary Engines - Criteria Pollutant and GHG Emissions

Table 9a: 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)
		Fuel	Tier	BHp						
Diesel Grinders	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Screens	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Stackers	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Colorizer	0	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Emergency Generator	1	Diesel	3	150	2.85	1.02	3.7	0.005	0.15	0.15
Diesel Emergency Fire Pump	1	Diesel	3	300	2.85	1.02	2.6	0.005	0.15	0.15

Table 9b: 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 9c: 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 9d: 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

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 10: TAC from Composting Dust

Table 10a: 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 10b: TAC from Material Handling and Wind Erosion

TAC	CAS	Concentration[1, 2]	Total TAC Emissions		Grinding and Screening TAC Emissions		Material Handling TAC Emissions		Wind Erosion TAC Emissions	
		(lb/lb Dust)	(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 11: Organic TAC Emissions

Table 11a: 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 11b: Feedstock Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11c: Composting TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11d: Curing TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11e: Finished Compost Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 12: NH3 Emissions

Table 12a: 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 12b: 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 13: Stationary Diesel Engine TAC Emissions

Table 13: 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 14: Summary of TAC Emissions from Composting Activities

Table 14a: 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 14b: 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 15: Onroad Mobile Sources - Vehicle Information

Table 15: 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 16: Onroad Mobile Sources Exhaust Emissions

Table 16a: 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 16b: 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 16c: 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	0.010	0.718	0.0023
	T7 Tractor	0.0090	0.0306	1.46	4.98	6.44	0.18	6.26	0.021

Table 16d: 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

Data and Parameters		
Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 17: Onroad Mobile Source Paved Road Dust

Table 17a: Paved Road PM10 Emission Factors1

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

$E = k\ (sL)^{0.91}\ x\ (W)^{1.02} * C_f$

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 17b: Fraction of VMT by Functional Type of Roadway2

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 4

Table 17c: 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	10	12	8	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	47	55	39	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	30	35	25	0.18	1.50	92	1.2	93
		VMT/Yr	9,337	10,943	7,747	56	468	28,080	374	28,454

Table 17d: 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 17e: 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 18: Fugitive Dust From Travel on Unpaved Roads

Table 18a: Unpaved Road Emission Factors1

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 18b: 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 18c: 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 19: Offroad Equipment - Criteria Pollutant Emissions

Table 19a: 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)
			Tier	BHp						
1	Fuel Truck	Freightliner M2106	4f	350	0.30	0.14	2.60	0.005	0.010	0.010
1	Tractors	Massey Fergusen, 7619	4f	200	0.30	0.14	2.60	0.005	0.010	0.010
1	Excavator	Caterpillar 326	4f	201	0.30	0.14	2.60	0.005	0.010	0.010
2	Loader	Caterpillar, 962K	4f	250	0.30	0.14	2.60	0.005	0.010	0.010
0	Windrow Turner	Scarab	4f	250	0.30	0.14	2.60	0.005	0.010	0.010
1	Water Truck	International, 7400 6x4	4f	350	0.30	0.14	2.60	0.005	0.010	0.010
1	Sweeper Truck	Freightliner M2	4f	240	0.30	0.14	2.60	0.005	0.010	0.010

Table 19b: 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 19c: 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 19d: 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

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 20: Fugitive Dust From Offroad Equipment Travel on Unpaved Areas and Haul Roads[1]

Table 20a: 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 20b: 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 20c: 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 estimate emissions.
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 Mar 2012.

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Table 21: Diesel and Gasoline Vehicle TAC Emissions

Table 21a: 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 21b: 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 21c: 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. Website: 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 22: TAC from Paved Road Dust

Table 22a: 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 22b: 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 23: TAC from Offroad Vehicles Operation on Unpaved Surfaces

Table 23a: 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 23b: 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 24: Summary of TAC Emissions from Mobile Sources

Table 24a: 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 24b: 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

Table 25: Summary of TAC Emissions

Table 25a: 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 25b: 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 25: Summary of TAC Emissions

Table 25a: Summary of TAC Emissions, l

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 25b: Summary of TAC Emissions, I

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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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 1/4 mile
			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 and Responses Rule 9510 and 3180 December 15, 2005
6. Rural is assumed to be 0.25 miles per one-way trip.

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 Tier and 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: Solid Waste Disposal Wastewater Treatment Ethanol Fermentation Submitted to: U.S. Environmental Protection Agency Sector Policies and Programs Division Measurement Policy Group, December 14, 2010

Table 3b: Uncontrolled Grinding and Screening PM Emission Factors

Process Operation	Emission Factor PM10(lb/ton)	Emission Factor PM2.5(lb/ton)	Note
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 PM10(lb/ton)	Emission Factor PM2.5(lb/ton)	Note
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

$E = k\ (sL)^{0.91}\ x\ (W)^{1.02} * C_f$

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 (or Equivalent)	Fuel	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									
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(tons)	Empty(tons)	Average(tons)	PM Emission Factors[35, 36] (lb/VMT)	
					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 (#471), accessed: https://ww2.arb.ca.gov/speciation-profiles-used-carb-modeling
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] (lb/lb Dust)
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: Stationary Engines - Criteria Pollutant and GHG Emissions

Table 9a: 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)
		Fuel	Tier	BHp						
Diesel Grinders	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Screens	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Stackers	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Colorizer	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Emergency Generator	1	Diesel	3	150	2.85	1.02	3.7	0.005	0.15	0.15
Diesel Emergency Fire Pump	1	Diesel	3	300	2.85	1.02	2.6	0.005	0.15	0.15

Table 9b: 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 9c: 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 9d: 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

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 10: TAC from Composting Dust

Table 10a: 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 10b: TAC from Material Handling and Wind Erosion

TAC	CAS	Concentration[1, 2]	Total TAC Emissions		Grinding and Screening TAC Emissions		Material Handling TAC Emissions		Wind Erosion TAC Emissions	
		(lb/lb Dust)	(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 11: Organic TAC Emissions

Table 11a: 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 11b: Feedstock Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11c: Composting TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11d: Curing TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11e: Finished Compost Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 12: NH3 Emissions

Table 12a: 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 12b: 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 13: Stationary Diesel Engine TAC Emissions

Table 13: 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 14: Summary of TAC Emissions from Composting Activities

Table 14a: 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 14b: 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 15: Onroad Mobile Sources - Vehicle Information

Table 15: 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 16: Onroad Mobile Sources Exhaust Emissions

Table 16a: 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 16b: 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 16c: 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	0.010	0.718	0.0023
	T7 Tractor	0.0090	0.0306	3.57	12.12	15.69	0.46	15.23	0.050

Table 16d: 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

Data and Parameters		
Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 17: Onroad Mobile Source Paved Road Dust

Table 17a: Paved Road PM10 Emission Factors1

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

$E = k\ (sL)^{0.91}\ x\ (W)^{1.02} * C_f$

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 17b: Fraction of VMT by Functional Type of Roadway2

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 4

Table 17c: 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	10	12	8	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	136	97	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	70	82	58	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 17d: 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 17e: 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 18: Fugitive Dust From Travel on Unpaved Roads

Table 18a: Unpaved Road Emission Factors1

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 18b: 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 18c: 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 19: Offroad Equipment - Criteria Pollutant Emissions

Table 19a: 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)
			Tier	BHp						
1	Fuel Truck	Freightliner M2106	4f	350	0.30	0.14	2.60	0.005	0.010	0.010
1	Tractors	Massey Fergusen, 7619	4f	200	0.30	0.14	2.60	0.005	0.010	0.010
1	Excavator	Caterpillar 326	4f	201	0.30	0.14	2.60	0.005	0.010	0.010
3	Loader	Caterpillar, 962K	4f	250	0.30	0.14	2.60	0.005	0.010	0.010
1	Windrow Turner	Scarab	4f	250	0.30	0.14	2.60	0.005	0.010	0.010
1	Water Truck	International, 7400 6x4	4f	350	0.30	0.14	2.60	0.005	0.010	0.010
1	Sweeper Truck	Freightliner M2	4f	240	0.30	0.14	2.60	0.005	0.010	0.010

Table 19b: 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 19c: 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 19d: 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

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 20: Fugitive Dust From Offroad Equipment Travel on Unpaved Areas and Haul Roads[1]

Table 20a: 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 20b: 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 20c: 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 estimate emissions.
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 Mar 2012.

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Table 21: Diesel and Gasoline Vehicle TAC Emissions

Table 21a: 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 21b: 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 21c: 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. Website: 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 22: TAC from Paved Road Dust

Table 22a: 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 22b: 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 23: TAC from Offroad Vehicles Operation on Unpaved Surfaces

Table 23a: 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 23b: 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 24: Summary of TAC Emissions from Mobile Sources

Table 24a: 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 24b: 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

Table 25: Summary of TAC Emissions

Table 25a: 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 25b: 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 25: Summary of TAC Emissions

Table 25a: Summary of TAC Emissions, l

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 25b: Summary of TAC Emissions, l

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 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 1/4 mile
			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 and Responses Rule 9510 and 3180 December 15, 2005
6. Rural is assumed to be 0.25 miles per one-way trip.

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 Tier and 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: Solid Waste Disposal Wastewater Treatment Ethanol Fermentation Submitted to: U.S. Environmental Protection Agency Sector Policies and Programs Division Measurement Policy Group, December 14, 2010

Table 3b: Uncontrolled Grinding and Screening PM Emission Factors

Process Operation	Emission Factor PM10(lb/ton)	Emission Factor PM2.5(lb/ton)	Note
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 PM10(lb/ton)	Emission Factor PM2.5(lb/ton)	Note
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

$E = k\ (sL)^{0.91}\ x\ (W)^{1.02} * C_f$

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 (or Equivalent)	Fuel	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									
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(tons)	Empty(tons)	Average(tons)	PM Emission Factors[35, 36] (lb/VMT)	
					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 (#471), accessed: https://ww2.arb.ca.gov/speciation-profiles-used-carb-modeling
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] (lb/lb Dust)
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: Stationary Engines - Criteria Pollutant and GHG Emissions

Table 9a: 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)
		Fuel	Tier	BHp						
Diesel Grinders	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Screens	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Stackers	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Colorizer	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Emergency Generator	1	Diesel	3	150	2.85	1.02	3.7	0.005	0.15	0.15
Diesel Emergency Fire Pump	1	Diesel	3	300	2.85	1.02	2.6	0.005	0.15	0.15

Table 9b: 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 9c: 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 9d: 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

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 10: TAC from Composting Dust

Table 10a: 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 10b: TAC from Material Handling and Wind Erosion

TAC	CAS	Concentration[1, 2]	Total TAC Emissions		Grinding and Screening TAC Emissions		Material Handling TAC Emissions		Wind Erosion TAC Emissions	
		(lb/lb Dust)	(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 11: Organic TAC Emissions

Table 11a: 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 11b: Feedstock Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11c: Composting TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11d: Curing TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11e: Finished Compost Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 12: NH3 Emissions

Table 12a: 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 12b: 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 13: Stationary Diesel Engine TAC Emissions

Table 13: 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 14: Summary of TAC Emissions from Composting Activities

Table 14a: 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 14b: 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 15: Onroad Mobile Sources - Vehicle Information

Table 15: 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 16: Onroad Mobile Sources Exhaust Emissions

Table 16a: 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 16b: 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 16c: 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	0.010	0.718	0.0023
	T7 Tractor	0.0090	0.0306	3.57	12.12	15.69	0.46	15.23	0.050

Table 16d: 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

Data and Parameters		
Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 17: Onroad Mobile Source Paved Road Dust

Table 17a: Paved Road PM10 Emission Factors1

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

$E = k\ (sL)^{0.91}\ x\ (W)^{1.02} * C_f$

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 17b: Fraction of VMT by Functional Type of Roadway2

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 4

Table 17c: 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	10	12	8	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	136	97	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	70	82	58	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 17d: 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 17e: 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 18: Fugitive Dust From Travel on Unpaved Roads

Table 18a: Unpaved Road Emission Factors1

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 18b: 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 18c: 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 19: Offroad Equipment - Criteria Pollutant Emissions

Table 19a: 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)
			Tier	BHp						
1	Fuel Truck	Freightliner M2106	4f	350	0.30	0.14	2.60	0.005	0.010	0.010
1	Tractors	Massey Fergusen, 7619	4f	200	0.30	0.14	2.60	0.005	0.010	0.010
1	Excavator	Caterpillar 326	4f	201	0.30	0.14	2.60	0.005	0.010	0.010
3	Loader	Caterpillar, 962K	4f	250	0.30	0.14	2.60	0.005	0.010	0.010
0	Windrow Turner	Scarab	4f	250	0.30	0.14	2.60	0.005	0.010	0.010
1	Water Truck	International, 7400 6x4	4f	350	0.30	0.14	2.60	0.005	0.010	0.010
1	Sweeper Truck	Freightliner M2	4f	240	0.30	0.14	2.60	0.005	0.010	0.010

Table 19b: 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 19c: 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 19d: 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

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 20: Fugitive Dust From Offroad Equipment Travel on Unpaved Areas and Haul Roads[1]

Table 20a: 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 20b: 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 20c: 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 estimate emissions.
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 Mar 2012.

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Table 21: Diesel and Gasoline Vehicle TAC Emissions

Table 21a: 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 21b: 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 21c: 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. Website: 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 22: TAC from Paved Road Dust

Table 22a: 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 22b: 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 23: TAC from Offroad Vehicles Operation on Unpaved Surfaces

Table 23a: 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 23b: 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 24: Summary of TAC Emissions from Mobile Sources

Table 24a: 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 24b: 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

Table 25: Summary of TAC Emissions

Table 25a: 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 25b: 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 25: Summary of TAC Emissions

Table 25a: Summary of TAC Emissions, l

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 25b: Summary of TAC Emissions, I

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 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 1/4 mile
			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 and Responses Rule 9510 and 3180 December 15, 2005
6. Rural is assumed to be 0.25 miles per one-way trip.

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 Tier and 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: Solid Waste Disposal Wastewater Treatment Ethanol Fermentation Submitted to: U.S. Environmental Protection Agency Sector Policies and Programs Division Measurement Policy Group, December 14, 2010

Table 3b: Uncontrolled Grinding and Screening PM Emission Factors

Process Operation	Emission Factor PM10(lb/ton)	Emission Factor PM2.5(lb/ton)	Note
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 PM10(lb/ton)	Emission Factor PM2.5(lb/ton)	Note
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

$E = k\ (sL)^{0.91}\ x\ (W)^{1.02} * C_f$

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 (or Equivalent)	Fuel	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									
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(tons)	Empty(tons)	Average(tons)	PM Emission Factors[35, 36] (lb/VMT)	
					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 (#471), accessed: https://ww2.arb.ca.gov/speciation-profiles-used-carb-modeling
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] (lb/lb Dust)
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: Stationary Engines - Criteria Pollutant and GHG Emissions

Table 9a: 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)
		Fuel	Tier	BHp						
Diesel Grinders	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Screens	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Stackers	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Colorizer	1	Diesel	4	100	0.26	0.05	3.7	0.005	0.01	0.01
Diesel Emergency Generator	1	Diesel	3	150	2.85	1.02	3.7	0.005	0.15	0.15
Diesel Emergency Fire Pump	1	Diesel	3	300	2.85	1.02	2.6	0.005	0.15	0.15

Table 9b: 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 9c: 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 9d: 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

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 10: TAC from Composting Dust

Table 10a: 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 10b: TAC from Material Handling and Wind Erosion

TAC	CAS	Concentration[1, 2]	Total TAC Emissions		Grinding and Screening TAC Emissions		Material Handling TAC Emissions		Wind Erosion TAC Emissions	
		(lb/lb Dust)	(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 11: Organic TAC Emissions

Table 11a: 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 11b: Feedstock Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11c: Composting TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11d: Curing TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 11e: Finished Compost Storage TAC Emissions

TAC	Weight Fraction[1]	TAC Emissions (lb/hr)	TAC Emissions (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 12: NH3 Emissions

Table 12a: 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 12b: 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 13: Stationary Diesel Engine TAC Emissions

Table 13: 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 14: Summary of TAC Emissions from Composting Activities

Table 14a: 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 14b: 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 15: Onroad Mobile Sources - Vehicle Information

Table 15: 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 16: Onroad Mobile Sources Exhaust Emissions

Table 16a: 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 16b: 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 16c: 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	0.010	0.718	0.0023
	T7 Tractor	0.0090	0.0306	3.57	12.12	15.69	0.46	15.23	0.050

Table 16d: 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

Data and Parameters		
Operating Hours	10	hours/day
Operating Days	312	day/yr

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Table 17: Onroad Mobile Source Paved Road Dust

Table 17a: Paved Road PM10 Emission Factors1

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

$E = k\ (sL)^{0.91}\ x\ (W)^{1.02} * C_f$

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 17b: Fraction of VMT by Functional Type of Roadway2

Freeway	Major	Collector	Local	Rural
33.25%	38.97%	27.59%	0.20%	note 4

Table 17c: 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	10	12	8	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	136	97	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	70	82	58	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 17d: 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 17e: 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 18: Fugitive Dust From Travel on Unpaved Roads

Table 18a: Unpaved Road Emission Factors1

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 18b: 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 18c: 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 19: Offroad Equipment - Criteria Pollutant Emissions

Table 19a: 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)
			Tier	BHp						
1	Fuel Truck	Freightliner M2106	4f	350	0.30	0.14	2.60	0.005	0.010	0.010
1	Tractors	Massey Fergusen, 7619	4f	200	0.30	0.14	2.60	0.005	0.010	0.010
1	Excavator	Caterpillar 326	4f	201	0.30	0.14	2.60	0.005	0.010	0.010
3	Loader	Caterpillar, 962K	4f	250	0.30	0.14	2.60	0.005	0.010	0.010
0	Windrow Turner	Scarab	4f	250	0.30	0.14	2.60	0.005	0.010	0.010
1	Water Truck	International, 7400 6x4	4f	350	0.30	0.14	2.60	0.005	0.010	0.010
1	Sweeper Truck	Freightliner M2	4f	240	0.30	0.14	2.60	0.005	0.010	0.010

Table 19b: 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 19c: 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 19d: 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

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 20: Fugitive Dust From Offroad Equipment Travel on Unpaved Areas and Haul Roads[1]

Table 20a: 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 20b: 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 20c: 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 estimate emissions.
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 Mar 2012.

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Table 21: Diesel and Gasoline Vehicle TAC Emissions

Table 21a: 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 21b: 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 21c: 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. Website: 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 22: TAC from Paved Road Dust

Table 22a: 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 22b: 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 23: TAC from Offroad Vehicles Operation on Unpaved Surfaces

Table 23a: 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 23b: 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 24: Summary of TAC Emissions from Mobile Sources

Table 24a: 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 24b: 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

Table 25: Summary of TAC Emissions

Table 25a: 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 25b: 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 25: Summary of TAC Emissions

Table 25a: Summary of TAC Emissions, l

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 25b: Summary of TAC Emissions, l

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

Appendix B

Air Toxics Prioritization Scores

Yorke ENGINEERING, LLC
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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

Yorke ENGINEERING, LLC
www.YorkeEngr.com

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	16 %	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/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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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	1 %	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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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	1 %	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/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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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/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 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	%	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/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 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	1 %	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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Summary of Prioritization Scores (PS) by Receptor Distance
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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/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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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	2 %	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/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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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	2 %	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/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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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	2 %	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/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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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	2 %	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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Scenario 3

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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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Scenario 3

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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/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 3

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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
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: 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/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 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/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 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/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 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	1 %	1.50	1 %	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/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 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	1 %	0.38	1 %	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	1 %	0.09	2 %	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	2 %	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/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 4

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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	[illegible] %	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/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 4

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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	1 %	0.01	2 %	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	2 %	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/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 4

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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	1 %	0.00	2 %	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	2 %	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	2%	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/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 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	2%	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	2%	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	1%			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/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 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	1 %			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/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 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	2%	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	1%			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/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 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	2%	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	1%			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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Scenario 6

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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	2%	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/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 6

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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	2%	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	2%	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	1%			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/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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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	1 %			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/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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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	2%	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	1%			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/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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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	2%	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	1%			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