TECHNICAL MEMORANDUM

DATE: December 24, 2025
TO: Mandi Needles, CASC Engineering & Consulting
FROM: Haseeb Qureshi, Ali Dadabhoy, Shannon Wong, Urban Crossroads, Inc.
JOB NO: 16463-02 AQ & GHG Assessment

SUBJECT: 6TH STREET AIR QUALITY AND GREENHOUSE GAS ASSESSMENT

Urban Crossroads, Inc. is pleased to provide the following Air Quality and Greenhouse Gas Assessment for the 6th Street (**Project**), which is located at 184 South 6th Avenue in the City of Industry. The Project site consists of two (2) parcels: Accessor's Parcel Numbers (APNs) 8206-027-058 and -080.

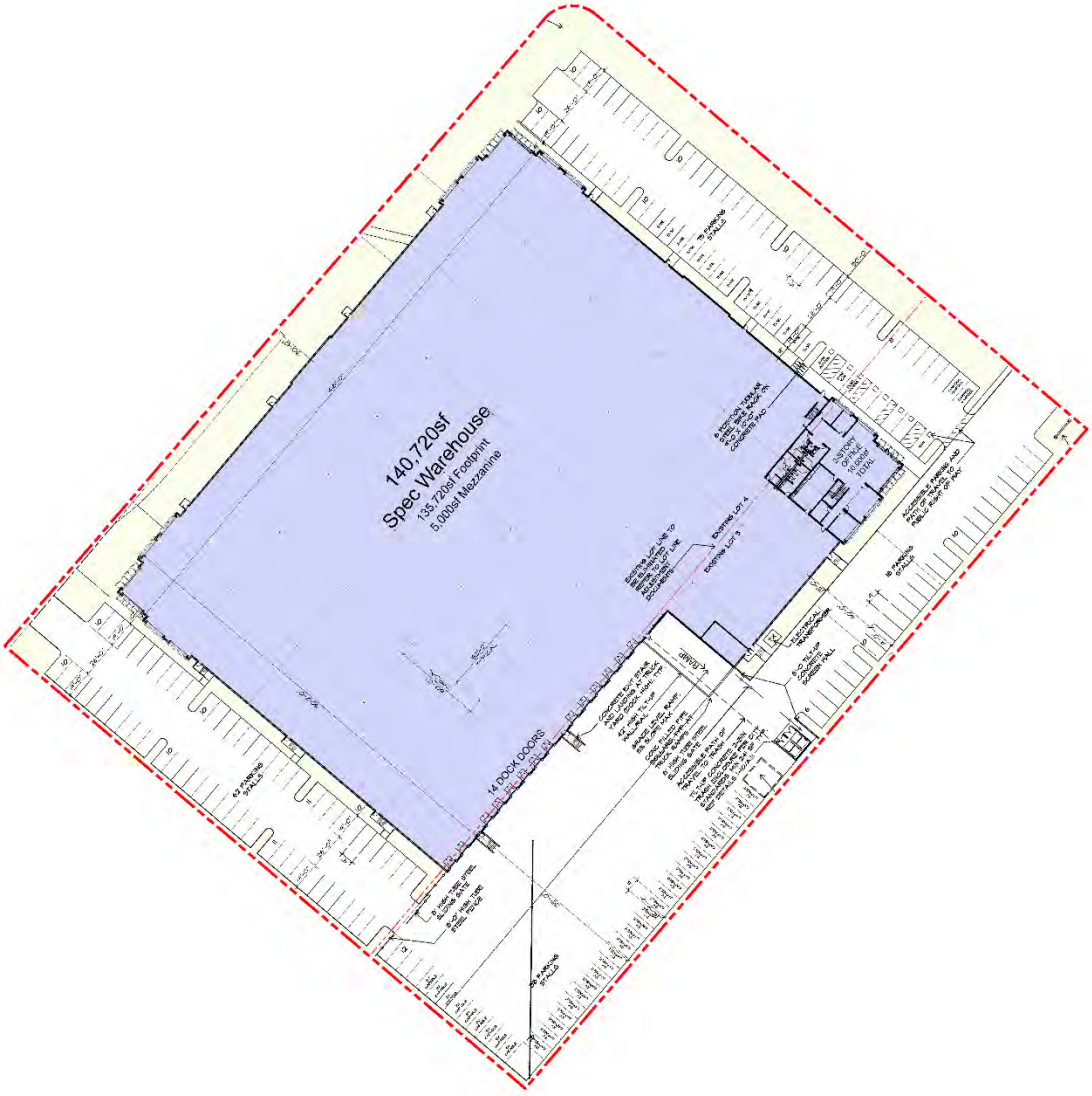
PROJECT OVERVIEW

The proposed building consists of 135,720 square-feet of warehouse space, 10,000 square-feet of office space split between two stories located at the front of the building, and 5,000 square-feet of mezzanine, resulting in a total floor area of 140,720 square feet, as shown in Exhibit 1. The Project is anticipated to have an opening year of 2027.

SUMMARY OF FINDINGS

Results of the assessment indicate that the Project would result in a less than significant impact with respect to air quality and greenhouse gases.

EXHIBIT 1: SITE PLAN



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LEGEND:

Site Boundary

PROJECT AIR QUALITY IMPACTS

AIR QUALITY SETTING

South Coast Air Basin (SCAB)

The Project site is located in the SCAB within the jurisdiction of South Coast Air Quality Management District (SCAQMD) (1). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As stated, the Project site is located within the SCAB, a 6,745-square-mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County.

The SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bounded by the San Gabriel Mountains to the south and west, the Los Angeles / Kern County border to the north, and the Los Angeles / San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley.

Regional Climate

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to mid 60s (degrees Fahrenheit [°F]). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide (SO_2) to sulfates (SO_4) is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71 percent (%) along the coast and 59% inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90% of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation

is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14½ hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as nitrogen oxides (NO_X) and carbon monoxide (CO) from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

Wind Patterns and Project Location

The distinctive climate of the Project area and the SCAB is determined by its terrain and geographical location. The SCAB is located in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

Criteria Pollutants

Both the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. The six criteria pollutants are ozone (O_3) (precursor emissions include NO_X and reactive organic gases (ROG), CO, particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The Riverside County portion of the SCAB is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3, PM_{10}, and $PM_{2.5}$.

Toxic Air Contaminants (TAC) Trend

In 1984, as a result of public concern for exposure to airborne carcinogens, CARB adopted regulations to reduce the amount of TAC emissions resulting from mobile and area sources, such as cars, trucks, stationary products, and consumer products. According to the Ambient and Emission Trends of Toxic Air Contaminants in California journal article (2) which was prepared for CARB, results show that between 1990-2012, ambient concentration and emission trends for the seven TACs responsible for most of the known cancer risk associated with airborne exposure in California have declined significantly (between 1990 and 2012). The seven TACs studied include those that are derived from mobile sources: diesel particulate matter (DPM), benzene (C_6H_6), and 1,3-butadiene (C_4H_6); those that are derived from stationary sources: perchloroethylene (C_2Cl_4) and hexavalent chromium (Cr(VI)); and those derived from photochemical reactions of emitted VOCs: formaldehyde (CH_2O) and acetaldehyde (C_2H_4O).[1] The decline in ambient concentration and emission trends of these TACs are a result of various regulations CARB has implemented to address cancer risk.

REGULATORY BACKGROUND

Federal Regulations

The EPA is responsible for setting and enforcing the national ambient air quality standards (NAAQS) for O_3, CO, NO_X, SO_2, PM_{10}, and lead (Pb) (3). The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (4). The CAA also mandates that each state submit and implement state implementation plans (SIPs) for local areas

[1] It should be noted that ambient DPM concentrations are not measured directly. Rather, a surrogate method using the coefficient of haze (COH) and elemental carbon (EC) is used to estimate DPM concentrations.

not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions) (5) (6). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_X. NO_X is a collective term that includes all forms of NO_X which are emitted as byproducts of the combustion process.

California Regulations

CARB

The CARB, which became part of the California EPA (CalEPA) in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the California ambient air quality standards (CAAQS) for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for SO_4, visibility, hydrogen sulfide (H_2S), and vinyl chloride (C_2H_3Cl). However, at this time, H_2S and C_2H_3Cl are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (7) (8).

Local air quality management districts, such as the SCAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare Air Quality Management Plans (AQMP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g., motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;

- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROGs, NO_X, CO and PM_{10}. However, air basins may use an alternative emission reduction strategy that achieves a reduction of less than 5% per year under certain circumstances.

AQMP

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMP to meet the state and federal ambient air quality standards (9). AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

APPLICABLE REGULATORY REQUIREMENTS

SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to Rule 403 (Fugitive Dust) and Rule 1113 (Architectural Coatings) (10) (11).

SCAQMD RULE 403

This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent and reduce fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to earth moving and grading activities. This rule is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM_{10} suppression techniques are summarized below.

- Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
- All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.
- All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
- Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the workday to remove soil tracked onto the paved surface.

SCAQMD RULE 1113

This rule serves to limit the volatile organic compound (VOC) content of architectural coatings used on projects in the SCAQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects in the SCAQMD must comply with the current VOC standards set in this rule.

METHODOLOGY

The California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released CalEEMod 2022 in May 2022. CalEEMod periodically releases updates, as such the latest version available at the time of this report has been

utilized in this analysis. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (12). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality and greenhouse gas emissions.

STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the California Environmental Quality Act Guidelines (*CEQA Guidelines*) (14 CCR §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (13):

- Threshold 1: Conflict with or obstruct implementation of the applicable air quality plan.
- Threshold 2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.
- Threshold 3: Expose sensitive receptors to substantial pollutant concentrations.
- Threshold 4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

AIR QUALITY REGIONAL AND LOCALIZED EMISSIONS THRESHOLDS

The SCAQMD has developed regional and localized significance thresholds for criteria pollutants, as summarized at Tables 1 and 2 (14). The SCAQMD's CEQA Air Quality Significance Thresholds (March 2023) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

TABLE 1: REGIONAL EMISSIONS SIGNIFICANCE THRESHOLDS

Pollutant	Construction	Operations
NO_X	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_X	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Pb	3 lbs/day	3 lbs/day

lbs/day = Pounds Per Day

TABLE 2: LOCALIZED EMISSIONS SIGNIFICANCE THRESHOLDS

Pollutant	Construction	Operations
NO_X	0.18 ppm	0.18 ppm
CO (1-hour average)	20 ppm	20 ppm
CO (8-hour average)	9 ppm	9 ppm
PM_{10}	10.4 µg/m^3	2.5 µg/m^3
$PM_{2.5}$	10.4 µg/m^3	2.5 µg/m^3

ppm = Parts Per Million
µg/m^3 = Micrograms Per Cubic Meter

CONSTRUCTION ACTIVITIES

Construction activities associated with the Project would result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Construction related emissions are expected from the following construction activities:

- Demolition
- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

DEMOLITION ACTIVITIES

The Project site is currently developed with 6 existing single-story light industrial warehouse buildings and the foundation material of a 7th building that will be demolished. Based on information provided by the client, the total volume of demolition debris includes 6,000 CY of concrete (walls and foundation), 1,056 CY of asphalt, and 950 tons of trash. For modeling purposes, a total of approximately 10,828.4 tons of debris has been assumed. Additionally, based on information provided by the client, demolition material will be hauled off-site to the El Sobrante Landfill, located 43 miles from the Project site. As such, a trip length of 43-miles was used to analyze the emissions associated with demolition activities.

GRADING ACTIVITIES

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions." Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. The Project would require 680 cubic yards of soil export. Based on information provided by the client, grading materials will be hauled off-site to the El Sobrante Landfill, located 43 miles from the Project site. As such, a trip length of 43-miles was used to analyze the emissions associated with export activities.

Off-Site Utility and Infrastructure Improvements

To support the Project development, there will be off-site improvements associated along 6th Street and Valley Boulevard project frontage. On 6th Street, improvements will relocate the southwesterly driveway further southwest, install one new public fire hydrant south of the relocated driveway, construct a new sidewalk along the entire length of frontage, install approximately 3 new streetlights, underground the existing high voltage transmission lines and remove the poles, and remove adjacent trees to increase curb radius at the intersection with Valley Boulevard. On Valley Boulevard, improvements will close the northwesterly driveway, relocate the southeasterly driveway, relocate one existing streetlight, and install one new public fire hydrant north of the relocated driveway. The off-site construction activities would not take place at one location for the entire duration of construction. Impacts associated with these activities are not expected to exceed the emissions identified for Project-related construction activities since the off-site construction areas would have physical constraints such as, roadway travel lanes, traffic signals, and sidewalks which would limit the amount of daily activity that could occur. The physical constraints would limit the amount of construction equipment that could be used, and any off-site and utility infrastructure construction would not use equipment totals that would exceed the equipment totals. On the basis of the previous discussion, no impacts beyond what has already been identified in this report are expected to occur.

On-Road Trips

Construction generates on-road vehicle emissions from vehicle usage for workers, vendors, and haul trucks commuting to and from the site. The number of worker, vendor, and hauling trips per phase is presented below in Table 3. Worker and hauling trips are based on CalEEMod defaults. It should be noted that for vendor trips, specifically, CalEEMod only assigns vendor trips to the Building Construction phase. Vendor trips would likely occur during all phases of construction. As such, the CalEEMod defaults for vendor trips have been adjusted based on a ratio of the total vendor trips to the number of days of each subphase of activity.

Table 3: Construction Trip Assumptions

Construction Activity	Worker Trips Per Day	Vendor Trips Per Day	Hauling Trips Per Day
Demolition	15	2	159
Site Preparation	18	1	0
Grading	15	2	5
Building Construction	59	19	0
Paving	20	0	0
Architectural Coating	12	0	0

CONSTRUCTION DURATION

For purposes of analysis, construction of Project is expected to commence in March 2026 and would last through January 2027. The construction schedule utilized in the analysis, as shown in Table 4, represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases

due to emission regulations becoming more stringent[2]. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (15).

TABLE 4: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Demolition	3/2/2026	3/24/2026	17
Site Preparation	3/25/2026	4/6/2026	9
Grading	4/7/2026	4/29/2026	17
Building Construction	4/30/2026	1/28/2027	196
Paving	1/6/2027	1/28/2027	17
Architectural Coating	1/6/2027	1/28/2027	17

CONSTRUCTION EQUIPMENT

Equipment used for construction of the Project is shown in Table 5. CalEEMod default parameters for equipment has been used. Consistent with industry standards and typical construction practices, each piece of equipment will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code.

TABLE 5: CONSTRUCTION EQUIPMENT

Construction Activity	Equipment[1]	Quantity	Hours
Demolition	Concrete/Industrial Saws	1	8
	Excavators	3	8
	Rubber Tired Dozers	2	8
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Excavators	1	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Crawler Tractors	3	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8

[2] As shown in the CalEEMod User's Guide Version 2022, Appendix G "Table G-11. Statewide Average Annual Offroad Equipment Emission Factors" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

Construction Activity	Equipment[1]	Quantity	Hours
Paving	Pavers	1	8
	Paving Equipment	2	8
	Rollers	2	8
	Tractors/Loaders/Backhoes	1	8
	Cement and Mortar Mixers	2	8
Architectural Coating	Air Compressors	1	8

[1] In order to account for fugitive dust emissions, Crawler Tractors were used in lieu of Tractors/Loaders/Backhoes.

REGIONAL CONSTRUCTION EMISSIONS SUMMARY

The estimated maximum daily construction emissions without mitigation are summarized in Table 6. Detailed construction model outputs are presented in Appendix 1. Under the assumed scenarios, emissions resulting from the Project construction will not exceed thresholds established by the SCAQMD for emissions of any criteria pollutant and no mitigation is required.

TABLE 6: REGIONAL CONSTRUCTION EMISSIONS SUMMARY

Year	Emissions (lbs/day)					
	ROG	NO_X	CO	SO_2	$PM_{10}T$	$PM_{2.5}T$
Summer						
2026	3.90	34.72	32.15	0.05	7.67	4.37
Winter						
2026	3.90	34.73	31.99	0.11	7.67	4.37
2027	43.58	19.62	30.91	0.05	2.03	0.95
Maximum Daily Emissions	43.58	34.73	32.15	0.11	7.67	4.37
SCAQMD Regional Thresholds	75	100	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

[1] PM10 and PM2.5 source emissions reflect 3x daily watering per SCAQMD Rule 403 for fugitive dust.

[2] VOC source emissions reflect SCAQMD Rule 1113 for Architectural Coatings.

REGIONAL OPERATIONAL EMISSIONS

Proposed Project

Operational activities associated with the Project would result in emissions of CO, VOCs, NO_X, SO_X, PM_{10}, and $PM_{2.5}$. Operational related emissions are expected from the following primary sources: area source emissions, mobile source emissions, stationary source emissions, and cargo handling equipment emissions.

The proposed Project related operational air quality impacts derive primarily from vehicle trips generated by the Project. Trip generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021) for the Warehousing (ITE Land Use Code 150) land use category were utilized in this analysis (16).

To determine emissions from trucks for the proposed industrial uses, the analysis incorporated the SCAQMD recommended truck trip length 15.3 miles for 2-axle (LHDT1, LHDT2) trucks, 14.2 miles 3-

axle (MHDT) trucks and 39.9 miles for 4+-axle (HHDT) trucks and weighting the average trip lengths using the following SCAQMD recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%. The trip length function for trucks in CalEEMod has been revised to 30.47 miles, with an assumption of 100% primary trips for the proposed industrial land uses.

It is anticipated that the Project will utilize a 300 hp diesel-powered fire pump and 700 hp emergency generator. For analytical purposes, it is anticipated that the fire pump and generator would operate for a maximum time of 1 hour per day and 50 hours per year for maintenance and testing purposes.

It is common for warehouse buildings to require the operation of exterior yard trucks or cargo handling equipment (CHE) to move empty containers and empty chassis in the building's truck court areas. The cargo handling equipment is assumed to have a horsepower (hp) range of approximately 175 hp to 200 hp. Based on the latest available information from SCAQMD (17); for example, warehouse projects typically have 3.6-yard trucks/CHE per million square feet of building space. For this Project, on-site modeled operational equipment conservatively includes up to one (1) 175 horsepower (hp), compressed natural gas or gasoline-powered tractors/loaders/backhoes operating at 4 hours a day[3] for 365 days of the year.

The estimated operation-source emissions from the Project are summarized in Table 7. Detailed operation model outputs are presented in Appendix 1. As shown in Table 7, operational-source emissions would not exceed the applicable SCAQMD regional thresholds for emissions of any criteria pollutant.

TABLE 7: TOTAL PROJECT REGIONAL OPERATIONAL EMISSIONS

Source	Emissions (lbs/day)					
	ROG	NO_X	CO	SO_2	$PM_{10}T$	$PM_{2.5}T$
Summer						
Mobile	0.65	7.39	8.17	0.08	3.53	1.00
Area	4.22	0.05	6.12	0.00	0.01	0.01
Stationary	1.64	4.59	4.18	0.01	0.24	0.24
Cargo Handling Equipment	0.12	0.38	16.44	0.00	0.03	0.03
Maximum Daily Emissions	6.63	12.41	34.91	0.09	3.81	1.28
SCAQMD Regional Thresholds	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO
Winter						
Mobile	0.64	7.71	7.71	0.08	3.53	1.00
Area	3.21	0.00	0.00	0.00	0.00	0.00
Stationary	1.64	4.59	4.18	0.01	0.24	0.24
Cargo Handling Equipment	0.12	0.38	16.44	0.00	0.03	0.03
Maximum Daily Emissions	5.61	12.68	28.34	0.08	3.80	1.27
SCAQMD Regional Thresholds	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

[3] Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoes would operate up to 4 hours per day.

Existing Buildings

The Project site is currently developed with 6 existing single-story light industrial warehouse buildings totaling 199,480 square feet. The estimated operation-source emissions from the existing buildings are summarized in Table 8. Detailed operation model outputs are presented in Appendix 2.

The existing buildings related operational air quality impacts derive primarily from vehicle trips generated by the existing uses. Trip generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021) for the Warehousing (ITE Land Use Code 150) land use category were utilized in this analysis (16).

To determine emissions from trucks for the existing industrial uses, the analysis incorporated the SCAQMD recommended truck trip length 15.3 miles for 2-axle (LHDT1, LHDT2) trucks, 14.2 miles 3-axle (MHDT) trucks and 39.9 miles for 4+-axle (HHDT) trucks and weighting the average trip lengths using the following SCAQMD recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%. The trip length function for trucks in CalEEMod has been revised to 30.47 miles, with an assumption of 100% primary trips for the existing industrial land uses.

TABLE 8: EXISTING BUILDINGS REGIONAL OPERATIONAL EMISSIONS

Source	Emissions (lbs/day)					
	ROG	NO_X	CO	SO_2	$PM_{10}T$	$PM_{2.5}T$
Summer						
Mobile	1.01	11.56	12.83	0.11	5.01	1.42
Area	6.21	0.07	8.67	0.00	0.02	0.01
Energy	0.06	1.03	0.87	0.01	0.08	0.08
Maximum Daily Emissions	7.28	12.67	22.38	0.12	5.10	1.51
Winter						
Mobile	1.00	12.06	12.11	0.11	5.01	1.42
Area	4.79	0.00	0.00	0.00	0.00	0.00
Energy	0.06	1.03	0.87	0.01	0.08	0.08
Maximum Daily Emissions	5.84	13.10	12.98	0.12	5.09	1.50

Project Net New Operational Emissions – Comparison to Existing Buildings

As shown in Table 9, the proposed Project is anticipated to generate less emissions per day for pollutants of VOC, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ and more emissions per day for CO as compared to emissions generated by the existing buildings. Additionally, the proposed Projects would still emit less emissions than the applicable thresholds.

TABLE 9: PROJECT NET NEW REGIONAL OPERATIONAL EMISSIONS

Source	Emissions (lbs/day)					
	ROG	NO_X	CO	SO_2	$PM_{10}T$	$PM_{2.5}T$
Summer						
Proposed Project	6.63	12.41	34.91	0.09	3.81	1.28
Existing Buildings	7.28	12.67	22.38	0.12	5.10	1.51
Net Emissions (Proposed – Existing)	-0.65	-0.26	12.54	-0.04	-1.29	-0.24
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO
Winter						
Proposed Project	5.61	12.68	28.34	0.08	3.80	1.27
Existing Buildings	5.84	13.10	12.98	0.12	5.09	1.50
Net Emissions (Proposed – Existing)	-0.23	-0.42	15.36	-0.03	-1.29	-0.23
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

LOCALIZED CONSTRUCTION EMISSIONS

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4.[4] LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses.

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the *LST Methodology* (18).

Emissions Considered

Based on SCAQMD's *LST Methodology*, emissions for concern during construction activities are on-site NO_X, CO, $PM_{2.5}$, and PM_{10}. The *LST Methodology* clearly states that "off-site mobile emissions

[4] The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD defines Environmental Justice as "...equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

Other Asphalt Surfaces	Propane Fireplaces	0	0

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	658,621	453	0.0330	0.0040	0.00
Parking Lot	65,595	453	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	453	0.0330	0.0040	0.00
User Defined Industrial	0.00	453	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	32,541,500	639,100
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	132	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	Diesel	1.00	1.00	50	700	0.73
Fire Pump	Diesel	1.00	1.00	50	300	0.73

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	18	annual days of extreme heat
Extreme Precipitation	5.8	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.48	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	2	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A

Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

6.3. Adjusted Climate Risk Scores

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	72
AQ-PM	86
AQ-DPM	83
Drinking Water	95
Lead Risk Housing	83
Pesticides	0.00
Toxic Releases	85
Traffic	77
Effect Indicators	—
CleanUp Sites	90
Groundwater	99
Haz Waste Facilities/Generators	100
Impaired Water Bodies	59
Solid Waste	92
Sensitive Population	—
Asthma	48
Cardio-vascular	70
Low Birth Weights	8.1
Socioeconomic Factor Indicators	—
Education	73
Housing	52
Linguistic	73
Poverty	76
Unemployment	70

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	34.67214167
Employed	60.78532016
Median HI	30.61722058
Education	—
Bachelor's or higher	26.52380341
High school enrollment	7.006287694
Preschool enrollment	6.454510458
Transportation	—
Auto Access	71.35891184
Active commuting	75.24701655
Social	—
2-parent households	20.23610933
Voting	7.789041447
Neighborhood	—
Alcohol availability	71.26908764
Park access	4.439881945
Retail density	88.93879122
Supermarket access	13.56345438
Tree canopy	15.25728218
Housing	—
Homeownership	43.80854613
Housing habitability	49.98075196
Low-inc homeowner severe housing cost burden	95.4446298
Low-inc renter severe housing cost burden	26.31849095

Uncrowded housing	22.16091364
Health Outcomes	—
Insured adults	28.37161555
Arthritis	0.0
Asthma ER Admissions	53.5
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	1.0
Cognitively Disabled	33.5
Physically Disabled	39.7
Heart Attack ER Admissions	47.6
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	99.3
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0

Children	33.8
Elderly	74.7
English Speaking	46.4
Foreign-born	80.5
Outdoor Workers	73.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	62.1
Traffic Density	80.7
Traffic Access	47.4
Other Indices	—
Hardship	68.8
Other Decision Support	—
2016 Voting	16.6

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	92
Healthy Places Index Score for Project Location (b)	22
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

8.1. Justifications

Screen	Justification
Construction: Construction Phases	Based on client data. Schedule compressed to account for 10 month construction duration. Building Construction, Paving, and Architectural Coating overlap to present a conservative analysis.
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases. Standard 8 hours work days.
Construction: Trips and VMT	Based on client data, demolition and grading debris will be hauled to El Sobrante Landfill which is about 43 miles from the Project Site Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction.
Construction: Architectural Coatings	SCAQMD Rule 1113
Operations: Vehicle Data	Trips taken from ITE 11th Edition
Operations: Fleet Mix	Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle trucks.
Operations: Architectural Coatings	SCAQMD Rule 1113
Operations: Energy Use	Natural gas was not assumed.

APPENDIX 4:

AERMOD LOCALIZED EMISSIONS MODEL OUTPUTS

```
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 24142  ***   ***
C:\Users\adadabhoy\Desktop\AERMOD\16463-6th Street\16463-6th Street. ***
04/25/25
 *** AERMET - VERSION  22112 ***   ***
                       ***        09:37:01

                                  PAGE  16
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = VOL14        ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                            DAY OF WEEK = WEEKDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .1000E+01
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                            DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
```

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = VOL15   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = VOL16   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -
                                                DAY OF WEEK = WEEKDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .1000E+01
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SATURDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00
                                                DAY OF WEEK = SUNDAY
    1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

                    * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY
OF WEEK (HRDOW) *

 SOURCE ID = VOL17   ; SOURCE TYPE = VOLUME   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 -
- -

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ	URBAN SOURCE	EMISSION RATE SCALAR VARY BY	AIRCRAFT
VOL131	0	0.62999E-05	409659.9	3766629.8	91.4	5.00	2.71	1.40	YES	NO	
VOL132	0	0.62999E-05	409669.2	3766623.8	91.5	5.00	2.71	1.40	YES	NO	
VOL133	0	0.62999E-05	409676.4	3766616.0	91.6	5.00	2.71	1.40	YES	NO	
VOL134	0	0.62999E-05	409685.6	3766607.8	91.7	5.00	2.71	1.40	YES	NO	
VOL135	0	0.62999E-05	409694.5	3766601.1	91.8	5.00	2.71	1.40	YES	NO	
VOL136	0	0.62999E-05	409702.9	3766594.2	91.9	5.00	2.71	1.40	YES	NO	
VOL137	0	0.62999E-05	409711.5	3766587.7	91.8	5.00	2.71	1.40	YES	NO	
VOL138	0	0.62999E-05	409719.1	3766581.2	91.8	5.00	2.71	1.40	YES	NO	
VOL139	0	0.62999E-05	409727.3	3766574.8	91.7	5.00	2.71	1.40	YES	NO	
VOL140	0	0.62999E-05	409735.1	3766568.7	91.6	5.00	2.71	1.40	YES	NO	
VOL141	0	0.62999E-05	409743.1	3766562.2	91.6	5.00	2.71	1.40	YES	NO	
VOL142	0	0.62999E-05	409654.2	3766648.5	91.2	5.00	2.71	1.40	YES	NO	
VOL143	0	0.62999E-05	409663.0	3766641.5	91.3	5.00	2.71	1.40	YES	NO	
VOL144	0	0.62999E-05	409671.4	3766634.1	91.5	5.00	2.71	1.40	YES	NO	
VOL145	0	0.62999E-05	409680.7	3766628.1	91.6	5.00	2.71	1.40	YES	NO	
VOL146	0	0.62999E-05	409687.8	3766620.3	91.7	5.00	2.71	1.40	YES	NO	
VOL147	0	0.62999E-05	409697.1	3766612.1	91.8	5.00	2.71	1.40	YES	NO	
VOL148	0	0.62999E-05	409705.9	3766605.4	91.8	5.00	2.71	1.40	YES	NO	
VOL149	0	0.62999E-05	409714.4	3766598.5	91.8	5.00	2.71	1.40	YES	NO	
VOL150	0	0.62999E-05	409723.0	3766592.0	91.7	5.00	2.71				

```
1.40     YES                    NO
 VOL151          0   0.62999E-05  409730.5 3766585.6    91.7     5.00     2.71
1.40     YES                    NO
 VOL152          0   0.62999E-05  409738.8 3766579.1    91.7     5.00     2.71
1.40     YES                    NO
 VOL153          0   0.62999E-05  409746.5 3766573.0    91.7     5.00     2.71
1.40     YES                    NO
 VOL154          0   0.62999E-05  409754.5 3766566.6    91.6     5.00     2.71
1.40     YES                    NO
 VOL155          0   0.62999E-05  409657.0 3766660.8    91.2     5.00     2.71
1.40     YES                    NO
 VOL156          0   0.62999E-05  409665.8 3766653.8    91.4     5.00     2.71
1.40     YES                    NO
 VOL157          0   0.62999E-05  409674.2 3766646.4    91.5     5.00     2.71
1.40     YES                    NO
 VOL158          0   0.62999E-05  409683.5 3766640.4    91.6     5.00     2.71
1.40     YES                    NO
 VOL159          0   0.62999E-05  409690.6 3766632.6    91.8     5.00     2.71
1.40     YES                    NO
 VOL160          0   0.62999E-05  409699.9 3766624.4    91.9     5.00     2.71
1.40     YES                    NO
 VOL161          0   0.62999E-05  409708.7 3766617.7    91.8     5.00     2.71
1.40     YES                    NO
 VOL162          0   0.62999E-05  409717.2 3766610.8    91.8     5.00     2.71
1.40     YES                    NO
 VOL163          0   0.62999E-05  409725.8 3766604.3    91.7     5.00     2.71
1.40     YES                    NO
 VOL164          0   0.62999E-05  409733.4 3766597.9    91.7     5.00     2.71
1.40     YES                    NO
 VOL165          0   0.62999E-05  409741.6 3766591.4    91.8     5.00     2.71
1.40     YES                    NO
 VOL166          0   0.62999E-05  409749.3 3766585.3    91.8     5.00     2.71
1.40     YES                    NO
 VOL167          0   0.62999E-05  409757.3 3766578.9    91.7     5.00     2.71
1.40     YES                    NO
 VOL168          0   0.62999E-05  409668.2 3766665.8    91.4     5.00     2.71
1.40     YES                    NO
 VOL169          0   0.62999E-05  409677.0 3766658.7    91.5     5.00     2.71
1.40     YES                    NO
 VOL170          0   0.62999E-05  409685.4 3766651.4    91.6     5.00     2.71
1.40     YES                    NO
 *** AERMOD - VERSION 24142  ***   ***
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 *** AERMET - VERSION  22112 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE VARY BY	AIRCRAFT
VOL171	0	0.62999E-05	409694.7	3766645.4	91.8	5.00	2.71	1.40	YES	NO
VOL172	0	0.62999E-05	409701.8	3766637.6	91.9	5.00	2.71	1.40	YES	NO
VOL173	0	0.62999E-05	409711.1	3766629.4	91.9	5.00	2.71	1.40	YES	NO
VOL174	0	0.62999E-05	409720.0	3766622.7	91.8	5.00	2.71	1.40	YES	NO
VOL175	0	0.62999E-05	409728.4	3766615.8	91.7	5.00	2.71	1.40	YES	NO
VOL176	0	0.62999E-05	409737.0	3766609.3	91.8	5.00	2.71	1.40	YES	NO
VOL177	0	0.62999E-05	409744.6	3766602.8	91.8	5.00	2.71	1.40	YES	NO
VOL178	0	0.62999E-05	409752.8	3766596.4	91.8	5.00	2.71	1.40	YES	NO
VOL179	0	0.62999E-05	409760.6	3766590.3	91.7	5.00	2.71	1.40	YES	NO
VOL180	0	0.62999E-05	409768.5	3766583.8	91.6	5.00	2.71	1.40	YES	NO
VOL181	0	0.62999E-05	409671.2	3766678.1	91.4	5.00	2.71	1.40	YES	NO
VOL182	0	0.62999E-05	409680.0	3766671.1	91.5	5.00	2.71	1.40	YES	NO
VOL183	0	0.62999E-05	409688.4	3766663.7	91.6	5.00	2.71	1.40	YES	NO
VOL184	0	0.62999E-05	409697.7	3766657.7	91.7	5.00	2.71	1.40	YES	NO
VOL185	0	0.62999E-05	409704.9	3766649.9	91.8	5.00	2.71	1.40	YES	NO
VOL186	0	0.62999E-05	409714.1	3766641.7	91.9	5.00	2.71	1.40	YES	NO
VOL187	0	0.62999E-05	409723.0	3766635.0	91.8	5.00	2.71	1.40	YES	NO
VOL188	0	0.62999E-05	409731.4	3766628.1	91.8	5.00	2.71	1.40	YES	NO
VOL189	0	0.62999E-05	409740.0	3766621.6	91.7	5.00	2.71	1.40	YES	NO

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 VOL190           0   0.62999E-05  409747.6 3766615.1    91.8     5.00     2.71
1.40     YES                   NO
 VOL191           0   0.62999E-05  409755.8 3766608.7    91.8     5.00     2.71
1.40     YES                   NO
 VOL192           0   0.62999E-05  409763.6 3766602.6    91.8     5.00     2.71
1.40     YES                   NO
 VOL193           0   0.62999E-05  409771.6 3766596.1    91.7     5.00     2.71
1.40     YES                   NO
 VOL194           0   0.62999E-05  409683.1 3766682.9    91.4     5.00     2.71
1.40     YES                   NO
 VOL195           0   0.62999E-05  409691.9 3766675.8    91.6     5.00     2.71
1.40     YES                   NO
 VOL196           0   0.62999E-05  409700.3 3766668.5    91.7     5.00     2.71
1.40     YES                   NO
 VOL197           0   0.62999E-05  409709.6 3766662.4    91.8     5.00     2.71
1.40     YES                   NO
 VOL198           0   0.62999E-05  409716.7 3766654.6    91.8     5.00     2.71
1.40     YES                   NO
 VOL199           0   0.62999E-05  409726.0 3766646.4    91.8     5.00     2.71
1.40     YES                   NO
 VOL200           0   0.62999E-05  409734.9 3766639.7    91.8     5.00     2.71
1.40     YES                   NO
 VOL201           0   0.62999E-05  409743.3 3766632.8    91.7     5.00     2.71
1.40     YES                   NO
 VOL202           0   0.62999E-05  409751.9 3766626.4    91.7     5.00     2.71
1.40     YES                   NO
 VOL203           0   0.62999E-05  409759.5 3766619.9    91.7     5.00     2.71
1.40     YES                   NO
 VOL204           0   0.62999E-05  409767.7 3766613.4    91.8     5.00     2.71
1.40     YES                   NO
 VOL205           0   0.62999E-05  409775.5 3766607.4    91.8     5.00     2.71
1.40     YES                   NO
 VOL206           0   0.62999E-05  409783.4 3766600.9    91.7     5.00     2.71
1.40     YES                   NO
 VOL207           0   0.62999E-05  409685.5 3766694.7    91.3     5.00     2.71
1.40     YES                   NO
 VOL208           0   0.62999E-05  409694.3 3766687.7    91.5     5.00     2.71
1.40     YES                   NO
 VOL209           0   0.62999E-05  409702.7 3766680.3    91.6     5.00     2.71
1.40     YES                   NO
 VOL210           0   0.62999E-05  409712.0 3766674.3    91.7     5.00     2.71
1.40     YES                   NO
↟ *** AERMOD - VERSION 24142  ***   ***
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 *** AERMET - VERSION  22112 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
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*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. SCALAR CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE VARY BY	AIRCRAFT
VOL211	0	0.62999E-05	409719.1	3766666.5	91.8	5.00	2.71	1.40	YES	NO
VOL212	0	0.62999E-05	409728.4	3766658.3	91.8	5.00	2.71	1.40	YES	NO
VOL213	0	0.62999E-05	409737.2	3766651.6	91.7	5.00	2.71	1.40	YES	NO
VOL214	0	0.62999E-05	409745.7	3766644.7	91.6	5.00	2.71	1.40	YES	NO
VOL215	0	0.62999E-05	409754.3	3766638.2	91.5	5.00	2.71	1.40	YES	NO
VOL216	0	0.62999E-05	409761.9	3766631.8	91.6	5.00	2.71	1.40	YES	NO
VOL217	0	0.62999E-05	409770.1	3766625.3	91.6	5.00	2.71	1.40	YES	NO
VOL218	0	0.62999E-05	409777.8	3766619.2	91.7	5.00	2.71	1.40	YES	NO
VOL219	0	0.62999E-05	409785.8	3766612.8	91.7	5.00	2.71	1.40	YES	NO
VOL220	0	0.62999E-05	409697.2	3766699.5	91.4	5.00	2.71	1.40	YES	NO
VOL221	0	0.62999E-05	409705.9	3766692.4	91.5	5.00	2.71	1.40	YES	NO
VOL222	0	0.62999E-05	409714.4	3766685.1	91.6	5.00	2.71	1.40	YES	NO
VOL223	0	0.62999E-05	409723.6	3766679.0	91.7	5.00	2.71	1.40	YES	NO
VOL224	0	0.62999E-05	409730.8	3766671.3	91.7	5.00	2.71	1.40	YES	NO
VOL225	0	0.62999E-05	409740.0	3766663.1	91.6	5.00	2.71	1.40	YES	NO
VOL226	0	0.62999E-05	409748.9	3766656.4	91.5	5.00	2.71	1.40	YES	NO
VOL227	0	0.62999E-05	409757.3	3766649.5	91.5	5.00	2.71	1.40	YES	NO
VOL228	0	0.62999E-05	409766.0	3766643.0	91.5	5.00	2.71	1.40	YES	NO
VOL229	0	0.62999E-05	409773.5	3766636.5	91.5	5.00	2.71			

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1.40     YES                    NO
 VOL230          0   0.62999E-05  409781.7 3766630.0    91.6     5.00     2.71
1.40     YES                    NO
 VOL231          0   0.62999E-05  409789.5 3766624.0    91.6     5.00     2.71
1.40     YES                    NO
 VOL232          0   0.62999E-05  409797.5 3766617.5    91.6     5.00     2.71
1.40     YES                    NO
 VOL233          0   0.62999E-05  409693.5 3766489.3    91.0     5.00     2.71
1.40     YES                    NO
 VOL234          0   0.62999E-05  409703.5 3766496.4    91.1     5.00     2.71
1.40     YES                    NO
 VOL235          0   0.62999E-05  409709.3 3766505.7    91.1     5.00     2.71
1.40     YES                    NO
 VOL236          0   0.62999E-05  409723.3 3766518.0    91.1     5.00     2.71
1.40     YES                    NO
 VOL237          0   0.62999E-05  409727.2 3766529.7    91.2     5.00     2.71
1.40     YES                    NO
 VOL238          0   0.62999E-05  409738.9 3766537.4    91.4     5.00     2.71
1.40     YES                    NO
 VOL239          0   0.62999E-05  409752.3 3766553.8    91.5     5.00     2.71
1.40     YES                    NO
 VOL240          0   0.62999E-05  409766.7 3766570.3    91.5     5.00     2.71
1.40     YES                    NO
 VOL241          0   0.62999E-05  409780.8 3766587.7    91.5     5.00     2.71
1.40     YES                    NO
 VOL242          0   0.62999E-05  409795.7 3766604.4    91.6     5.00     2.71
1.40     YES                    NO
 *** AERMOD - VERSION 24142  ***   ***
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 *** AERMET - VERSION  22112 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*


                                          *** SOURCE IDs DEFINING SOURCE GROUPS
***

 SRCGROUP ID                                          SOURCE IDs
 -----------                                          ----------


  ALL        VOL11       , VOL12       , VOL13       , VOL14       , VOL15       ,
VOL16       , VOL17       , VOL18       ,

             VOL19       , VOL20       , VOL21       , VOL22       , VOL23       ,
VOL24       , VOL25       , VOL26       ,
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                VOL27       , VOL28       , VOL29       , VOL30       , VOL31       ,
VOL32         , VOL33       , VOL34       ,

                VOL35       , VOL36       , VOL37       , VOL38       , VOL39       ,
VOL40         , VOL41       , VOL42       ,

                VOL43       , VOL44       , VOL45       , VOL46       , VOL47       ,
VOL48         , VOL49       , VOL50       ,

                VOL51       , VOL52       , VOL53       , VOL54       , VOL55       ,
VOL56         , VOL57       , VOL58       ,

                VOL59       , VOL60       , VOL61       , VOL62       , VOL63       ,
VOL64         , VOL65       , VOL66       ,

                VOL67       , VOL68       , VOL69       , VOL70       , VOL71       ,
VOL72         , VOL73       , VOL74       ,

                VOL75       , VOL76       , VOL77       , VOL78       , VOL79       ,
VOL80         , VOL81       , VOL82       ,

                VOL83       , VOL84       , VOL85       , VOL86       , VOL87       ,
VOL88         , VOL89       , VOL90       ,

                VOL91       , VOL92       , VOL93       , VOL94       , VOL95       ,
VOL96         , VOL97       , VOL98       ,

                VOL99       , VOL100      , VOL101      , VOL102      , VOL103      ,
VOL104        , VOL105      , VOL106      ,

                VOL107      , VOL108      , VOL109      , VOL110      , VOL111      ,
VOL112        , VOL113      , VOL114      ,

                VOL115      , VOL116      , VOL117      , VOL118      , VOL119      ,
VOL120        , VOL121      , VOL122      ,

                VOL123      , VOL124      , VOL125      , VOL126      , VOL127      ,
VOL128        , VOL129      , VOL130      ,

                VOL131      , VOL132      , VOL133      , VOL134      , VOL135      ,
VOL136        , VOL137      , VOL138      ,

                VOL139      , VOL140      , VOL141      , VOL142      , VOL143      ,
VOL144        , VOL145      , VOL146      ,

                VOL147      , VOL148      , VOL149      , VOL150      , VOL151      ,
VOL152        , VOL153      , VOL154      ,

                VOL155      , VOL156      , VOL157      , VOL158      , VOL159      ,
VOL160        , VOL161      , VOL162      ,
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

VOL171 , VOL172 , VOL173 , VOL174 , VOL175 ,
VOL176 , VOL177 , VOL178 ,

VOL179 , VOL180 , VOL181 , VOL182 , VOL183 ,
VOL184 , VOL185 , VOL186 ,

VOL187 , VOL188 , VOL189 , VOL190 , VOL191 ,
VOL192 , VOL193 , VOL194 ,

VOL195 , VOL196 , VOL197 , VOL198 , VOL199 ,
VOL200 , VOL201 , VOL202 ,

VOL203 , VOL204 , VOL205 , VOL206 , VOL207 ,
VOL208 , VOL209 , VOL210 ,

VOL211 , VOL212 , VOL213 , VOL214 , VOL215 ,
VOL216 , VOL217 , VOL218 ,

VOL219 , VOL220 , VOL221 , VOL222 , VOL223 ,
VOL224 , VOL225 , VOL226 ,

VOL227 , VOL228 , VOL229 , VOL230 , VOL231 ,
VOL232 , VOL233 , VOL234 ,

VOL235 , VOL236 , VOL237 , VOL238 , VOL239 ,
VOL240 , VOL241 , VOL242 ,

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
	9663345.	VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 ,
		VOL19 , VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 ,
		VOL27 , VOL28 , VOL29 , VOL30 , VOL31 , VOL32 , VOL33 , VOL34 ,
		VOL35 , VOL36 , VOL37 , VOL38 , VOL39 , VOL40 , VOL41 , VOL42 ,
		VOL43 , VOL44 , VOL45 , VOL46 , VOL47 , VOL48 , VOL49 , VOL50 ,
		VOL51 , VOL52 , VOL53 , VOL54 , VOL55 , VOL56 , VOL57 , VOL58 ,
		VOL59 , VOL60 , VOL61 , VOL62 , VOL63 , VOL64 , VOL65 , VOL66 ,
		VOL67 , VOL68 , VOL69 , VOL70 , VOL71 , VOL72 , VOL73 , VOL74 ,
		VOL75 , VOL76 , VOL77 , VOL78 , VOL79 , VOL80 , VOL81 , VOL82 ,
		VOL83 , VOL84 , VOL85 , VOL86 , VOL87 , VOL88 , VOL89 , VOL90 ,
		VOL91 , VOL92 , VOL93 , VOL94 , VOL95 , VOL96 , VOL97 , VOL98 ,
		VOL99 , VOL100 , VOL101 , VOL102 , VOL103 , VOL104 , VOL105 , VOL106 ,

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(409752.8, 3766521.6, 91.7, 91.7, 2.0); (409648.8, 3766481.5, 91.4, 91.4, 2.0);
(409592.3, 3766517.2, 91.1, 91.1, 2.0); (409728.3, 3766464.3, 90.7, 90.7, 2.0);
(409822.4, 3766481.5, 92.4, 92.4, 2.0); (409645.6, 3766708.6, 91.5, 100.0, 2.0);
(409630.3, 3766664.8, 91.2, 91.2, 2.0); (409588.5, 3766635.0, 91.2, 91.2, 2.0);
(409590.4, 3766624.3, 91.1, 91.1, 2.0); (409550.5, 3766580.5, 91.1, 91.1, 2.0);
(409523.9, 3766539.9, 90.9, 90.9, 2.0); (409790.9, 3766722.9, 92.9, 100.1, 2.0);
(409739.0, 3766758.6, 92.3, 100.1, 2.0); (409832.8, 3766371.5, 91.4, 91.4, 2.0);
(409771.5, 3766295.9, 91.2, 91.2, 2.0); (409741.9, 3766261.2, 90.7, 90.7, 2.0);
(409862.0, 3766437.0, 92.0, 92.0, 2.0); (409909.0, 3766485.7, 91.8, 99.6, 2.0);
(409952.8, 3766456.8, 92.3, 92.3, 2.0); (409948.3, 3766316.7, 91.5, 91.5, 2.0);
(409626.2, 3766752.4, 91.6, 100.0, 2.0); (409606.3,

3766713.3,   91.6,   91.6,   2.0);
     (409542.3, 3766688.4,   91.1,   91.1,   2.0);   (409517.5,
3766733.1,   91.5,   91.5,   2.0);
     (409451.6, 3766344.6,   90.7,   90.7,   2.0);   (409400.6,
3766403.1,   90.2,   90.2,   2.0);
     (409342.1, 3766439.8,   90.3,   90.3,   2.0);   (409887.3,
3766657.9,   92.0,   99.7,   2.0);
     (410070.1, 3766868.0,   93.0,   93.0,   2.0);   (410011.6,
3766920.9,   92.5,   92.5,   2.0);
     (409953.2, 3766977.4,   92.5,   92.5,   2.0);   (409920.9,
3767006.7,   92.3,   92.3,   2.0);
     (409986.1, 3766859.3,   92.9,   92.9,   2.0);   (410121.0,
3766824.5,   92.8,   92.8,   2.0);
     (410105.5, 3766840.1,   92.9,   92.9,   2.0);   (410050.2,
3766889.8,   92.8,   92.8,   2.0);
     (409994.2, 3766935.2,   92.6,   92.6,   2.0);   (409547.3,
3766642.4,   90.9,   90.9,   2.0);

 *** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

                                          *** METEOROLOGICAL DAYS SELECTED FOR
PROCESSING ***
                                                              (1=YES; 0=NO)

            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
            1 1 1 1 1 1 1 1 1 1   1 1 1 1 1

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: PICO_V11_trimmed.sfc
Met Version: 22112
Profile file: PICO_V11_trimmed.pfl

Surface format: FREE

Profile format: FREE

Surface station no.: 3166 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN

Year: 2019 Year: 2019

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
19	01	01	1	01	-9.8	0.138	-9.000	-9.000	-999.	170.	24.2	0.15	0.78	1.00	1.58	82.	10.0	284.3	9.0
19	01	01	1	02	-3.9	0.088	-9.000	-9.000	-999.	65.	15.8	0.17	0.78	1.00	0.95	236.	10.0	281.6	9.0
19	01	01	1	03	-3.0	0.079	-9.000	-9.000	-999.	53.	14.8	0.15	0.78	1.00	0.83	60.	10.0	279.4	9.0
19	01	01	1	04	-7.8	0.122	-9.000	-9.000	-999.	103.	21.1	0.16	0.78	1.00	1.39	41.	10.0	278.1	9.0
19	01	01	1	05	-2.4	0.074	-9.000	-9.000	-999.	49.	15.2	0.16	0.78	1.00	0.71	50.	10.0	277.7	9.0
19	01	01	1	06	-6.7	0.113	-9.000	-9.000	-999.	91.	19.3	0.16	0.78	1.00	1.28	43.	10.0	276.6	9.0
19	01	01	1	07	-10.2	0.140	-9.000	-9.000	-999.	126.	24.4	0.17	0.78						

```
1.00    1.55   14.   10.0  276.7    9.0
 19 01 01   1 08   -2.6  0.076 -9.000 -9.000 -999.   52.     15.3  0.16   0.78
0.55    0.83   54.   10.0  277.0    9.0
 19 01 01   1 09   19.9  0.147  0.397  0.005  113.  135.    -14.4  0.19   0.78
0.32    1.13  203.   10.0  280.2    9.0
 19 01 01   1 10   62.6  0.191  0.729  0.005  224.  201.    -10.1  0.19   0.78
0.25    1.41  209.   10.0  284.6    9.0
 19 01 01   1 11   92.0  0.218  1.133  0.005  571.  245.    -10.2  0.17   0.78
0.22    1.65  215.   10.0  285.9    9.0
 19 01 01   1 12  106.6  0.234  1.347  0.005  829.  272.    -10.8  0.17   0.78
0.21    1.78  219.   10.0  287.0    9.0
 19 01 01   1 13  105.8  0.236  1.397  0.005  931.  275.    -11.2  0.17   0.78
0.21    1.80  239.   10.0  287.8    9.0
 19 01 01   1 14   89.4  0.327  1.357  0.005 1009.  448.    -35.2  0.17   0.78
0.22    2.86  217.   10.0  288.1    9.0
 19 01 01   1 15   58.4  0.370  1.196  0.005 1058.  540.    -78.1  0.19   0.78
0.26    3.38  191.   10.0  288.7    9.0
 19 01 01   1 16   15.3  0.346  0.768  0.005 1070.  489.   -244.5  0.19   0.78
0.34    3.33  194.   10.0  288.5    9.0
 19 01 01   1 17  -22.0  0.249 -9.000 -9.000 -999.  304.     68.4  0.19   0.78
0.61    2.57  186.   10.0  287.8    9.0
 19 01 01   1 18   -7.9  0.124 -9.000 -9.000 -999.  116.     21.9  0.17   0.78
1.00    1.38  222.   10.0  285.8    9.0
 19 01 01   1 19   -3.3  0.082 -9.000 -9.000 -999.   57.     15.1  0.16   0.78
1.00    0.88   57.   10.0  283.3    9.0
 19 01 01   1 20   -3.6  0.085 -9.000 -9.000 -999.   59.     15.3  0.16   0.78
1.00    0.93   50.   10.0  281.1    9.0
 19 01 01   1 21   -4.7  0.095 -9.000 -9.000 -999.   70.     16.5  0.16   0.78
1.00    1.07   35.   10.0  280.1    9.0
 19 01 01   1 22   -5.8  0.105 -9.000 -9.000 -999.   82.     18.2  0.16   0.78
1.00    1.20   37.   10.0  279.0    9.0
 19 01 01   1 23  -13.0  0.159 -9.000 -9.000 -999.  153.     28.1  0.16   0.78
1.00    1.77   40.   10.0  278.9    9.0
 19 01 01   1 24  -10.7  0.144 -9.000 -9.000 -999.  132.     25.3  0.17   0.78
1.00    1.59   30.   10.0  279.1    9.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 19 01 01 01    9.0 0 -999.  -99.00   284.3   99.0  -99.00  -99.00
 19 01 01 01   10.0 1   82.    1.58  -999.0   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
 *** AERMOD - VERSION 24142  ***   ***
C:\Users\adadabhoy\Desktop\AERMOD\16463-6th Street\16463-6th Street. ***
04/25/25
 *** AERMET - VERSION  22112 ***   ***
                       ***        11:06:35

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```

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL11 , VOL12 , VOL13 , VOL14 , VOL15 ,
VOL16 , VOL17 , VOL18 , VOL19 , VOL20 , VOL21 , VOL22 , VOL23 ,
VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , VOL31 ,
VOL32 , VOL33 , VOL34 , VOL35 , VOL36 , VOL37 , VOL38 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_2.5 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
409752.77	3766521.59	0.23000m	(22120324)	409648.81	3766481.50	0.20957m	(21012324)
409592.35	3766517.19	0.17474m	(22120324)	409728.31	3766464.30	0.13509m	(22120324)
409822.41	3766481.50	0.07205m	(22120324)	409645.57	3766708.64	0.15091	(20020924)
409630.32	3766664.83	0.21858	(20020924)	409588.46	3766634.98	0.16173m	(22120324)
409590.40	3766624.27	0.18680m	(22120324)	409550.49	3766580.47	0.12428m	(22120324)
409523.89	3766539.91	0.08426	(21123024)	409790.93	3766722.92	0.08809	(19120824)
409739.02	3766758.61	0.07819	(20041224)	409832.79	3766371.50	0.03470m	(22120324)
409771.46	3766295.90	0.02828m	(21012524)	409741.94	3766261.18	0.02416m	(21012524)
409861.99	3766437.05	0.04295	(19121524)	409909.04	3766485.72	0.03931m	(22120324)
409952.85	3766456.84	0.02801m	(22120324)	409948.31	3766316.67	0.01842	(21021424)
409626.23	3766752.42	0.08176	(20020924)	409606.34	3766713.26	0.10066	(20020924)
409542.31	3766688.40	0.06646m	(22120324)	409517.45	3766733.15	0.04409m	(22120324)
409451.56	3766344.65	0.02459	(21123024)	409400.58	3766403.08	0.02776	(21123024)
409342.15	3766439.75	0.02133	(21123024)	409887.30			

```
 3766657.94        0.05493  (19021624)
       410070.06   3766868.04        0.01346  (22022224)               410011.63
 3766920.88        0.01416  (19120824)
       409953.19   3766977.44        0.01281m (22120324)               409920.87
 3767006.66        0.01243m (22120324)
       409986.14   3766859.34        0.01823  (19120824)               410121.03
 3766824.53        0.01222  (22022224)
       410105.49   3766840.07        0.01270  (22022224)               410050.17
 3766889.80        0.01369  (19120824)
       409994.22   3766935.18        0.01402  (19120824)               409547.28
 3766642.40        0.09036m (22120324)
↑ *** AERMOD - VERSION 24142  ***   ***
C:\Users\adadabhoy\Desktop\AERMOD\16463-6th Street\16463-6th Street. ***
04/25/25
 *** AERMET - VERSION  22112 ***   ***
                       ***        11:06:35

                                  PAGE  16
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*

                                                *** THE SUMMARY OF HIGHEST 24-HR
RESULTS ***


                                   ** CONC OF PM_2.5   IN MICROGRAMS/M**3
              **

                                                      DATE
                                        NETWORK
GROUP ID                           AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS       0.23000m ON 22120324: AT (  409752.77,
3766521.59,    91.67,    91.67,    2.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
↑ *** AERMOD - VERSION 24142  ***   ***
C:\Users\adadabhoy\Desktop\AERMOD\16463-6th Street\16463-6th Street. ***
04/25/25
 *** AERMET - VERSION  22112 ***   ***
                       ***        11:06:35

                                  PAGE  17
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ_U*
```

```
*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of            0 Fatal Error Message(s)
A Total of           67 Warning Message(s)
A Total of          721 Informational Message(s)

A Total of        43824 Hours Were Processed

A Total of           91 Calm Hours Identified

A Total of          630 Missing Hours Identified (  1.44 Percent)


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
 ME W186     527       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
     0.50
 ME W187     527       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

 CN W732    5328         AVER: 24-hr avg, < 18 hours of data, calms policy used.
2019081024
 CN W732   10512         AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020031324
 CN W732   10536         AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020031424
 CN W732   10560         AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020031524
 CN W732   10584         AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020031624
 CN W732   10992         AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020040224
 CN W732   11016         AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020040324
 CN W732   11112         AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020040724
 CN W732   11424         AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020042024
 CN W732   15504         AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020100724
 CN W732   15576         AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020101024
 CN W732   16368         AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020111224
 CN W732   16512         AVER: 24-hr avg, < 18 hours of data, calms policy used.
```

2020111824
 CN W732   16560   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020112024
 CN W732   16584   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020112124
 CN W732   16608   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020112224
 CN W732   16632   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020112324
 CN W732   16656   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020112424
 CN W732   16680   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020112524
 CN W732   17160   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020121524
 CN W732   17304   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2020122124
 CN W732   17760   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021010924
 CN W732   17784   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021011024
 CN W732   17808   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021011124
 CN W732   17832   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021011224
 CN W732   18096   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021012324
 CN W732   18120   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021012424
 CN W732   18144   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021012524
 CN W732   19296   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021031424
 CN W732   19680   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021033024
 CN W732   19776   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021040324
 CN W732   21240   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021060324
 CN W732   23400   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021090124
 CN W732   24288   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021100824
 CN W732   24312   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2021100924
 CN W732   29520   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2022051424
 CN W732   30240   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2022061324
 CN W732   31656   AVER: 24-hr avg, < 18 hours of data, calms policy used.

2022081124
 CN W732   32352   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2022090924
 CN W732   33888   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2022111224
 CN W732   33912   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2022111324
 CN W732   33936   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2022111424
 CN W732   33960   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2022111524
 CN W732   34392   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2022120324
 CN W732   36120   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023021324
 CN W732   36192   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023021624
 CN W732   36720   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023031024
 CN W732   36744   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023031124
 CN W732   36768   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023031224
 CN W732   36864   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023031624
 CN W732   37224   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023033124
 CN W732   37392   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023040724
 CN W732   38400   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023051924
 CN W732   39744   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023071424
 CN W732   41424   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023092224
 CN W732   41976   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023101524
 CN W732   42384   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023110124
 CN W732   42408   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023110224
 CN W732   42432   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023110324
 CN W732   42456   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023110424
 CN W732   42480   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023110524
 CN W732   42504   AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023110624
 CN W732   42528   AVER: 24-hr avg, < 18 hours of data, calms policy used.

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2023110724
 CN W732   43248         AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023120724
 CN W732   43704         AVER: 24-hr avg, < 18 hours of data, calms policy used.
2023122624

    ***********************************
    *** AERMOD Finishes Successfully ***
    ***********************************
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