10426 LOCUST AVENUE WAREHOUSE PROJECT OPERATIONAL HEALTH RISK ASSESSMENT ANALYSIS

County of San Bernardino

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Traffic Engineering ● Transportation Planning ● Parking ● Noise & Vibration
Air Quality ● Global Climate Change ● Health Risk Assessment

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Project No. 19509

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EXECUTIVE SUMMARY

The purpose of this health risk assessment analysis is to provide an assessment of the impacts resulting from the operation of the proposed 10426 Locust Avenue Warehouse project and to identify measures that may be necessary to reduce potentially significant impacts.

Cancer and Non-Cancer-Related Health Risk Impacts

As the proposed warehouse use is anticipated to have approximately 34 truck trips per day (non-PCE), a quantitative health risk assessment for the proposed on-site warehouse uses is not warranted or required.

The project would not expose sensitive receptors in the project vicinity to a cancer risk in excess of 10 in a million from diesel particulate matter (DPM) mobile source emissions from the operation of the project. Impacts are considered to be less than significant. No mitigation is required.

The operational health risk impacts for non-cancer related impacts would be less than 1.0; therefore, they are also considered to be less significant. No mitigation is required.

1. INTRODUCTION AND SETTING

This section describes the purpose of this health risk assessment, project location, proposed development, and study area. Figure 1 shows the project location map and Figure 2 illustrates the project site plan.

PURPOSE AND OBJECTIVES

This study was performed to address the possibility of cancer and non-cancer risk from project-related mobile source diesel emissions. The objectives of the study include:

- discussion of the cancer risk thresholds of significance
- analysis of the operations related cancer risk from diesel emissions
- recommendations for mitigation measures

The County of San Bernardino is the lead agency for this health risk assessment, in accordance with the California Environmental Quality Act authorizing legislation. Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with terms unique to air quality, a definition of terms has been provided in Appendix A.

PROJECT LOCATION

The 2.81-acre project site is located at 10426 Locust Avenue, in the unincorporated area of Bloomington, in the County of San Bernardino, California. The project site is currently vacant.

Surrounding land uses include: a single-family residential use to the north, Locust Avenue to the east, an industrial use with associated single-family house to the south, and an industrial use to the west of the project site. A vicinity map showing the project location is provided on Figure 1.

PROJECT DESCRIPTION

The proposed project involves construction of a new 55,020 square foot warehouse building. The proposed project also includes 56 parking stalls for employees and vendors. Access to the Project Site would be will be provided by two driveways on Locust Avenue. Figure 2 illustrates the proposed site plan.

PHASING AND TIMING

Per the *10426 Locust Avenue Warehouse Project Transportation Study Screening Assessment* (Ganddini Group Inc., April 29, 2022), the proposed project is anticipated to be operational in 2024.

SENSITIVE RECEPTORS IN PROJECT VICINITY

Sensitive receptors include residential land uses, schools, day care centers, and other places where people reside, including prisons. The nearest sensitive receptors to the project site are: the existing single-family residential uses located adjacent to the north and south and approximately 60 feet (~18 meters) to the east (across Locust Avenue), 630 feet (~192 meters) to the southeast (across intersection of Locust Avenue and Slover Avenue), 1,229 feet (~374 meters) to the south (along the western side of Slover Avenue), and 1,278 feet (~390 meters) to the southwest (along Otilla Street) of the project site.

Figure 1
Project Location Map

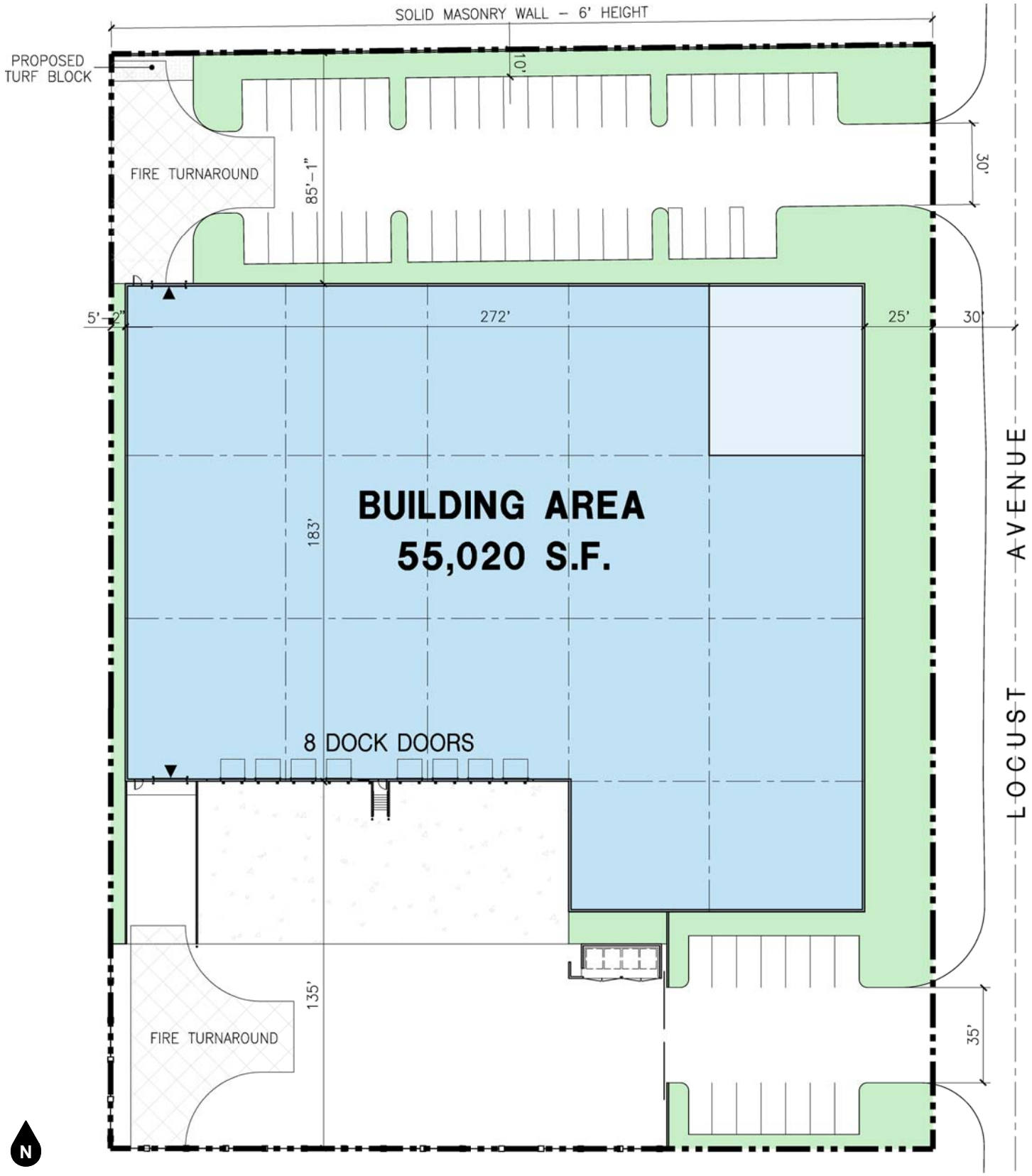

Figure 2
Site Plan

2. POLLUTANTS AND REGULATORY SETTING

POLLUTANTS

Pollutants are generally classified as either criteria pollutants or non-criteria pollutants. Federal ambient air quality standards have been established for criteria pollutants, whereas no ambient standards have been established for non-criteria pollutants. For some criteria pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). A summary of federal and state ambient air quality standards is provided in the Regulatory Framework section.

Toxic Air Contaminants

In addition to the above-listed criteria pollutants, toxic air contaminants (TACs) are another group of pollutants of concern. Sources of toxic air contaminants include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least forty different toxic air contaminants. The most important of these toxic air contaminants, in terms of health risk, are diesel particulates, benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. Public exposure to toxic air contaminants can result from emissions from normal operations as well as from accidental releases. Health effects of toxic air contaminants include cancer, birth defects, neurological damage, and death.

Toxic air contaminants are less pervasive in the urban atmosphere than criteria air pollutants, however they are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of toxic air contaminants with varying degrees of toxicity. Sources of toxic air contaminants include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust.

According to the 2013 California Almanac of Emissions and Air Quality, the majority of the estimated health risk from toxic air contaminants can be attributed to relatively few compounds, the most important of which is diesel particulate matter (DPM). Diesel particulate matter is a subset of PM2.5 because the size of diesel particles are typically 2.5 microns and smaller. The identification of diesel particulate matter as a toxic air contaminant in 1998 led the California Air Resources Board (CARB) to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles in September 2000. The plan's goals are a 75-percent reduction in diesel particulate matter by 2010 and an 85-percent reduction by 2020 from the 2000 baseline. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot". Diesel exhaust also contains a variety of harmful gases and over 40 other cancer-causing substances. California's identification of diesel particulate matter as a toxic air contaminant was based on its potential to cause cancer, premature deaths, and other health problems. Exposure to diesel particulate matter is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's potential airborne cancer risk from combustion sources.

The California Air Resources Board (CARB) have monitoring networks that measure ambient concentrations of certain TACs that are associated with important health-related effects and are present in appreciable concentrations in the area. The CARB publishes annual Statewide, air basin, and location-specific summaries of the concentration levels of several TACs and their resulting cancer risks[1]. The most recent summary is the CARB Air Quality Almanac for 2013 (CARB 2013). The Almanac presents the relevant concentration and

[1] Cancer risk is expressed as a probability of an individual out of a population of one million contracting cancer via a continuous exposure to TACs over a 30-year lifetime.

cancer risk data for the ten TACs that pose the most substantial health risk in California based on available data. These TACs are: acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene. DPM is not directly measured but is indirectly estimated based on fine particulate matter measurements and special studies on the chemical speciation of ambient fine particulate data along with receptor modeling techniques. CARB showed that Diesel PM emissions decreased 37 percent from 2000 to 2010 primarily as a result of more stringent emissions standards and the introduction of cleaner burning diesel fuel. Emissions from diesel mobile sources are projected to continue to decrease after 2010. Overall, statewide emissions are forecasted to decline by 71 per cent between 2000 and 2035. CARB estimates that 78 percent of the known statewide cancer risks are from the top 10 outdoor air toxics in addition to DPM.

Estimates of total cancer risk Statewide have shown a steady decline from the early 1990s when the cancer risk from DPM was estimated to be 1,696 in one million. By the year 2000, the cancer risk was estimated to be 1,005 in one million or a reduction of 41 percent. Reductions in cancer risk are expected to continue into the future as new emission controls are implemented that further reduce DPM emissions, the major component of the total airborne cancer risk. Table 1 provides this summary of TACs and health risk information from the ARB Annual Toxic Summary for the most recent three-year period, 2018-2020 for the Riverside - Rubidoux air monitoring station, the closest air monitoring station to the project site with recent data, located approximately 4.43 miles south of the project site. The cancer risk attributable to the non-DPM chemicals (i.e., the 10 TACs measured by the ARB described above where data from two or more years were available) have also shown reductions at the Riverside - Rubidoux location. For example, the health risk associated with acetaldehyde exposure declined from an estimated cancer risk of 18 in one million in 2018, to 14 in one million in 2019.

According to the SCAQMD's MATES-V study, the project area has an estimated multi-pathway cancer risk of 434 in one million and an inhalation cancer risk of 407 in one million. In comparison the average multi-pathway cancer risk for the South Coast Air Basin portion of San Bernardino County is 471 in one million and the inhalation cancer risk is 439 in a million. This cancer risk at the project site is largely due to the proximity to the 10 Freeway and Union Pacific Rail Line.

Asbestos

Asbestos is listed as a TAC by the CARB and as a Hazardous Air Pollutant by the United States Environmental Protection Agency (EPA). Asbestos occurs naturally in mineral formations and crushing or breaking these rocks, through construction or other means, can release asbestiform fibers into the air. Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. The risk of disease is dependent upon the intensity and duration of exposure. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. Naturally occurring asbestos is not present in Los Angeles County. The nearest likely locations of naturally occurring asbestos, as identified in the General Location Guide for Ultramafic Rocks in California prepared by the California Division of Mines and Geology, is located in is located at Asbestos Mountain in the San Jacinto Valley; approximately 62 miles southeast of the site. Due to the distance to the nearest natural occurrences of asbestos, the project site is not likely to contain asbestos

REGULATORY SETTING

The proposed project is addressed through the efforts of various international, federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy making, education, and a variety of programs. The agencies responsible for improving the air quality are discussed below.

Federal – United States Environmental Protection Agency (EPA)

The EPA is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The National Ambient Air Quality Standards (NAAQS) pollutants were identified using medical evidence.

As part of its enforcement responsibilities, the EPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the national standards. The State Implementation Plan (SIP) must integrate federal, state, and local components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the State Implementation Plan (SIP).

State – California Air Resources Board

The CARB, which is a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the State Implementation Plan (SIP). In addition, the CARB establishes emission standards for motor vehicles sold in California, consumer products (e.g., hairspray, aerosol paints, and barbeque lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

CARB Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling adopts new section 2485 within Chapter 10, Article 1, Division 3, title 13 in the California Code of Regulations. The measure limits the idling of diesel vehicles (i.e., commercial trucks over 10,000 pounds) to reduce emissions of toxics and criteria pollutants. The driver of any vehicle subject to this section: (1) shall not idle the vehicle's primary diesel engine for greater than five minutes at any location; and (2) shall not idle a diesel-fueled auxiliary power system for more than five minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

CARB Requirements to Reduce Idling Emissions from New and In-Use Trucks. Amendments were made to Title 13 in California Code of Regulations in Sections 1956.8, 2404, 2424, 2425, and 2485. The amendment states: "all new 2008 and subsequent model-year heavy-duty diesel engines shall be equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of continuous idling operation once the vehicle is stopped, the transmission is set to 'neutral' or 'park,' and the parking brake is engaged. If the parking brake is not engaged, then the engine shutdown system shall shut down the engine after 900 seconds of continuous idling operation once the vehicle is stopped and the transmission is set to 'neutral' or 'park.'" There are a few conditions where the engine shutdown system can be overridden to prevent engine damage. Any project trucks manufactured after 2008 would be consistent with this rule, which would ultimately reduce air emissions.

Statewide Truck and Bus Regulation (Regulation to Reduce Emissions of DPM, Oxides of Nitrogen and Other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles, Title 13, California Code of Regulations, Section 2025). On December 12, 2008, the ARB approved this regulation to reduce emissions from existing on-road diesel trucks and buses operating in California. This regulation applies to all on-road heavy-duty diesel-fueled vehicles with a gross vehicle weight rating greater than 14,000 pounds, agricultural yard trucks with off-road certified engines, and certain diesel fueled shuttle vehicles of any gross vehicle weight rating. Out-of-state trucks and buses that operate in California are also subject. Under the regulation, older, heavier trucks (i.e., those with pre-2000-year engines and a gross vehicle weight rating greater than 26,000 pounds), are required to have installed a particulate matter filter and must be replaced with a 2010 engine between 2015 and 2020, depending on the model year. By 2015, all heavier pre-1994 trucks must be upgraded to

2010 engines and newer trucks are thereafter required to be replaced over the next eight years. Older, more polluting trucks are required to be replaced first, while trucks that already have relatively clean 2007-2009 engines are not required to be replaced until 2023. Lighter trucks (14,001-26,000 pounds) must adhere to a similar schedule. Furthermore, nearly all trucks that are not required under the Truck and Bus Regulation to be replaced by 2015 were required to be upgraded with a particulate matter filter by that date.

The CARB is also responsible for regulations pertaining to toxic air contaminants. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly) was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. AB 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release into the air basin. The data is ranked by high, intermediate, and low categories, which are determined by: the potency, toxicity, quantity, volume, and proximity of the facility to nearby receptors.

AB 617 Nonvehicular air pollution: criteria air pollutants and toxic air contaminants

This bill requires the state board to develop a uniform statewide system of annual reporting of emissions of criteria air pollutants and toxic air contaminants for use by certain categories of stationary sources. The bill requires those stationary sources to report their annual emissions of criteria air pollutants and toxic air contaminants, as specified. This bill required the state board, by October 1, 2018, to prepare a monitoring plan regarding technologies for monitoring criteria air pollutants and toxic air contaminants and the need for and benefits of additional community air monitoring systems, as defined. The bill requires the state board to select, based on the monitoring plan, the highest priority locations in the state for the deployment of community air monitoring systems. The bill requires an air district containing a selected location, by July 1, 2019, to deploy a system in the selected location. The bill would authorize the air district to require a stationary source that emits air pollutants in, or that materially affect, the selected location to deploy a fence-line monitoring system, as defined, or other specified real-time, on-site monitoring. The bill authorized the state board, by January 1, 2020, and annually thereafter, to select additional locations for the deployment of the systems. The bill would require air districts that have deployed a system to provide to the state board air quality data produced by the system. By increasing the duties of air districts, this bill would impose a state-mandated local program. The bill requires the state board to publish the data on its Internet Web site.

Regional

The project site is located within the City of Santa Fe Springs, in Los Angeles County, which is part of the South Coast Air Basin (SCAB) that includes all of Orange County as well as the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The South Coast Air Basin is located on a coastal plain with connecting broad valleys and low hills to the east. Regionally, the South Coast Air Basin is bounded by the Pacific Ocean to the southwest and high mountains to the east forming the inland perimeter.

SCAQMD

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin. To that end, as a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments and cooperates actively with all federal and state agencies.

In addition to attaining and maintaining air quality standards set by State and Federal Governments, the District is also responsible for ensuring that toxic air pollutants do not pose a nuisance or significant health threat to the surrounding community. Every year, the State's Air Toxics Hot Spots program (AB 2588) requires the District to quantify and assess health risks from subject facilities to nearby residents, notify affected residents of significant risks, and to reduce those significant health risks to acceptable levels.

Health Risk Significant Thresholds

According to the SCAQMD CEQA Handbook, any project that has the potential to expose the public to toxic air contaminants in excess of the following thresholds would be considered to have a significant air quality impact:

- If the Maximum Incremental Cancer Risk (MICR) is 10 in one million or greater; or
- Toxic air contaminants from the proposed project would result in a Hazard Index increase of 1 or greater.

In order to determine if the proposed project may have a significant impact related to hazardous air pollutants (HAP), the Health Risk Assessment Guidance for analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, (Diesel Analysis), prepared by SCAQMD, August 2003, recommends that if the proposed project is anticipated to create hazardous air pollutants through stationary sources or regular operations of diesel trucks on the project site, then the proximity of the nearest receptors to the source of the hazardous air pollutants and the toxicity of the hazardous air pollutants should be analyzed through a comprehensive facility-wide health risk assessment (HRA).

As determined in the *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal. 4th 369 (CBIA) case the California Supreme Court determined that CEQA does not generally require an impact analysis of the existing environmental conditions on the future residents of a proposed project and generally only requires an analysis of the proposed project's impact on the environment. However, the CBIA case also stated that when a proposed project brings development and people into an area already subject to specific hazards and the new development/people exacerbate the existing hazards, then CEQA requires an analysis of the hazards and the proposed project's effect in terms of increasing the risks related to those hazards. Regarding air quality hazards, TACs are defined as substances that may cause or contribute to an increase in deaths or in serious illness, or that may pose a present or potential hazard to human health. As such, if a proposed project would not exacerbate pre-existing hazards (e.g., TAC health risks) then an analysis of those hazards and the proposed project's effect on increasing those hazards is not required.

However, the project is an industrial warehouse and will be a source of operational toxic air contaminants; therefore, an HRA was conducted.

Table 1
TAC Concentration Levels and Associated Risks - Riverside-Rubidoux

TAC	Concentration[1] / Risk[2]	Year		
		2018	2019	2020
Acetaldehyde	Annual Average	1.230	0.960	ND
	Health Risk	18	14	ND
Benzene	Annual Average	0.239	0.190	ND
	Health Risk	62	49	ND
1,3-Butadiene	Annual Average	0.043	0.034	ID
	Health Risk	46	37	ID
Carbon Tetrachloride	Annual Average	0.073	0.069	ID
	Health Risk	56	53	ID
Chromium, Hex	Annual Average	ND	0.032	ND
	Health Risk	ND	13	ND
Para-Dichlorobenzene	Annual Average	ID	ID	ID
	Health Risk	ID	ID	ID
Formaldehyde	Annual Average	4.210	3.190	ND
	Health Risk	88	67	ND
Methylene Chloride	Annual Average	9.590	0.281	ID
	Health Risk	95	3	ID
Perchloroethylene	Annual Average	0.011	0.011	ID
	Health Risk	1	1	ID
Diesel PM	Annual Average	No monitoring data available		
	Health Risk			
Total Health Risk (without DPM)		**366**	**224**	**-**

Notes:

ND = no data reported; ID = insufficient data

Source: http://www.arb.ca.gov/adam/toxics/toxics.html (for Riverside-Rubidoux-5888 Mission Boulevard Air Monitoring Station)

1. Concentrations for Hexavalent Chromium are expressed as ng/m3, and concentrations for Diesel PM are expressed as µg/m3. Concentrations for all other TACs are expressed as ppb.
2. Health Risk represents the number of excess cancer cases per million people based on a lifetime (30-year) exposure to the annual average concentration. Total Health Risk represents only those compounds listed in this table and only those with data for the year. There may be other significant compounds for which monitoring and/or health risk information is not available.

3. DIESEL EMISSIONS HEALTH RISK ASSESSMENT

The on-going operation of the proposed project would generate toxic air contaminant (TAC) emissions from diesel truck emissions created by the on-going operations of the proposed project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 30-year lifetime will contract cancer, based on the use of revised Office of Environmental Health Hazard Assessment (OEHHA) risk-assessment methodology[2]. The 2015 OEHHA guidance states that "Districts are to determine which facilities will prepare an HRA based on a prioritization process outlined in the law. The process by which Districts identify priority facilities for risk assessment involves consideration of potency, toxicity, quantity of emissions, and proximity to sensitive receptors such as hospitals, daycare centers, schools, work-sites, and residences". The Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis prepared by SCAQMD (August 2003) defers to CARB (State) guidance for "technical guidance for diesel toxic impact analyses for various source categories".

The California Air Pollution Control Officers Association (CAPCOA) has developed TAC health risk assessment guidelines to provide consistent, statewide procedures for preparing the health risk assessments required under the Air Toxics "Hot Spots" Act. The title of these guidelines is CAPCOA Air Toxics "Hot Spots" Program Revised 1992 Risk Assessment Guidelines. The District recommends that lead agencies conduct TAC risk assessments in accordance with the CAPCOA Risk Assessment Guidelines, as supplemented by the District's supplemental guidelines. According to SCAQMD and CAPCOA guidelines, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 30-year lifetime will contract cancer, based on the use of standard risk-assessment methodology.

The nearest sensitive receptors to the project site are the existing single-family residential uses located adjacent to the north and south and approximately 60 feet (~18 meters) to the east, 630 feet (~192 meters) to the southeast, 1,229 feet (~374 meters) to the south, and 1,278 feet (~390 meters) to the southwest of the project site.

The most recent Health Risk Assessment for Proposed Land Use Projects prepared by CAPCOA (July 2009) recommends avoiding siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). A summary of the basis for the distance recommendations can be found in the ARB Handbook *Air Quality and Land Use Handbook: A Community Health Perspective*.

Per the Transportation Study Screening Assessment (Ganddini, 2022), the proposed warehouse use is anticipated to have approximately 34 truck trips per day (non-PCE). Therefore, as it is not anticipated to accommodate more than 100 trucks per day, a quantitative health risk assessment for the proposed on-site warehouse uses is not warranted or required.

[2] In February 2015, the Office of Environmental Health Hazard Assessment updated their "Air Toxics Hot Spots Program, Risk Assessments Guidelines, Guidance Manual for Preparation of Health Risk Assessments; however, the updated OEHHA guidance states in the page footers "do not cite or quote". SCAQMD staff have incorporated the updates into their methodology for SCAQMD's Rules 1401, 1401.1, 1402, and 212, and have updated their HRA Guidance for permitting; however, they are still in the process of updating the guidance for CEQA analyses (via working group sessions).

4. MITIGATION MEASURES

OPERATIONAL MEASURES

Health risk impacts are less than significant. No operational mitigation is required.

5. REFERENCES

California Air Pollution Control Officers Association

2009 Health Risk Assessments for Proposed Land Use Projects

California Air Resources Board

2008 Resolution 08-43

2008 Airborne Toxic Control Measure for in-use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, Section 2477 of Division 3, Chapter 9, Title 13, California Code of Regulations

2008 ARB Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk – Frequently Asked Questions

2013 Almanac of Emissions and Air Quality.
Source: https://www.arb.ca.gov/aqd/almanac/almanac13/almanac13.htm

Ganddini Group, Inc.

2022 10426 Locust Avenue Warehouse Project Transportation Study Screening Assessment. April 29.

Office of Environmental Health Hazard Assessment

2015 Air Toxics Hot Spots Program Risk Assessment Guidelines

South Coast Air Quality Management District

2003 Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis

2021 Final MATES-V Multiple Air Toxics Exposure Study in the South Coast Air Basin. August.

U.S. Geological Survey

2011 Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California

APPENDICES

Appendix A Glossary

APPENDIX A

GLOSSARY

AQMP	Air Quality Management Plan
BACT	Best Available Control Technologies
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH_4	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DPM	East Kern Air Pollution Control District
EKAPCD	Diesel particulate matter
EPA	U.S. Environmental Protection Agency
GHG	Greenhouse gas
GWP	Global warming potential
HIDPM	Hazard Index Diesel Particulate Matter
HFCs	Hydrofluorocarbons
IPCC	International Panel on Climate Change
LCFS	Low Carbon Fuel Standard
LST	Localized Significant Thresholds
$MTCO_2e$	Metric tons of carbon dioxide equivalent
$MMTCO_2e$	Million metric tons of carbon dioxide equivalent
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NOx	Nitrogen Oxides
NO_2	Nitrogen dioxide
N_2O	Nitrous oxide
OEHHA	Office of Environmental Health Hazard Assessment
O_3	Ozone
OPR	Governor's Office of Planning and Research
PFCs	Perfluorocarbons
PM	Particle matter
PM10	Particles that are less than 10 micrometers in diameter
PM2.5	Particles that are less than 2.5 micrometers in diameter
PMI	Point of maximum impact
PPM	Parts per million
PPB	Parts per billion
SF_6	Sulfur hexafluoride
SIP	State Implementation Plan
SCAQMD	South Coast Air Quality Management District
SOx	Sulfur Oxides
TAC	Toxic air contaminants
VOC	Volatile organic compounds

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