April 28, 2023

PARADISE LAKE LLC
c/o Ms. Cheryl Tubbs
LILBURN CORPORATION
1905 Business Center Drive
San Bernardino, California 92408

RE: Beyond Food Mart (Oliver and Iris) Gas Station Toxic Air Contaminant Health Risk Assessment Technical Memorandum
Project No. 19606

Dear Ms. Tubbs,

Ganddini Group, Inc. is pleased to provide this Tier 2 screening level Toxic Air Contaminant (TAC) Health Risk Assessment (HRA) Technical Memorandum for the Beyond Food Mart (Oliver and Iris) project. The 1.31-acre project site is located at the northwest corner of the intersection of Oliver Street and Iris Avenue in the City of Moreno Valley, California. The project site is currently undeveloped and zoned for commercial use. A project location map, showing the project's location, is provided on Figure 1. A glossary is provided in Appendix A to assist the reader with technical terms related to this TAC HRA.

PROJECT DESCRIPTION

The proposed project involves construction of a 7,460 square foot convenience store/gas station with eight (8) dual-sided fuel pumps (16 vehicle fueling positions) and a 1,790 square foot automatic car wash tunnel. Vehicular access is proposed to be provided by two restricted right turn in/out driveways with one on Oliver Street and one on Iris Avenue. The project site plan is shown on Figure 2.

According to the South Coast Air Quality Management District's (SCAQMD's) MATES-V study, the project area has an estimated multi-pathway ambient cancer risk of 296 in one million and an inhalation cancer risk of 279 in one million. In comparison the average multi-pathway cancer risk for the South Coast Air Basin portion of Riverside County is 332 in one million and the inhalation cancer risk is 313 in a million.

POLLUTANTS

Toxic Air Contaminants

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.

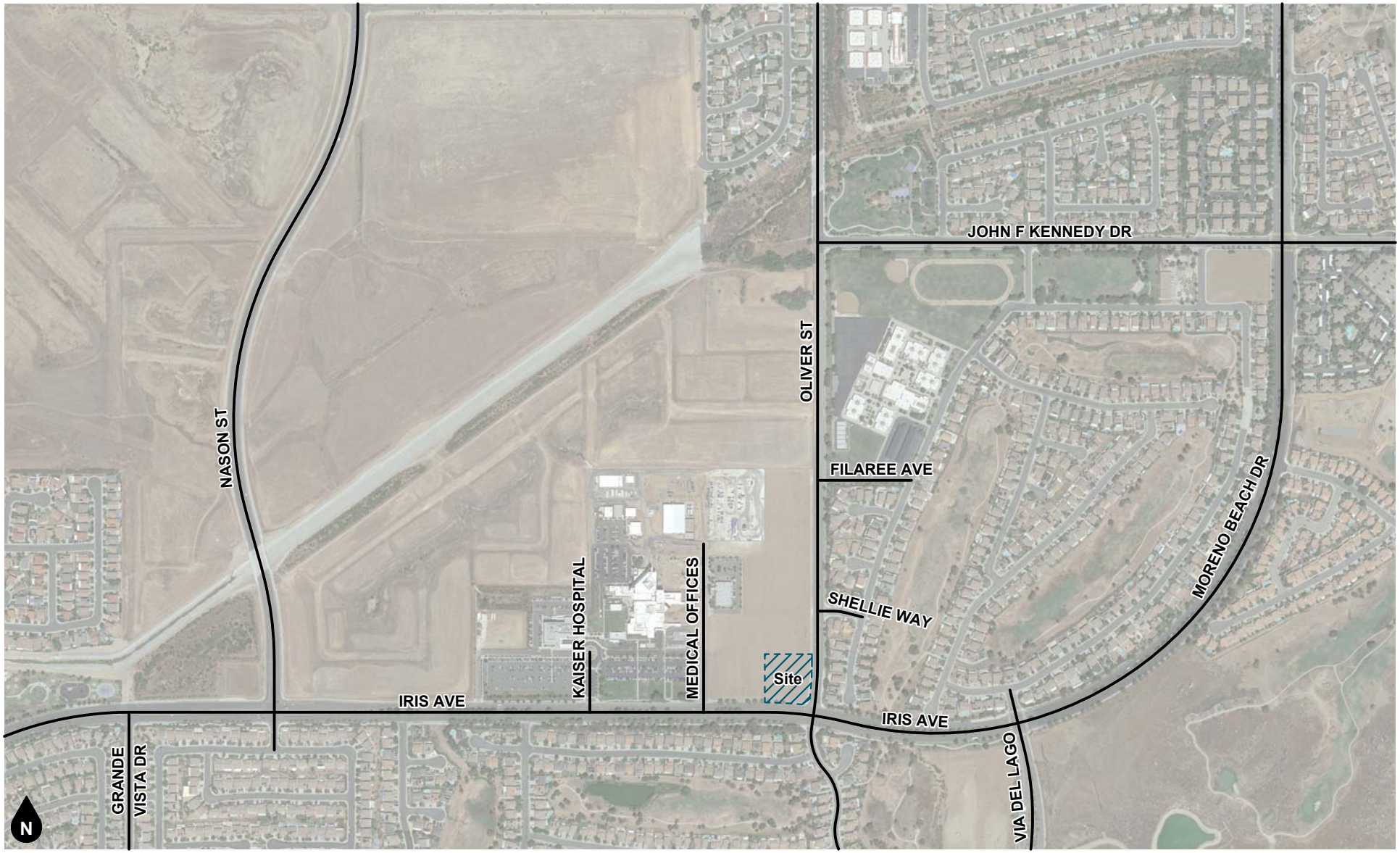

Figure 1
Project Location Map

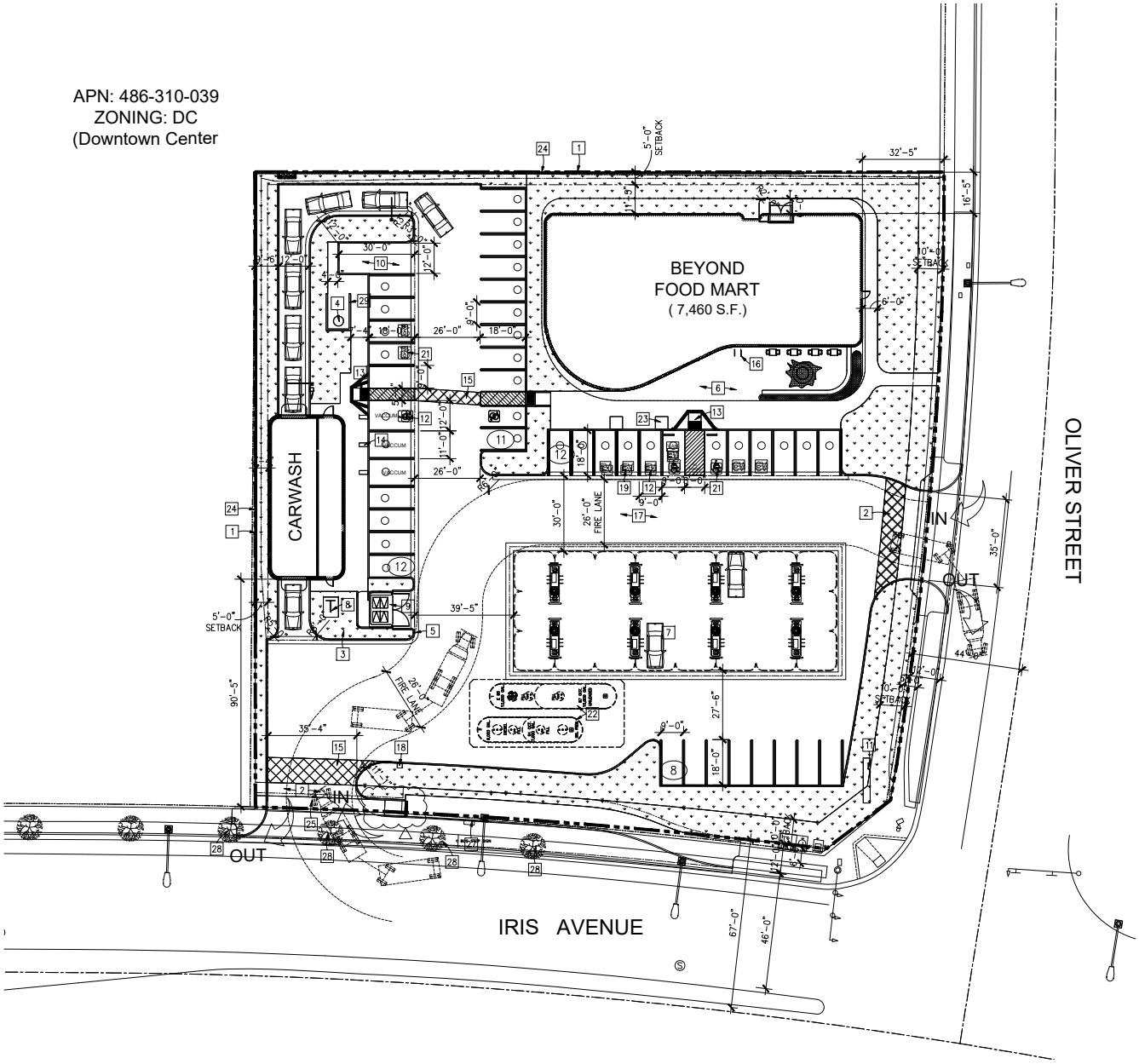

Figure 2
Site Plan

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 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 15.1 miles northwest of the project site. The cancer risk attributable to the non-DPM chemicals (i.e., the 10 TACs measured by the ARB described above) have also shown significant

[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.

reductions at the Riverside-Rubidoux location declining from an estimated cancer risk of 106 in one million in 2018 to 94 in one million in 2019.

REGULATORY SETTING

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.

The project is proposing a gasoline fueling station in proximity to existing residential uses and will be a source of toxic air contaminants; therefore, an analysis of the gas station's toxic air contaminant emissions has been 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	ID
	Health Risk	18	14	ID
Benzene	Annual Average	ND	ID	ID
	Health Risk	ND	ID	ID
1,3-Butadiene	Annual Average	ND	ID	ID
	Health Risk	ND	ID	ID
Carbon Tetrachloride	Annual Average	ND	ID	ID
	Health Risk	ND	ID	ID
Chromium, Hex	Annual Average	ID	0.032	ID
	Health Risk	ID	13	ID
Para-Dichlorobenzene	Annual Average	ND	ND	ND
	Health Risk	ND	ND	ND
Formaldehyde	Annual Average	4.210	3.190	ID
	Health Risk	88	67	ID
Methylene Chloride	Annual Average	ND	ID	ID
	Health Risk	ND	ID	ID
Perchloroethylene	Annual Average	ND	ID	ID
	Health Risk	ND	ID	ID
Diesel PM	Annual Average	No monitoring data available		
	Health Risk			
Total Health Risk (without DPM)		**106**	**94**	**-**

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.

OPERATIONS-RELATED TOXIC AIR CONTAMINANTS

The CARB Air Quality and Land Use Handbook (CARB Handbook) provides an advisory recommendation that a 50-foot separation be provided between sensitive receptors and typical gasoline dispensing facilities and a 300-foot separation be provided between sensitive receptors and a large gasoline station.[2] The project proposes to develop the site with commercial land uses. The site is proposed to be developed with a 7,460 square foot convenience store/gas station with eight (8) dual-sided fuel pumps (16 vehicle fueling positions) and a 1,790 square foot automatic car wash tunnel. Therefore, the project includes the construction and operation of an 8-fuel pump (16-fueling position) gas station. As provided by the project applicant, the proposed gasoline service station is anticipated to have an annual throughput of up to approximately 5.04 million gallons.[3]

Those who are sensitive to air pollution include children, the elderly, and persons with preexisting respiratory or cardiovascular illness. For purposes of CEQA, the SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24 hours, such as residences, hospitals, or convalescent facilities.[4] Commercial and industrial facilities are not included in the definition because employees do not typically remain on-site for 24 hours.

The closest sensitive receptors to the proposed service station include: the single-family residential uses to the east of Oliver Street, located at a distance of approximately 141 feet (~43 meters) from the façade of the residential dwelling unit to the edge of the fueling canopy, and the single-family residential uses to the south, located approximately 219 feet (~67 meters) from the underground storage tanks; approximately 250 feet (~76 meters) from the edge of the fueling canopy. The Fresenius Kidney Care Dialysis Center is located at 27420 Iris Avenue, approximately 530 feet (~161 meters) northwest of the corner of the fueling canopy and Kaiser Permanente Moreno Valley Medical Center is located at 27300 Iris Avenue, approximately 667 feet (~203 meters) northwest of the edge of the fueling canopy.

The closest commercial uses will be on-site at the proposed car wash and the proposed convenience store, both of which are located approximately 65 feet (~20 meters) from the edge of the fueling canopy.

The gasoline-station portion of the project will be permitted by SCAQMD. Fuel-related emissions will be regulated by the SCAQMD Rule 461 and the facility will be required to obtain a Permit To Operate. Gasoline dispensing facilities are required to use Phase I/II EVR (enhanced vapor recovery) systems. Phase II EVR have an average efficiency of 95.1 percent and Phase I EVR have an average efficiency of 98 percent[5]. Therefore, potential for fugitive VOC or TAC emissions from the gasoline pumps is negligible.

Assuming 5.04 million gallons per year of throughput for this gasoline-dispensing facility, as provided by the project applicant, using the SCAQMD Risk Assessment Procedures for Rules 1401, 1401.1 and 212[6] and the SCAQMD RiskTool (V1.105) R040919[7] (please see Appendix B for the modeling output) and a downwind distance of approximately 43 meters (the closest sensitive receptor location where an individual could remain

[2] A large gas station is defined as a facility with a throughput of 3.6 million gallons per year or greater.

[3] The throughput of the proposed project is anticipated to include 300,000 gallons of gasoline, 20,000 gallons of diesel, and 100,000 gallons of E85 per month for a total of 5,040,000 gallons per year.

[4] SCAQMD 2008. Final Localized Significance Threshold Methodology. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2. Page 3-2.

[5] Source: ARB's: Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities (12/23/2013), ARB's Attachment 1: Revised Emission Factors for Phase II Vehicle Fueling at California Gasoline Dispensing Facilities (12/23/2013)

[6] http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12

[7] http://www.aqmd.gov/home/permits/risk-assessment

for 24 hours), in the Perris area; the residential MICR for the closest residential receptor is 9.684 in a million. The commercial MICR at a distance of 20 meters is 1.452 in a million.

As the neither the residential cancer risk nor the commercial cancer risk exceeds 10 in a million, the project is not considered to be a significant source of TACs or fugitive VOC emissions and sensitive receptors in the project vicinity and the proposed commercial receptors would not be exposed to toxic sources of air pollution.

Additionally, as the MICR does not exceed SCAQMD thresholds at the closest receptors, any receptors located further away than the closest receptors would also not be exposed to significant TACs or fugitive VOC emissions. Therefore, the project will not result in significant operational emissions-related TAC impacts.

CONCLUSIONS

As discussed above, the proposed project will not be a significant source of TACs or fugitive VOC emissions and neither sensitive receptors nor the proposed commercial receptors would be exposed to toxic sources of air pollution. Therefore, this technical memorandum found that the health risk impacts associated with the proposed gasoline fueling facility are considered to be less than significant. No further analysis or mitigation is required.

It has been a pleasure to assist you on this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 975-3100.

Respectfully submitted,
GANDDINI GROUP, INC.

Katie Wilson

Katie Wilson, M.S.
Senior Air Quality Analyst

APPENDIX A

GLOSSARY

AQMP	Air Quality Management Plan
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH4	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO_2	Carbon dioxide
CO2e	Carbon dioxide equivalent
DPM	Diesel particulate matter
EPA	U.S. Environmental Protection Agency
GHG	Greenhouse gas
GWP	Global warming potential
HFCs	Hydrofluorocarbons
IPCC	International Panel on Climate Change
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
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
PPB	Parts per billion
PPM	Parts per million
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SF_6	Sulfur hexafluoride
SIP	State Implementation Plan
SOx	Sulfur Oxides
TAC	Toxic air contaminants
UNFCC	United Nations Framework Convention on Climate Change
VOC	Volatile organic compound

APPENDIX B

SCAQMD RISKTOOL (V1.105) R040919 MODEL OUTPUT

GASOLINE DISPENSING SERVICE STATION

(Procedure Version 8.1 & Package N, September 1, 2017) - Risk Tool V1.105

AN:

Facility Name: BFM Iris & Oliver

Deem Complete Date:

Storage Tank Type	Underground		MET Station	Perris	
Annual Throughput	5.04	million gallons /year	Distance to Resident	43	meter
T-BACT	YES		Distance to Commercial	20	meter

MICR Calculation: MICR = MICR per 1 Million gallons/yr x Annual Throughput (Million gallons/yr)

HIA & HIC Calculation: Negligible compared to Cancer risk and is not calculated.

MICR Result

	Resident	Commercial
MICR	9.684	1.452
MICR ≤ 10	**PASS**	**PASS**

Interpolation for MICR from Nearest Distances

	Residential			**Commercial**		
	near	**actual**	far	near	**actual**	far
Distance (meter)	25	**43**	50	20	**20**	25
MICR (per 1 million gasoline gallon throughput per year)	3.494	**1.9215**	1.310	0.288	**0.288**	0.288

Look up from Table 12 - MICR for Underground Storage Tank

		Downwind Distance (m)							
Station	**Receptor**	**25**	**50**	**75**	**100**	**200**	**300**	**500**	**1000**
Perris	Resident	3.494	1.310	0.695	0.436	0.127	0.063	0.026	0.008
	Commercial	0.288	0.108	0.057	0.036	0.010	0.005	0.002	0.001