SMALL PROJECT ANALYSIS LEVEL

ZONE CHANGE (APN 368-060-32) INDUSTRIAL PROJECT



DECEMBER 2025

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SECTION 1 - EXECUTIVE SUMMARY

QK, Inc. (QK) has completed a Small Project Analysis Level (SPAL) for the proposed zone change for Assessor Parcel Number (APN) 368-060-32 (Project). The proposed Project is located in the northwestern portion within the City of Bakersfield, California located 0.25-mile west of Wedding Avenue and 0.15-mile south of Rosedale Highway. The proposed Project will change the zoning from agricultural to industrial use.

The proposed Project's construction and operations would include the following criteria pollutant emissions: reactive organic gases (ROG), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and suspended particulate matter (PM_{10} and $PM_{2.5}$). Project operations would generate air pollutant emissions from mobile sources (vehicle activity from employees and visitors), energy sources (natural gas and electricity usage), and area sources (incidental activities related to architectural coating, consumer products, and landscape maintenance). Project construction and operational activities would also generate greenhouse gas (GHG) emissions. Criteria and GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2022.1.1.35 (California Air Pollution Control Officers Association (CAPCOA) 2025).

Based on the thresholds established by the SJVAPCD's GAMAQI, the emissions estimates prepared pursuant to this SPAL assessment do not exceed the SJVAPCD's established emissions significance thresholds for all CEQA air quality contaminants, therefore, this Project would not pose a significant impact to the San Joaquin Valley Air Basin and would have a less than significant air quality impact.

SECTION 2 - INTRODUCTION

2.1 - Purpose

This SPAL was prepared pursuant to the SJVAPCD's Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) (SJVAPCD 2015), the California Environmental Quality Act (CEQA) (Public Resources Code 21000 to 21189) and the CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3, Sections 15000 – 15387).

2.2 - General Project Description

The proposed Project will change the current zoning from an agricultural to industrial use within the City of Bakersfield, California. The Project site is in the northwestern portion of the metropolitan Bakersfield area. Located 0.25-mile west of Wedding Avenue and 0.15-mile south of Rosedale Highway (Figure 2-1 and Figure 2-2). The Project site is identified by APN 368-060-32, within Section 28, Township 29S, Range 27E, Mount Diablo Base and Meridian (MDB&M). The parcel is approximately 2.99 acres

This assessment examines the projected gross impact to air quality posed by this Project to the San Joaquin Valley Air Basin to determine whether or not the Project remains below established air quality thresholds of significance. Error! Reference source not found.**Figure 2-1** depicts the regional location and **Figure 2-2** depicts an aerial view of the Project location.



Figure 2-1
Regional Location



Figure 2-2
Project Location

SECTION 3 - IMPACT ASSESSMENT

3.1 - Small Project Analysis Level Qualification

The SJVAPCD created the SPAL screening tool to streamline air quality assessments of commonly encountered projects. According to GAMAQI, the SJVAPCD "pre-calculated the emissions on a large number and types of projects to identify the level at which they have no possibility of exceeding the emissions thresholds"[1].

The SJVAPCD SPAL process established review parameters to determine whether a project qualifies as a "small project." A project that is found to be "less than" the established parameters has "no possibility of exceeding criteria pollutant emissions thresholds." Error! Reference source not found. presents the SPAL size parameters for residential projects.

Table 3-1
Small Project Analysis Level for Industrial Projects

Land Use Category - Industrial	Project Size (Square Feet)*	ADT One-Way for all Fleet Types (except HHDT)	ADT One-Way for HHDT Trips Only
General Light Industrial	280,000	550	70
Heavy Industrial	900,000	550	70
Industrial Park	295,000	550	70
Manufacturing	472,000	550	70
Proposed Project	**32,000****	**137*****	**6*****

*Project size based on SPAL Table 4a, as posted on SJVAPCD webpage: https://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI-SPAL.PDF
**Estimated based on Project site size.
***Based on default CalEEMod trips and fleet mix.

As shown in **Table 3-1**, the proposed Project would not exceed the established SPAL limits for any industrial project. The Project would construct 32,000 square feet compared to any allowable project size for industrial uses. And based on the CalEEMod default trip rate for manufacturing the Project's average daily trips (ADTs) would be below both SPAL ADT thresholds. Based on the above information, this Project qualifies for a limited air quality analysis applying the SPAL guidance to determine air quality impacts.

[1] SJVAPCD GAMAQI, Section 8.3.4, Page 85.

3.2 - Significance Criteria

This SPAL utilizes the CEQA and the SJVAPCD's GAMAQI to determine the significance thresholds for the proposed Project.

A potentially significant impact to air quality, as defined by the CEQA Appendix G Environmental Checklist Form (not included herein), would occur if the project caused one or more of the following to occur:

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

The SJVAPCD has established emission thresholds in their GAMAQI to determine whether a project would create any potential air quality impacts that would require further analysis in an Environmental Impact Report (EIR). The SJVAPCD air quality thresholds from GAMAQI are presented in **Table 3-2** (SJVAPCD 2015).

Table 3-2
SJVAPCD CEQA Thresholds of Significance

Criteria Pollutant	Significance Level		
	Construction Emissions	Operational Permitted Emissions	Operational Non-Permitted Emissions
CO	100 tons/yr	100 tons/yr	100 tons/yr
NOx	10 tons/yr	10 tons/yr	10 tons/yr
ROG	10 tons/yr	10 tons/yr	10 tons/yr
SOx	27 tons/yr	27 tons/yr	27 tons/yr
PM_{10}	15 tons/yr	15 tons/yr	15 tons/yr
$PM_{2.5}$	15 tons/yr	15 tons/yr	15 tons/yr

Source: SJVAPCD 2015.

3.2.1 - THRESHOLD FOR AMBIENT AIR QUALITY IMPACTS

CEQA Guidelines – Appendix G (Environmental Checklist) states that a project that would "*violate any air quality standard or contribute substantially to an existing or projected air quality violation*" would be considered to create significant impacts on air quality. Therefore, an ambient air quality analysis should determine whether the emissions from a project would cause or contribute significantly to violations of the NAAQS or CAAQS when added to existing ambient concentrations.

Table 3-3
Federal and California Standards

Pollutant	Averaging Time	NAAQS	CAAQS
		Concentration	
O_3	8-hour	0.070 ppm (137 µg/m³)[a]	0.070 ppm (137 µg/m³)
	1-hour		0.09 ppm (180 µg/m³)
CO	8-hour	9 ppm (10 µg/m³)	9 ppm (10 µg/m³)
	1-hour	35 ppm (40 µg/m³)	20 ppm (23 µg/m³)
NO_2	Annual Average	53 ppb (100 µg/m³)	0.030 ppm (57 µg/m³)
	1-Hour	100 ppb (188.68 µg/m³)	0.18 ppm (339 µg/m³)
SO_2	3-Hour	0.5 ppm (1,300 µg/m³)	
	24 Hour	0.14 ppm (365 µg/m³)	0.04 ppm (105 µg/m³)
	1-Hour	75 ppb (196 µg/m³)	0.25 ppm (655 µg/m³)
Particulate Matter (PM_{10})	Annual Arithmetic Mean		20 µg/m³
	24-Hour	150 µg/m³	50 µg/m³
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m³	12 µg/m³
	24-Hour	35 µg/m³	
Sulfates	24-Hour		25 µg/m³
Pb[d]	Rolling Three-Month Average	0.15 µg/m³	
	30 Day Average		1.5 µg/m³
H_2S	1-Hour		0.03 ppm (42 µg/m³)
Vinyl Chloride (chloroethene)	24-Hour		0.010 ppm (26 µg/m³)
Visibility Reducing particles	8 Hour (1000 to 1800 PST)		[b]

ppm = parts per million
ppb = parts per billion
mg/m³ = milligrams per cubic meter
µg/m³ = micrograms per cubic meter

Source: CARB 2024
a. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm
b. In 1989, CARB converted both the general statewide 10-mile visibility standards and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

3.2.2 - THRESHOLDS FOR HAZARDOUS AIR POLLUTANTS

The SJVAPCD's Guidelines state that a project result in a significant impact if it exceeds that District's health risk notification thresholds presented in **Table 3-4**.

Table 3-4
Measures of Significance – Toxic Air Contaminants

Agency	Level	Description
Significance Thresholds Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	Carcinogens	Maximally Exposed Individual risk **equals or exceeds** 20 in one million.
	Non-Carcinogens	**Acute**: Hazard Index **equals or exceeds** 1.0 for the Maximally Exposed Individual. **Chronic**: Hazard Index **equals or exceeds** 1.0 for the Maximally Exposed Individual.

Source: SJVAPCD 2015

3.2.3 - GLOBAL CLIMATE CHANGE THRESHOLDS OF SIGNIFICANCE

On December 17, 2009, SJVAPCD adopted Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA (SJVAPCD 2009); which outlined the SJVAPCD's methodology for assessing a project's significance for GHGs under CEQA. The following criteria was outlined in the document to determine whether a project could have a significant impact:

- Projects determined to be exempt from the requirements of CEQA would be determined to have a less than significant individual and cumulative impact for GHG emissions and would not require further environmental review, including analysis of project specific GHG emissions. Projects exempt under CEQA would be evaluated consistent with established rules and regulations governing project approval and would not be required to implement BPS.
- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement BPS.
- Projects implementing Best Performance Standards would not require quantification of project specific GHG emissions. Consistent with CEQA Guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.
- Projects not implementing Best Performance Standards would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29%, compared to Business-as-Usual (BAU), including GHG emission reductions achieved since the 2002-2004 baseline period. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.

- Notwithstanding any of the above provisions, projects requiring preparation of an Environmental Impact Report for any other reason would require quantification of project specific GHG emissions. Projects implementing BPS or achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.

The County of Kern nor the City of Bakersfield has developed specific thresholds for GHGs. The SJVAPCD has developed thresholds to determine significance of a proposed project – either implement Best Performance Standards or achieve a 29% reduction from BAU (a specific numerical threshold). However, the SJVAPCD has established their BAU and baseline emissions based on the years 2002-2004 and 2020, respectively. Since the 2020 projected baseline has passed no new guidance has been approved for determining BAU and projected baseline for the next target year. Therefore, the 29% reduction from BAU cannot be applied to the subject Project in order to determine significance. Additionally, a Best Performance Standards threshold has not been established. For this Project, compliance with locally adopted climate plans will be used to determine level of significance for GHG. Therefore, the GHG analysis for this Project follows the suggestions from the Court's ruling on the Newhall Ranch development project in order to determine significance using the project design features.

3.3 - Project Related Emissions

A cursory review of the Project emissions was conducted to demonstrate that it would not exceed established air quality emissions thresholds, pursuant to the SJVAPCD's GAMAQI.

3.3.1 - SHORT-TERM EMISSIONS

Short-term emissions are primarily from the construction of a project and would have temporary impacts on air quality.

CalEEMod was used to estimate emissions from construction worker vehicles and on-site construction equipment. CalEEMod default construction schedule and equipment was used to estimated Project emissions.

Adjustments to the CalEEMod default values were as follows:

- Land use lot acreage was adjusted to match the Project description; and
- The demolition Phase was removed;

Even though unmitigated emissions would be less than the air quality thresholds, the Project also must comply with required SJVAPCD's mitigation measures to limit fugitive dust emissions. The following mitigation measures were applied in CalEEMod resulting in Mitigated emissions shown in Table 3-5:

- Water exposed area 3 times per day; and
- Reduce vehicle speed to less than 15 miles per hour on unpaved roads.

Table 3-5 presents the Project's short-term emissions and demonstrated that the Project's construction activities would not exceed construction significance thresholds. Therefore, construction emissions were found to be less than significant, and no further evaluation is required. Emission calculations are available in **Appendix A**.

Table 3-5
Short-Term Project Emissions

Emissions Source	Pollutant (tons/year)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
2026	0.14	1.20	1.40	0.003	0.05	0.04
Significance Threshold	10	10	100	27	15	15
Is Threshold Exceeded for a Single Year After Mitigation?	No	No	No	No	No	No

Source: QK 2025

3.3.2 - LONG-TERM OPERATIONAL EMISSIONS

Long-term emissions are caused by operational mobile sources and area source emissions from the Project.

Table 3-6 presents the Project's long-term operations emissions generated from mobile, energy, and area sources as well as from water use and waste generation emissions. Most of these emission impacts are from mobile sources traveling to and from the Project area.

CalEEMod was used to estimate emissions from worker and visitor vehicles, on-site equipment, and on-site area sources. Default trips and fleet mix were adjusted to match the anticipated trip data for the Project. The Project's long-term emissions demonstrated that the Project's operational activities would not exceed operational thresholds. Therefore, operational emissions were found to be less than significant, and no further evaluation is required. Emission calculations are available in Appendix A.

Table 3-6
Long-Term (Operational Emissions)

Emissions Source	Pollutant (tons/year)					
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Project Operational Emissions	0.09	0.11	0.62	0.002	0.14	0.04
Significance Threshold	10	10	100	27	15	15
Is Threshold Exceeded After Mitigation?	No	No	No	No	No	No

3.3.3 - GREENHOUSE GAS EMISSIONS

The Project's greenhouse gas (GHG) emissions are primarily from construction equipment source activities and operational mobile and energy sources. Not all GHGs exhibit the same ability to induce climate change; as a result, GHG contributions are commonly quantified as carbon dioxide equivalents (CO_2e) (see **Appendix A**). The proposed Project's construction and operational CO_2e emissions were estimated using CalEEMod. These emissions are summarized in **Table 3-7**.

Table 3-7
Estimated Annual GHG Emissions (MT/Year)

Source	CO_2	CH_4	N_2O	CO_2e
Total Construction Emissions	238	0.01	0.00	238
Total Operational Emissions	171	0.60	0.02	191

In the decade after SJVAPCD adopted their Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA, several new laws and executive orders were adopted that require additional reductions in years after 2020. For instance, Senate Bill 32 requires that GHG emissions be 40% less than 1990 levels by 2030. More drastic still, Senate Bill 100 which was signed by the Governor recently requires 100% zero-carbon electricity by 2045. On the day SB 100 was signed into law, the Governor also signed Executive Order B-55-18 which commits California to total, economy-wide carbon neutrality by 2045. Clearly, the 2009 Guidance may be somewhat inadequate in producing a meaningful comparison by today's standards which propose a grand vision that, if achieved, would fundamentally change how business is conducted and citizens live in the State. Thus, as discussed in the most recent updates to the Scoping Plan, objectives of the Scoping Plan affect all sectors of the economy and it no longer makes sense to evaluate GHG emissions on a project-level.

For these reasons, Project GHG emissions levels presented in **Table 3-7** are primarily for disclosure purposes. The Project's largest contributors to GHG emissions are from construction activities and operational mobile and energy sources. Electricity and transportation fuels are, in effect, regulated by requiring providers and importers of electricity and fuel to participate in the GHG Cap-and-Trade Program and other Programs (e.g., low carbon fuel standard, renewable portfolio standard, etc.). Each sector-wide program exists within the framework of AB 32 and its descendant laws the purpose of which is to achieve GHG emissions reductions consistent with the AB 32 Scoping Plan.

The Project would generate GHGs from electricity use and combustion of gasoline/diesel fuels, each of which is regulated near the top of the supply-chain. As such, each consumer in California (including those creating emissions of this Project) will have no choice but to purchase electricity and fuels produced in a way that is acceptable to the California market. Thus, Project GHG emissions will be consistent with the relevant plan (i.e., AB 32 Scoping Plan). The Project would meet its fair share of the cost to mitigate the cumulative impact of global climate change based on energy purchases from the California market. Thus,

consumers of electricity and transportation fuels are in effect regulated by higher level emissions restrictions on the producers of these energy sources. Therefore, the Project would have a less than significant impact on applicable GHG reduction plans and the Project's contribution to cumulative global climate change impacts would not be cumulatively considerable.

3.4 - Potential Impacts on Sensitive Receptors

Sensitive receptors are defined as locations where young children, chronically ill individuals, the elderly, or people who are more sensitive than the general population reside, such as schools, hospitals, nursing homes, and daycare centers. The nearest residential sensitive receptor is located adjacent to the proposed Project site.

The closest school is Vista West High School located 0.14 miles east of the Project site. The closest hospital is Mercy Southwest Hospital located 2.24 miles southwest and the closest assisted living facility is Positive Purpose LLC located 0.95 miles to the southwest. The nearest daycare facility is Play and Thrive Academy located 0.77 miles to the north of the Project.

Based on the predicted operational emissions and activity types, the proposed Project is not expected to affect any on-site or off-site sensitive receptors and is not expected to have any adverse impacts on any known sensitive receptors.

3.5 - Potential Impacts to Visibility to Nearby Class 1 Areas

Visibility impact analyses are intended for stationary sources of emissions which are subject to the PSD requirements in 40 CFR Part 60; they are not usually conducted for area sources. Under the PSD program, all international parks, national wilderness areas and national memorial parks that exceed 5,000 acres, and of national parks that exceed 6,000 acres are designated as mandatory federal Class I areas which are provided visibility protection under the Clean Air Act. Because the Project's PM10 emissions increases are predicted to be less than the PSD threshold levels, an impact at any Class 1 area or military/airspace operation within 100 kilometers of the Project is extremely unlikely. Therefore, based on the Project's predicted less-than significant PM10 emissions, the Project would be expected to have a *less than significant impact* to visibility at any Class 1 area or military/airspace operation.

3.6 - Predicted Health Impacts

Projects are considered for potential health risks wherein a new or modified source of Hazardous Air Pollutants (HAPs) is proposed for a location near an existing residential area or other sensitive receptor when evaluating potential impacts related to HAPs.

The proposed Project would result in emissions of Hazardous Air Pollutants (HAPs) during construction and would be located near existing residents; therefore, an assessment of the potential risk to the population attributable to emissions of hazardous air pollutants from the proposed Project is required. The project may also have a small amount of HAP emissions

from the anticipated 6 truck tips per day. However, this level of emissions would add a minimal impact to the risk associated with the construction emissions and were therefore considered negligible and not modeling for the purposes of this SPAL analysis.

To predict the potential health risk to the population attributable to emissions of HAPs from the proposed Project, ambient air concentrations were predicted with dispersion modeling to arrive at a conservative estimate of increased individual carcinogenic risk that might occur as a result of continuous exposure over the construction period for construction emissions. Similarly, predicted concentrations were used to calculate non-cancer chronic and acute hazard indices, which are the ratio of expected exposure to acceptable exposure. The basis for evaluating potential health risks is the identification of sources with increased HAPs. HAP emissions from anticipated on-site construction activities were evaluated.

Health risk is determined using the Hotspots Analysis and Reporting Program (HARP) software distributed by the CARB. HARP2 requires peak 1-hour emission rates and annual-averaged emission rates for all pollutants for each modeling source. The assumptions used to calculate the emission rates for the proposed Project are outlined below.

The most recent version of EPA's AMS/EPA Regulatory Model – AERMOD (recompiled for the Lakes ISC-AERMOD View) was used to predict the dispersion of emissions from the proposed Project. The analysis employed all of the regulatory default AERMOD model keyword parameters, including elevated terrain options.

Diesel combustion emissions from diesel on-site construction equipment were modeled as an area source for on-site construction activity on the property. Diesel particulate matter was calculated using CalEEMod for on-site construction. A unit emission rate of one gram/second (g/sec) was input to AERMOD for each source.

A fenceline discrete receptor grid was placed around the Project site in order to evaluate residences and businesses within close proximity of the Project site. A three-tier grid was used with 25-meter fenceline spacing. The first tier extended 100 meters with 25-meter tier spacing, the second tier extended an additional 200 meters with 50 meter tier spacing and the third tier extended another 400 meters with a tier spacing of 100 meters. A total of 772 discrete off-site receptors were analyzed. Elevated terrain options were employed even though there is not complex terrain in the Project area. The 7.5-minute DEM terrain data for Oildale, CA and Gosford, CA, was processed with AERMAP to identify elevations for the proposed Project.

SJVAPCD-provided AERMET processed meteorological datasets for the Bakersfield monitoring station, calendar years 2018 through 2022 were input to AERMOD (SJVAPCD, 2025d). This was the most recent available dataset available at the time the modeling was conducted. Rural dispersion parameters were used because the operation and the majority of the land surrounding the facility are considered "rural" under the Auer land use classification method (Auer, 1978).

Plot files generated by AERMOD were uploaded to the Air Dispersion Modeling and Risk Assessment Tool (ADMRT) program in the Hotspots Analysis and Reporting Program Version 2 (HARP2) (CARB, 2015). ADMRT post-processing was used to assess the potential for excess cancer risk and chronic and acute non-cancer effects using the most recent health effects data from the California EPA Office of Environmental Health Hazard Assessment (OEHHA) using the OEHHA Derived Method. HARP2 site parameters were set for the mandatory minimum pathways of inhalation, homegrown gardens, soil ingestion, dermal, and mother's milk. The non-inhalation pathways used a deposition rate of 0.02 m/s along with all other default parameters. Risk reports were generated using the derived OEHHA analysis method for carcinogenic risk and non-carcinogenic chronic and acute risk. Site parameters are included in the HARP2 output files. Total cancer risk was predicted for the inhalation pathway at each receptor. A hazard index was computed for chronic non-cancer health effects for each applicable endpoint and each receptor. A hazard index for acute non-cancer health effects was not computed since diesel particulate matter (DPM) does not have a risk exposure level for acute risk.

SJVAPCD has set the level of significance for carcinogenic risk at twenty in one million, which is understood as the possibility of causing 20 additional cancer cases in a population of one million people. The level of significance for chronic non-cancer risk is a hazard index of 1.0. All receptors were modeled with a 1-year exposure for construction activities. The majority of receptors surrounding the Project site are non-residential, however, in order to be conservative all receptors were treated as residential.

The carcinogenic risk and the health hazard index (HI) for chronic non-cancer risk at the point of maximum impact (PMI) do not exceed the significance levels of twenty in one million (20 x 10-6) and 1.0, respectively for the proposed Project. The PMIs are identified by receptor location and risk and are provided in **Table 3-8**. The electronic AERMOD and HARP2 output files are provided in **Appendix B**.

Table 3-8
Potential Maximum Impacts Predicted by HARP

	Cancer Risk	Chronic Hazard Index
Total Construction	17.3E-06	1.95E-02
SJVAPCD Threshold	20.0E-06	1.0
Exceedance?	No	No
Receptor #	559	559
UTM Easting (m)	310585.73	310585.73
UTM Northing (m)	3917238.54	3917238.54

Note: UTM = Universal Transverse Mercator

As shown above in **Table 3-8**, the maximum predicted cancer risk for the proposed Project is 17.3E-06. The maximum chronic non-cancer hazard index for the proposed Project is 1.95E-02. Since the PMI remained below the significance threshold for cancer and chronic risk, this Project would not have an adverse effect to any of the surrounding communities.

The potential health risk attributable to the proposed Project is determined to be *less than significant* based on the following conclusions:

1. Potential carcinogenic risk from the proposed Project is below the significance level of ten in a million at each of the modeled receptors; and
2. The hazard index for the potential chronic non-cancer risk from the proposed Project is below the significance level of 1.0 at each of the modeled receptors.
3. The hazard index for the potential acute non-cancer risk was not calculated since there is no acute risk associated with DPM emission; therefore, the proposed Project is considered below the significance level.

Therefore, potential risk to the population attributable to emissions of HAPs from the proposed Project would be less than significant.

3.7 - Odor Impacts and Mitigation

An evaluation is typically conducted for both of the following situations: 1) a potential source of objectionable odors is proposed for a location near existing sensitive receptors, and 2) sensitive receptors are proposed to be located near an existing source of objectionable odors. The criteria for this evaluation are based on the Lead Agency's determination of the proximity to one another of the proposed project and the sensitive receptors. A sensitive receptor is a location where human populations, especially children, senior citizens and sick persons, are present, and where there is a reasonable expectation of continuous human exposure to pollutants, according to the averaging period for ambient air quality standards, i.e. the 24-hour, 8-hour or 1-hour standards. Commercial and industrial sources are not considered sensitive receptors.

The proposed Project is not considered a source of objectionable odors or odorous compounds. Furthermore, there does not appear to be any significant source of objectionable odors in close proximity that may adversely impact the project site when it is in operation. As such, the proposed project will not be a source of any odorous compounds nor will it likely be impacted by any odorous source.

3.8 - Impacts to Ambient Air Quality

An ambient air quality analysis, when required, determines if a proposed project has the potential to cause a violation of the ambient air quality standards or a substantial contribution to an existing or projected air quality standard. As stated in the of GAMAQI (2015, p 96-97), SJVAPCD has developed screening levels for requiring an Ambient Air Quality Analysis (AAQA). The SJVAPCD recommends that an AAQA be performed for all criteria pollutants when emissions of any criteria pollutant resulting from project construction or operational activities exceed the 100 pounds per day screening level, after compliance with Rule 9510 requirements and implementation of all enforceable mitigation measures.

As demonstrated in *Sections 3.3.1 Short Term Operational Emissions and 3.3.2 Long Term Operational Emissions*, the Project's potential increase to any criteria pollutant's average daily emissions for construction and operational activities associated with this Project would not exceed 100 pounds per day. Therefore, an AAQA is not required for this Project.

3.9 - Cumulative Impacts

Cumulative impacts were also evaluated; however, cumulative emissions were not quantified because no other tentative projects were found within a one-mile radius of the Proposed Project that provided enough project detail information to accurately estimate emissions. Owing to the inherently cumulative nature of air quality impacts, the threshold for whether a project would make a cumulatively considerable contribution to a significant cumulative impact is currently based on whether the proposed Project would exceed established project-level thresholds. As such, a qualitative evaluation of the cumulative projects supports a finding that the Project's contribution would not be cumulatively considerable because the proposed Project's incremental emissions increase would be less than significant.

SECTION 4 - CONCLUSIONS

Based on the criteria established by the SJVAPCD's GAMAQI, the proposed Project does not meet the minimum standards to require a full Air Quality Impact Analysis. Furthermore, the Project as proposed would not exceed the SJVAPCD's criteria air pollutant emission levels and would generate *less than significant air quality impacts*.

SECTION 5 - REFERENCES

California Air Pollution Control Officers Association (CAPCOA). 2024. California Emissions Estimator Model tm (CalEEMod), version 2022.1.1.28

----------. 2016. "Air Toxic Hot Spots" Facility Prioritization Guidelines, Revised 2016. Final August 2016 http://www.capcoa.org/wp-content/uploads/2016/08/CAPCOA%20Prioritization%20Guidelines%20-%20August%202016%20FINAL.pdf

California Air Resources Board (CARB). 2015. Hotspots Analysis and Reporting Program (HARP2) User Guide. https://ww2.arb.ca.gov/sites/default/files/classic//toxics/harp/docs2/harp2admrtuserguide.pdf.

--------. 2024. "Ambient Air Quality Standards." July 22, 2024. https://ww2.arb.ca.gov/sites/default/files/2024-08/AAQS%20Table_ADA_FINAL_07222024.pdf

California Environmental Quality Act (CEQA). 2024. (Public Resources Code 21000 - 21189) and CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3, Sections 15000 – 15387).

---------. 2024. CEQA, Appendix G – Environmental Checklist Form, Final Text.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2020. Small Project Analysis Level (SPAL). November 13, 2020. http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI-SPAL.PDF

-----------. 2015. Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI). March 19, 2015. http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf

-----------. 2009. Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA. December 17, 2009. http://www.valleyair.org/Programs/CCAP/12-17-09/1%20CCAP%20-%20FINAL%20CEQA%20GHG%20Staff%20Report%20-%20Dec%2017%202009.pdf

----------. 2024. Air Monitoring Location Map. http://valleyair.org/aqinfo/air-monitoring.htm

----------. 2023. Meteorological Datasets for Bakersfield 2018-2022. https://ww2.valleyair.org/permitting/air-dispersion-modeling/meteorological-data-zip-files/

APPENDIX A

PROJECT EMISSION CALCULATIONS

APPENDIX B

HEALTH RISK ASSESSMENT MODELING FILES