ENVIRONMENT | PLANNING | DEVELOPMENT SOLUTIONS, INC.

DATE: June 2, 2021

SUBJECT: Response to Comments – Lancaster Promenade

This document responds to the May 12, 2021 SWAPE Comment letter, which is attached as Exhibit D to the May 13, 2021 letter prepared by Mitchell M. Tsai, Attorney for Southwest Regional Council of Carpenters.

Comment 1; Pages 1 & 2. Unsubstantiated Input Parameters Used to Estimate Project Emissions - Unsubstantiated Reduction in CO2 Intensity Factor

Comment: The comment letter states there are alleged inconsistencies between the model inputs and the information disclosed in the Initial Study/Mitigated Negative Declaration (IS/MND) and March 4, 2021 CalEEMod Emission Summary (air quality/GHG study). As an example, the comment questions the justification for reducing the default CO_2 intensity factor from 703 lb/mWh to 533 lb/mWh for Southern California Edison (SCE) territory.

Response: the SCE default 703 lb/mWh default CalEEMod CO_2 intensity factor was based on the California Air Resources Board's Local Government Operations Protocol for CO_2 and updated public utility protocols CO_2 for the reporting year 2012. The CalEEMOd User Guide indicates that if a new intensity factor is identified before the default values are updated in CalEEMod, the user may override the default and provide justification for the change. SCE updated the CO_2 intensity factor in the 2019 Sustainability report to 534 lb/mWh, which was used in the GHG analysis.

Therefore, the value used in the project air quality/GHG study of 533 lb/mWh was derived from the reference below (screen capture below from Page 78 and link to the report below) and represents the most current estimate of the CO_2 intensity factor for SCE. No revisions to the IS/MND are required.

https://www.edison.com/content/dam/eix/documents/sustainability/eix-2019-sustainability-report.pdf

SUSTAINABILITY SCORECARD

COMPARISON BETWEEN 2018 AND 2019

● Better ● No change ● Worse

COMPANY OVERVIEW

	2017	2018	2019
Net Income (millions $)	565	(423)	1,284
Core Earnings (millions $)**	1,466	1,351	1,595
Basic Earnings per Share ($)	1.73	(1.30)	3.78
Core Earnings per Share ($)**	4.50	4.15	4.70
Total Operating Revenue (millions $)	12,320	12,657	12,347
Total Assets (millions $)	52,580	56,715	64,382
Total Annual Capital Expenditures (millions $)	3,835*	4,363	4,815
Number of Customer Accounts*	5,094,818	5,126,985	5,151,098
Number of Employees	12,521	12,574	12,937
Board of Directors: Total Number of Directors	11	11	11

TRANSITION TO A CLEAN ENERGY FUTURE

	2017	2018	2019	2018-2019 COMPARISON
Carbon-free Power (% of delivered electricity)*◊	46	46	48	●
Renewables Portfolio Standard (RPS): Eligible Renewables (% of delivered electricity)*◊	31.6	36.4**	35.0	● 1
CO_2e Emissions From Owned Electricity Rate (lbs/MWh)*	250	186	227	● 2
CO_2e Emissions From Delivered Electricity Rate (lbs/MWh)*	549	513	534	● 3
Scope 1 Emissions (million metric tons CO_2e)*◊	1.9	1.1	1.4	● 4
Scope 2 Emissions (million metric tons CO_2e)*◊	1.3	1.2	0.8	●
Scope 3 Emissions (million metric tons CO_2e)*◊	16.6	15.8	13.6	●

See definitions on page 80

TRANSITION TO A CLEAN ENERGY FUTURE (CONTINUED)

	2017	2018	2019	2018-2019 COMPARISON
SF_6 Emissions Rate (%)*	1.5	1.9	1.0	●
SF_6 Emissions (million metric tons CO_2e)*	0.168	0.213	0.111	●
NOx Emissions Rate of UOG (lbs/MWh)*	0.080	0.152	0.080	●
NOx Emissions From UOG (metric tons)*	153.5	147.6	114.1	●
SO_2 Emissions Rate of UOG (lbs/MWh)*	0.005	0.005	0.005	●
SO_2 Emissions From UOG (metric tons)*	8.9	4.7	6.6	● 5
Mercury Emissions From UOG (lbs/MWh)*	0	0	0	● 6
Customer Energy Efficiency: GWh % of CPUC Goals*	128	140	116	● 7
Customer Energy Efficiency: MW % of CPUC Goals*	127	139	110	● 7
Customer Energy Efficiency: (MW)*	292	286	238	● 7
Percent of Active Customer Accounts With Smart Meters (%)*	99.15	99.17	99.18	●

- 2017 figure restated from $3.828 billion to $3.835 billion for consistency with an accounting standards update reported in Edison International's 2018 10-K filing.
- 2018 figure restated from 36.5% to 36.4% due to lower RPS eligible deliveries from two facilities that experienced a delivery point outage for a short period in 2018.
- ◊ The 2019 calculation is an estimate and includes as an input an estimate of SCE's delivered power mix using the methodology prescribed by the California Energy Commission (CEC) Power Source Disclosure Program (PSDP) as of April 23, 2020. SCE's final PSDP report will be filed with the CEC on July 20, 2020, and may include updates to the inputs used in this calculation.

1 In 2019, 38.1% of SCE's supply portfolio came from renewable sources eligible under California's RPS, which is an increase over 2018 (36.4%). Of that, approximately 35% was delivered to customers and 3% was sold for resale. The 2019 figure in the scorecard is the estimated percent delivered to customers.

2 In 2019, SCE's largest natural gas asset, Mountainview Generating Station, was economically dispatched by the California Independent System Operator (CAISO) for more hours than in 2018. While year-over-year dispatch varies based on a number of factors, including local electricity supply and demand, natural gas prices and plant availability, SCE forecasts that Mountainview Generating Station will run less over time than it has historically due to increased renewable and battery storage capacity available in the market.

3 While SCE's estimated 2019 delivered power mix had a higher proportion of carbon-free power than in 2018, pursuant to the methodology prescribed by the CEC PSDP as of April 23, 2020, the emissions intensity increased slightly. This is due to a higher proportion of specified natural gas resources, with a higher average emissions intensity, versus unspecified market resources, with a comparatively lower average emissions intensity, in SCE's estimated delivered power in 2019 compared to 2018. See additional details in Clean Energy.

4 Scope 1 emissions have declined 26% since 2017; however, they show an increase over our 2018 performance. In 2018, SCE's largest natural gas asset, Mountainview Generating Station, which makes up a significant portion of SCE's Scope 1 emissions, was economically dispatched by CAISO for more hours than in 2018. See note 2.

5 SO_2 emissions increased due to increased economic dispatch of SCE-owned Mountainview Generating Station in 2019 compared to 2018. See note 2.

6 SCE does not own any coal generation plants and does not emit mercury emissions.

7 Performance on customer energy efficiency measures decreased slightly in 2019 compared to 2018. Stricter building codes throughout SCE's service area have resulted in fewer opportunities to achieve energy savings through SCE's program (i.e., there are fewer opportunities for savings above code as the codes become stricter).

Comment 2; Page 2. Unsubstantiated Changes to the Individual Construction Phase Lengths

Comment: The comment letter states that the study fails to provide substantial evidence to support the revised individual construction phase lengths.

Response: Based on the applicant's estimated construction schedule of 18 months, which is based on experience building similarly sized projects, the CalEEMod default construction schedule was condensed to be a single-phase development over 18 months. This was done to provide a conservative estimate of project construction emissions whereby the emissions were concentrated within a smaller timeframe than the more prolonged default construction schedule. This is exemplified by comparing the construction emissions given the default CalEEMod construction phases and construction emissions assuming the condensed construction phases as contained in the AQ Report. Table 1 provides the two schedules, and Table 2 presents the emission comparison. As noted from Table 2, the emissions associated with the condensed construction schedule are the lower for most of the construction years than for the default schedule. Note also that a Site Preparation construction phase was not included in the construction assessment. The CalEEMod User Guide, Page 31, defines the Site Preparation phase as:

> "Site Preparation involves clearing vegetation (grubbing and tree/stump removal) and removing stones and other unwanted material or debris prior to grading"

Because the current site is vacant, relatively flat and barren, absent any vegetation, the site preparation phase was unnecessary. No revisions to the IS/MND are required.

Table 2-1: Comparison of Construction Schedules

Activity	Start Date	End Date	Total Days
Grading			
Default Schedule	08/02/2021	09/17/2021	35
Condensed Schedule	08/02/2021	09/10/2021	30
Building Construction			
Default Schedule	09/18/2021	05/26/2023	440
Condensed Schedule	09/11/2021	09/02/2022	255
Paving			
Default Schedule	05/27/2023	07/28/2023	45
Condensed Schedule	09/03/2022	10/14/2022	30
Architectural Coating			
Default Schedule	07/29/2023	09/15/2023	35
Condensed Schedule	10/15/2022	11/25/2022	30

Table 5-1: Comparison of Construction Emissions – Default Construction Schedule and Condensed Schedule

Construction Schedule	Maximum Daily Construction Emissions[1] (pounds/day)					
	VOC	NO_X	C0	SO_x	PM_{10}	$PM_{2.5}$
2021						
Default Schedule	5.6	89.5	41.0	0.2	10.6	4.6
Condensed Schedule	5.8	96.9	45.5	0.3	10.5	4.6
2022						
Default Schedule	4.5	31.1	39.0	0.1	6.2	2.3
Condensed Schedule	115.4	34.8	39.1	0.1	7.3	2.6
2023						

Construction Schedule	Maximum Daily Construction Emissions[1] (pounds/day)					
	VOC	NO_X	C0	SO_x	PM_{10}	$PM_{2.5}$
Default Schedule	96.1	26.9	37.1	0.1	6.1	2.1
Condensed Schedule	0.0	0.0	0.0	0.0	0.0	0.0
Maximum Daily Emissions3.6						
Default Schedule	**96.1**	**89.5**	**41.0**	**0.2**	**10.6**	**4.6**
Condensed Schedule	**115.4**	**96.9**	**45.5**	**0.3**	**10.5**	**4.6**

Notes:

ROG = reactive organic gases NOx = oxides of nitrogen PM10 = particulate matter 10 microns or less in diameter

PM2.5 = particulate matter 2.5 microns or less in diameter CO = carbon monoxide SO_x = sulfur oxides

PM emissions reflect SCAQMD Rule 403 reductions

Source: see Data Attachment

Comment 3; Page 4. Unsubstantiated Reductions to Architectural and Area Coating Emission Factors

Comment: The comment letter identifies several reductions to the default architectural and area coating emission factors that the commenter feels are unsubstantiated.

Response: The VOC emission rates assumed in the air quality/GHG study were extracted from the Antelope Valley Air Quality Management District (AVAQMD) Rule 1113 (screen capture of Table 1 below), which identifies the following VOC content limits for Primary Coatings, which are appropriate to use and serve as substantial evidence because AVAQMD is the applicable jurisdiction governing air quality in the project's region.

Flat Coatings: 50 grams/liter, effective 6/16/2014 (float coatings applies to interior residential)

Nonflat Coatings: 100 grams/liter, effective 6/18/2014 (Nonflat coatings applied to residential exterior)

Table 1
VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS

Limits are expressed in grams of VOC per liter[a] of Coating thinned to the manufacturer's maximum recommendation, excluding the volume of any water, Exempt Compounds, or Colorant added to tint bases. "Manufacturer's maximum recommendation" means the maximum recommendation for thinning that is indicated on the label or lid of the Coating container.

Coating Category	Effective 03/18/2003	Effective 06/18/2003	Effective, 01/01/2004	Effective 6/18/2014
Primary Coatings				
Flat Coatings	250	100		50
Nonflat Coatings	250	150		100
Nonflat-High Gloss Coatings	250			150

Related to architectural coatings, the remarks contained on the CalEEMod Architectural Coatings data page include a typographical error. The remarks are hereby corrected as follows:

> "VOC content for coating changed to reflect the use of very low VOC coatings for residential (~~10~~ 50 ~~-~~g/l) and non-residential uses at 100 g/l) and for parking lot set at 50 g/l"

No further revisions to the IS/MND are required.

Comment 4; Page 5. Unsubstantiated Changes to Fireplace and Woodstove Values

Comment: The comment letter states that by including unsubstantiated reductions to the number of fireplaces and woodstoves, the model may underestimate the Project's area-source operational emissions and should not be relied upon to determine Project significance.

Response: The project design plan does not call for installing any wood or gas fireplaces, or wood stoves in any of the residential units. Therefore, the CalEEMod defaults in the air quality/GHG study were changed to zero for these emission sources. No revisions to the IS/MND are required.

Comment 5; Page 5. Updated Analysis Indicates a Potentially Significant Air Quality Impact

Comment: The comment letter states that a CalEEMod model has been run using different data than the commentor believes more accurately reflects the project and using this data results in the exceedance of AVAQMD's regional air quality threshold. The commentor prepared a new analysis using different data in a CalEEMod model run and incorporated the results in the letter.

Response: The commentor incorrectly uses default data in the provided CalEEMod model run and adjusted the assumptions used in the air quality/GHG study. For example the commentor did not account for the correct CO_2 intensity factor (see response to comment #1 above), used an arbitrary construction schedule that it is inconsistent with the applicant's anticipated construction schedule (see response to comment #2 above), inaccurately incorporates VOC content (see response to comment #3 above), and wood stoves/fireplaces (see response to comment #4 above). The modeling results in the air quality/GHG study and discussed above in prior responses provide air quality impact results that accurately reflect the project's construction and operational emissions. The results contained in the air quality/GHG study conclude that the project's emissions would not exceed any AVAQMD emission significance thresholds.

Also, the study has a typographical error. On Page 55, the text states that construction is anticipated to commence in August 2021 and last for approximately 15 months; however, this statement is hereby corrected to indicate the construction schedule is estimated to last 18 months, which is consistent with the CalEEMod model outputs in the air quality/GHG study. No further revisions to the IS/MND are required.

Comment 6: Page 6. Diesel Particulate Matter Health Emissions Inadequately Evaluated

Comment: The comment letter states that the IS fails to adequately evaluate the project's construction-related and operational toxic air contaminant (TAC) emissions or make a reasonable effort to connect these emissions to potential health risks to nearby sensitive receptors. The comment letter goes on to state that the IS failed to follow the California Office of Environmental Health Hazards Assessment (OEHHA) guidance for performing health risk assessments (HRA).

Response: The OEHHA document recommendation is taken out of context and is misconstrued. First, the OEHHA document does not recommend as comment letter states that "all short-term projects lasting at least two months be evaluated…" [emphasis added]. The OEHHA document states, "Due to the uncertainty in assessing cancer risk from very short-term exposures, we do not recommend assessing cancer risk for projects lasting less than two months…" (p 8-18 of OEHHA Guidelines). This clearly is not a requirement to evaluate all projects lasting more than 2 months. While this quote is from Chapter 8, it is in Chapter 1, specifically Section 1.3 – Who Is Required to Conduct a Risk Assessment, where the need for a risk assessment is discussed. The very first sentence of the Section 1.3 states; "The Hot Spots Act requires that each local Air Pollution Control District or Air Quality Management District determine which facilities prepare an HRA." The AVAQMD CEQA Guidelines do not contain any requirement for residential construction projects or the normal operation of a residential to conduct an HRA. Finally, it should be noted that AVAQMD did not request preparation of an HRA.

Notwithstanding the above discussion, detailed responses were prepared to discuss the comments made by the comment letter review. These responses include:

- A critique of the screening model assessment by the commentor to quantify the project's construction and operational impacts on the surrounding environment.
- The preparation of a refined health risk assessment to quantify the project's construction and operational health impacts using a refined and more accurate air dispersion model and site-specific information.
- The preparation of a refined health risk assessment to quantify the potential health risk and non-cancer hazards from the exposures to the diesel particulate matter emissions from State Route 14 on the project's future residents.

Health Risk Assessment Modeling

The comment letter states on Page 9 the following regarding their performance of air dispersion modeling using a regulatory-approved screening model, AERSCREEN:

> The model replaced SCREEN3, and AERSCREEN is included in the OEHHA and the California Air Pollution Control Officers Associated (CAPCOA) guidance as the appropriate air dispersion model for Level 2 health risk screening analyses (HRSAs). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

Construction Health Risk Impacts

Notwithstanding the above discussion, a refined construction HRA was prepared for this project to confirm the conclusions reached in the IS/MND. The HRA in the comment letter applied the USEPA AERSCREEN air dispersion model to calculate DPM concentrations downwind of the project during construction. The AERSCREEN model is designed to provide conservative analyses (i.e. overestimation of impacts) using fictitious meteorological data and non-specific receptor locations to screen projects at a less specific level when site-specific meteorological and receptor data is not available. Because of the screening and generic nature of the AERSCREEN model, the HRA provided in the comment letter substantially overestimates the potential diesel particulate matter (DPM)–caused cancer risks from the project construction.

In lieu of the more generic AERSCREEN model, the following HRA applied the more specific USEPA AERMOD air dispersion model that estimates the impacts of single or multiple emission sources, using actual site-specific meteorological conditions and actual physical locations of sensitive receptors. Because of these factors, the AERMOD model will provide much more accurate impact results than those produced by a data-limited screening model such as the AERSCREEN Model used in the comment letter.

Table 6-1 provides the general AERMOD modeling assumptions used in the construction HRA, while Table 6-2 summarizes the construction emission source configuration. Table 6-3 summarizes the assumptions in estimating cancer risks applying the OEHHA guidance referred to in the comment letter in evaluating the construction of cancer risks. The AERMOD model estimates a DPM concentration during construction of 0.0319 ug/m^3 at the maximum impacted sensitive receptor located at an existing residence to the east of the project site across 20th Street. Table 6-4 summarizes the construction cancer risks calculated for the maximum impacted receptor types using the more refined AERMOD air dispersion model. Table 6-4 also displays the AVAQMD cancer risk significance threshold of 10 in one million.

As noted in Table 6-4, the cancer risk at the maximum impacted sensitive receptor is less than the AVAQMD cancer risk significance threshold of 10 in one million. The maximum cancer risk at the pre-birth to 2 years old receptor type is 5.1 in one million. This risk level compares to the maximum construction impact of 21.5 in one million identified in the comment letter. The significant difference in cancer risk ratios between the two analyses methods is attributable to the use of a more accurate and

precise AERMOD air dispersion model that takes into account site-specific meteorological conditions and accurate locations of actual receptors as compared with the screening model used in the comment letter. Based on the results of the AERMOD air dispersion model, the findings in the IS/MND do not require revisions.

Table 6-1: AERMOD Modeling Assumption

Feature	Assumption
Terrain processing	● Complex terrain; elevations were obtained for the project site using the EPA AERMAP terrain data pre-processor
Land Use	● Urban based on land use patterns surrounding the project site
Meteorological Data	● Fox Field, Lancaster for the years 2009 to 2013 from the CARB HARP2 data source as representative of meteorological conditions at the project site
Receptor locations and heights	● A network grid of 25x25 meter cells was used that included all nearby existing residences to the east and south of the project site ● Receptors placed a ground-level

Table 6-2: Summary of Construction Emission Source Configurations

Emission Source Type	Geometric Configuration	Relevant Assumptions
Offroad Construction Equipment	Polygon Area Source	• Stack release: height: 5 meters • Size of area source: 107,404.0 square meters (covers entire site) • Construction duration: 08/2/2021 to 11/25/2022 (480 days) • Annual average DPM emission rate: 216 pounds per 480 days (Comment Letter estimate) • Operations: 8 hours/day (7am to 3pm 5 days/week)

Table 6-3: Exposure Assumptions for Construction Cancer Risk – OEHHA Guidance

Receptor Type	Exposure Frequency, EF		Exposure Duration, ED (years)	Age Sensitivity Factors (ASF)	Time at Home Factor (TAH)	Daily Breathing Rate (DBR) (L/kg-day)
	Hours/day	Days/year				
Sensitive/Residential Receptor—Pre-birth to 2 years old						
3rd Trimester to Birth	24	350	0.25	10	0.85	361
0 to 2 years	24	350	1.07	10	0.85	1,090
Child						
2 to 16 years	24	350	1.32	3	0.72	572
Adult						
17 years and older	24	350	1.32	1	0.73	261
(L/kg-day) = liters per kilogram body weight per day The total duration of construction: 480 days Source: OEHHA March 2015						

Table 6-4: Summary of Project Construction Health Risk Assessment

Predicted Annual Average DPM Air Concentration at the Maximum Impacted Sensitive Receptor: 0.0319 µg/m³			
Location(1)	Cancer Risk (per million)		Exceeds Significance Threshold?
	Maximum Proposed Project Risk	Significance Threshold	
Maximum Impacted Sensitive Receptor (Prebirth to 2 years old)	5.1	10	No
Maximum Impacted Child Receptor	0.8	10	No
Maximum Impacted Adult Receptor	0.4	10	No

Operational Health Risk Assessment

The comment letter's analysis of the project's operational health impacts is significantly flawed, resulting in an overestimate of DPM emissions and, consequently, operational health impacts. The flaws in the comment letter analysis are as follows:

- The comment letter used both onsite and offsite mobile emissions (regional emissions) to represent onsite emissions (localized emissions). This assumption is the equivalent of having all 6,487 vehicle trips related to project operations that would normally be assumed to travel regionally up to 10.8 miles[1] instead site travel exclusively on the project site. Because of the residential nature of this project, a substantial percentage (approximately 83 percent – see explanation below) of the daily mobile source emissions occurs offsite as the project vehicles travel to and from the project site each day. The comment letter's assumption that all travel

[1] 10.8 miles is based on CalEEMod defaults for various residential and commercial trip types

will occur onsite results in a substantial overestimation of operational DPM emissions and attendant operational cancer risks.

- A review of the CalEEMod operational PM_{10} exhaust emissions identifies three operational sources of the PM_{10} exhaust - area sources, energy sources, and mobile sources. The PM_{10} exhaust emissions from the project's area sources and energy sources result from the combustion of natural gas for heating and gasoline from landscape equipment, respectively, both non-diesel PM_{10} exhaust emission sources. However, the comment letter's analysis included the non-diesel emissions as diesel emissions even though not all equipment will be diesel fueled. This assumption results in a substantial overestimation of operational DPM emissions and attendant operational cancer risks.

- The calculated CalEEMod mobile source PM_{10} exhaust emissions are a combination of PM_{10} exhaust from gasoline vehicles and diesel vehicles as CalEEMod does not provide an emission separation by fuel type. The comment letter's assumption is that all PM_{10} exhaust emissions are DPM emissions from diesel vehicles even though not all vehicles are diesel fueled. This assumption in the comment letter results in a substantial overestimation of operational DPM emissions and attendant operational cancer risk.

A new, more accurate, and refined operational health risk assessment was prepared that addressed the above flaws. As a conservative assumption, it was first assumed that the mobile source PM_{10} exhaust estimated in CalEEMod is entirely comprised of DPM as diesel PM_{10} exhaust. For this project, the CalEEMod annual mobile source DPM as PM_{10} exhaust emission is 0.0466 tons per year or 93.2 pounds per day. This emission total reflects the emissions from both onsite and offsite vehicle travel. The CalEEMod model, unfortunately, does not provide a breakdown of onsite versus offsite mobile source emissions. However, one way to estimate the onsite emissions is to assume an average trip length for vehicle travel within the project site. Based on a review of the project site plan, a representative onsite trip length is 0.2 miles. In other words, each project vehicle is assumed to travel 0.2 miles while traveling onsite. Assuming this onsite trip distance results in a CalEEMod-estimated onsite DPM motor vehicle exhaust emissions of 0.00802 tons/year or approximately 17 percent of the combined total onsite and offsite PM_{10} motor vehicle emissions calculated by CalEEMod, e.g., offsite mobile source emissions comprise 83 percent of the total mobile source emissions.

The operational health risk assessment assumed the same AERMOD air dispersion model, area source emission configuration, meteorological data, and receptor locations used in estimating construction impacts. The maximum operational annual DPM concentration was 0.0099 $\mu g/m^3$ at an existing residential receptor located across 20th Street W, east of the project. This DPM concentration compares to the flawed estimate of 0.1326 ug/m^3 in the comment letter. Again, this difference results from the flawed assumptions identified above in applying a simplified overly conservative screening air dispersion model to examine air quality impacts.

Table 6.5 summarizes the combined lifetime construction and operation health risk. As shown therein, the maximum lifetime cancer risk is 8.7 in one million, a risk level less than the AVAQMD threshold level of 10 in one million. This refined risk estimate compares to the highly inaccurate estimated lifetime cancer risk of 95 in one million identified in the comment letter.

Table 6.5: Estimated Project Lifetime Construction and Operational Health Risks

		DPM (ug/m3)	CPF g/kg-day)$^{-1}$	DBR (l/kg-day)	ED (years)	EF (days)	AT (years)	TAH	ASF	Cancer Risk (/million)	
Construction	3rd to 0	0.0319	1.1	361	0.25	350	25550	0.85	10	0.37	**3rd Trimester= 0.37/million**
Construction	1	0.0319	1.1	1090	1.09	350	25550	0.85	10	4.85	**Infant Exposure**
Operation	2	0.0099	1.1	1090	0.66	350	25550	0.85	10	0.91	**5.77 /million**
Operation	3	0.0099	1.1	572	1	350	25550	0.72	3	0.18	
Operation	4	0.0099	1.1	572	1	350	25550	0.72	3	0.18	
Operation	5	0.0099	1.1	572	1	350	25550	0.72	3	0.18	
Operation	6	0.0099	1.1	572	1	350	25550	0.72	3	0.18	
Operation	7	0.0099	1.1	572	1	350	25550	0.72	3	0.18	
Operation	8	0.0099	1.1	572	1	350	25550	0.72	3	0.18	
Operation	9	0.0099	1.1	572	1	350	25550	0.72	3	0.18	**Child**
Operation	10	0.0099	1.1	572	1	350	25550	0.72	1	0.06	**Exposure**
Operation	11	0.0099	1.1	572	1	350	25550	0.72	1	0.06	**1.72 /million**
Operation	12	0.0099	1.1	572	1	350	25550	0.72	1	0.06	
Operation	13	0.0099	1.1	572	1	350	25550	0.72	1	0.06	
Operation	14	0.0099	1.1	572	1	350	25550	0.72	1	0.06	
Operation	15	0.0099	1.1	572	1	350	25550	0.72	1	0.06	
Operation	16	0.0099	1.1	572	1	350	25550	0.72	1	0.06	
Operation	17	0.0099	1.1	572	1	350	25550	0.73	1	0.06	
Operation	18	0.0099	1.1	572	1	350	25550	0.73	1	0.06	
Operation	19	0.0099	1.1	572	1	350	25550	0.73	1	0.06	
Operation	20	0.0099	1.1	572	1	350	25550	0.73	1	0.06	
Operation	21	0.0099	1.1	572	1	350	25550	0.73	1	0.06	
Operation	22	0.0099	1.1	572	1	350	25550	0.73	1	0.06	
Operation	23	0.0099	1.1	572	1	350	25550	0.73	1	0.06	**Adult**
Operation	24	0.0099	1.1	572	1	350	25550	0.73	1	0.06	**Exposure**
Operation	25	0.0099	1.1	572	1	350	25550	0.73	1	0.06	**0.9 /million**
Operation	26	0.0099	1.1	572	1	350	25550	0.73	1	0.06	
Operation	27	0.0099	1.1	572	1	350	25550	0.73	1	0.06	
Operation	28	0.0099	1.1	572	1	350	25550	0.73	1	0.06	
Operation	29	0.0099	1.1	572	1	350	25550	0.73	1	0.06	
Operation	30	0.0099	1.1	572	1	350	25550	0.73	1	0.06	
									Total	**8.7**	**/million**

Note that this new operational health impact assessment provides a conservative estimate (in terms of over-estimating) of the impacts from DPM emissions. This refined cancer risk result assumes that the heavy-duty truck DPM emissions remain constant at their 2023 emission levels into the future. However, at least for the next few years, it is expected that the truck DPM emission factors will decline from their 2023 levels as new and cleaner vehicles replace older and more polluting trucks in response to ever-tightening emission standards for heavy-duty trucks. This fact, in turn, will result in a lower estimate of the operational DPM emissions and cancer risks.

Comment 7; Page 8. The IS fails to address the non-cancer health risks posed to future, onsite receptors as a result of proximity to State Route 14 ("SR 14").

Response: As identified in this comment, TACs can also cause chronic (long-term) effects related to non-cancer illnesses such as reproductive effects, birth defects, or adverse environmental effects. Non-cancer health risks are conveyed in terms of the hazard index (HI), a ratio of the predicted concentration of the facility's TAC emissions to a concentration considered acceptable to public health professionals. A significant risk is defined as an HI of 1 or greater. An HI of less than 1 indicates that no significant health risks are expected from the facility's TAC emissions. The following equation gives the relationship for the non-cancer hazards of TACs:

$$HI = C_{ann}/REL \qquad \text{(EQ-1)}$$

Where:

HI = Hazard Index: an expression of the potential for chronic non-cancer health risks
C_{ann} = Annual average TAC concentration: for purposes of this assessment, DPM ($\mu g/m^3$)
REL = Reference Exposure Level, the DPM concentration at which no adverse health effects are anticipated; for DPM REL = 5 $\mu g/m^3$)

Note that the HRA for SR14 was expanded to include and estimate both the non-cancer hazard index and the estimation of the lifetime cancer risk to the project's residents from the SR14 DPM emissions.

To estimate the cancer risks and non-cancer hazards to the project's residents from exposures to DPM from the SR14 traffic requires information on traffic volumes, speeds, and emission rates. Traffic information was derived from the California Department of Transportation (CalTrans) annual vehicle miles traveled summaries for 2019, the latest year available from CalTrans (and before the Covid 19 anomalous traffic patterns in 2020). In the following health risk assessment, the focus was placed on estimating the DPM emissions (as PM_{10} exhaust) from heavy-duty trucks which are responsible for over 95 percent of the total mobile source DPM emissions (diesel cars and trucks). The emission factors for DPM were obtained from the ARB EMFAC2017 mobile source emission model for the portion of Los Angeles County within the Mojave Desert for the year 2023.

The estimation of the DPM emissions from SR 14 was derived using the following equation:

$$\text{DPM Emissions} = \sum_{1}^{n} (AADT_i) \times (\text{Trip Length}) \times (EF_i) \times CF \qquad \text{(EQ-2)}$$

Where:

DPM Emissions in grams/sec along the trip length for all vehicles
$AADT_i$: annual average daily travel for vehicle class i (trips/day)
Trip Length: length of the vehicle trips in the AERMOD model = 0.5 miles for all vehicles
EF_i: DPM (as PM_{10} exhaust) emission factor for vehicle class i in grams/mile
CF: conversion factor from grams/day to grams/sec (1.157E-05)
i: diesel vehicle class assumed to be light heavy-duty trucks, medium-heavy duty trucks, and heavy-heavy duty trucks
N = number of vehicle classes (4 – light-heavy duty vehicle class is comprised of two sub-classes,LHDT1 and LHDT2 in addition to MHDT and HHDT)

Table 7-1 summarizes the relevant traffic and emission factor data used in the analysis to quantify the relative health impacts of DPM emissions from SR14 on the project's residences. The SR14 DPM emission data were input into the AERMOD air dispersion model with the meteorological and receptor assumptions described earlier for the project construction and operational emission impacts. The SR14 emissions was represented as a line volume source within the AERMOD model an emission release height of 3.11 meters within the AERMOD model.

Table 7-2 summarizes the health impacts of the DPM emissions on the future project residences from DPM emissions from SR14, which is further detailed in Table 7-3. This refined cancer risk result assumes that the heavy-duty truck DPM emissions remain constant at their 2023 emission levels into the future.

However, at least for the next few years, it is expected that the truck DPM emission factors will decline from their 2023 levels as new and cleaner vehicles replace older and more polluting trucks in response to ever-tightening emission standards for heavy-duty trucks. This fact, in turn, will result in a lower estimate of the operational DPM emissions and cancer risks.

As noted from Table 7-2, the DPM emissions from diesel traffic moving along SR14 to the west of the project would not result in either cancer risks or non-cancer hazards that exceed the health significance thresholds recommended by the AVAQMD.

Table 7-1: Traffic and Emission Data for SR14

Metric	Assumption
Annual Average Daily Traffic(1)	51,000
Vehicle Fleet Mix(1)	% trucks: 4.9% % trucks as 2-axle: 40.9% % trucks as 3-axle: 8.5% % trucks as 4+ axle: 50.6%
Diesel Fleet Mix(2)	% 2-axle (LHDT1) as DSL: 53.2% % 2-axle (LHDT2) as DSL: 74.7% % 3-axle (MHDT) as DSL: 86.1% $ 4+axle (HHDT) as DSL: 100%
Annual Average Daily Diesel Truck Trips	LHDT1: 426 LHDT2: 169 MHDT: 185 HHDT: 1,272 Total: 2,051 AADT x %Trucks x % Truck Class x %DSL
Average Vehicle Speed	60 mph for all vehicles
Vehicle Trip Length(3)	0.5 miles of SR14 along the western border of the project
Vehicle DPM Emission Factors(4)	LHDT1: 0.0199 grams/mile LHDT2: 0.0184 grams/mile MHDT: 0.0166 grams/mile HHDT: 0.0287 grams/mile
Average DPM Emissions	LHDT1: 4.83E-05 grams/sec LHDT2: 1.76E-05 grams/sec MHDT: 1.22E-05 grams/sec HHDT: 2.07E-04 grams/sec Total: 2.85E-04 grams/sec Eq. 1

Metric	Assumption
Notes: (1) Traffic volumes extracted from the CalTrans Traffic Census Program Location: SR14 @Lancaster, West Avenue I for 2019 Webpage: https://dot.ca.gov/programs/traffic-operations/census (2) % Diesel vehicles extracted from ARB EMFAC2017 for LA County (Mojave Desert) for 2023 (3) Trip length from West Lancaster Boulevard to West Avenue I (4) DPM as PM_{10} exhaust extracted from EMFAC2017 for LA County (Mojave Desert) for 2023 at 60 miles per hour	

Table 7-2: Health Impacts from SR14 on the Proposed Project

Location(1)	Cancer Risk (per million)		Exceeds Significance Threshold?
	Maximum Lifetime Proposed Project Risk	Significance Threshold	
Maximum Impacted Sensitive Receptor	3.6	10	No
Location(1)	**Chronic Non-Cancer Hazard Index**		**Exceeds Significance Threshold?**
	Estimated Hazard Index	**Significance Threshold**	
Maximum Impacted Sensitive Receptor	0.001	1.0	No

Note:
(1) The maximum impacted sensitive receptor is located at a proposed residence located along the western end of the project site.

Table 7-3: Calculations of Cancer Risk and Non-Cancer Hazards from Exposure to DPM from the SR14 Freeway

Annual Average SR14 DPM Emissions:			**0.000286**	**grams/sec**							
Maximum Period Average SR14 DPM Concentration at Project Receptor:						**0.0071**	**ug/m3**		**Chronic Non-Cancer Hazard Index:**		**0.00142**
									Chronic Non-Cancer Hazard Index Threshold:		**1.0**
Location of Closest Project Sensitive Receptor: along the western border of the Project											
		DPM (ug/m3)	**CPF g/kg-day)⁻¹**	**DBR (l/kg-day)**	**ED (years)**	**EF (days)**	**AT (years)**	**TAH**	**ASF**	**Cancer Risk (/million)**	
Construction	3rd to 0	0.0071	1.1	361	0.25	350	25550	0.85	10	0.08	**3rd Trimester= 0.08/million**
Construction	1	0.0071	1.1	1090	1	350	25550	0.85	10	0.99	**Infant Exposure**
Operation	2	0.0071	1.1	1090	1	350	25550	0.85	10	0.99	**1.98 /million**
Operation	3	0.0071	1.1	572	1	350	25550	0.72	3	0.13	
Operation	4	0.0071	1.1	572	1	350	25550	0.72	3	0.13	
Operation	5	0.0071	1.1	572	1	350	25550	0.72	3	0.13	
Operation	6	0.0071	1.1	572	1	350	25550	0.72	3	0.13	
Operation	7	0.0071	1.1	572	1	350	25550	0.72	3	0.13	
Operation	8	0.0071	1.1	572	1	350	25550	0.72	3	0.13	
Operation	9	0.0071	1.1	572	1	350	25550	0.72	3	0.13	**Child**
Operation	10	0.0071	1.1	572	1	350	25550	0.72	1	0.04	**Exposure**
Operation	11	0.0071	1.1	572	1	350	25550	0.72	1	0.04	**1.23 /million**
Operation	12	0.0071	1.1	572	1	350	25550	0.72	1	0.04	
Operation	13	0.0071	1.1	572	1	350	25550	0.72	1	0.04	
Operation	14	0.0071	1.1	572	1	350	25550	0.72	1	0.04	
Operation	15	0.0071	1.1	572	1	350	25550	0.72	1	0.04	
Operation	16	0.0071	1.1	572	1	350	25550	0.72	1	0.04	
Operation	17	0.0071	1.1	261	1	350	25550	0.73	1	0.02	
Operation	18	0.0071	1.1	261	1	350	25550	0.73	1	0.02	
Operation	19	0.0071	1.1	261	1	350	25550	0.73	1	0.02	
Operation	20	0.0071	1.1	261	1	350	25550	0.73	1	0.02	
Operation	21	0.0071	1.1	261	1	350	25550	0.73	1	0.02	
Operation	22	0.0071	1.1	261	1	350	25550	0.73	1	0.02	
Operation	23	0.0071	1.1	261	1	350	25550	0.73	1	0.02	**Adult**
Operation	24	0.0071	1.1	261	1	350	25550	0.73	1	0.02	**Exposure**
Operation	25	0.0071	1.1	261	1	350	25550	0.73	1	0.02	**0.3 /million**
Operation	26	0.0071	1.1	261	1	350	25550	0.73	1	0.02	
Operation	27	0.0071	1.1	261	1	350	25550	0.73	1	0.02	
Operation	28	0.0071	1.1	261	1	350	25550	0.73	1	0.02	
Operation	29	0.0071	1.1	261	1	350	25550	0.73	1	0.02	
Operation	30	0.0071	1.1	261	1	350	25550	0.73	1	0.02	
									Total	**3.6**	**/million**
									Cancer Risk Threshold	**10**	**/million**

Comment 8; Page 12. Failure to Adequately Address Greenhouse Gas Emissions

Comment: The comment states that the IS/MND provides unsubstantiated greenhouse gas analysis as several model input values are inconsistent with the information disclosed in the IS.

Response: This comment does not identify the specific values that are supposedly inconsistent with the information presented in the IS/MND. The only value identified in a previous comment involves the CO_2 emission intensity factor used by SCE. See the response to Comment #1 above regarding this comment.

Comment 9; Page 14: Feasible Mitigation Measures Available to Reduce Emissions

Comment: The comment letter states that there are feasible mitigation measures to reduce potential air quality impacts.

Response: The findings of the air quality/GHG study determined that there are no potential significant impacts requiring the application of mitigation measures. As stated above, none of the air quality/GHG study findings require changes; therefore, none of the suggested mitigation measures are required.