TRAVELERS STATION

Greenhouse Gas Analysis

EMC Planning Group, Inc.

January 2022

E M C

Planning for Success.

January 7, 2022

Geary Coats
Coats Consulting
P.O. Box 1356
Carmel, CA 93921

Re: Greenhouse Gas Analysis for the Traveler's Station CEQA Document

Dear Geary:

This letter report includes analysis of the projected greenhouse gas (GHG) impacts of the proposed Traveler's Station project. The analysis methodology has been informed by discussions with you and by communications with Stan Ketchum regarding San Benito County's preferred analysis approach given the ever-changing GHG impact analysis landscape. The information is designed to supplement the CEQA documentation being prepared for the project. More precisely, the analysis addresses item VIII, Greenhouse Gas Emissions, in Appendix G, Environmental Checklist, of the 2022 CEQA Guidelines.

Potential to Generate GHGs that May Have a Significant Impact on the Environment

San Benito County ("county") has not adopted a plan for reducing GHGs, nor has the county adopted a threshold of significance for GHGs. The Monterey Bay Air Resources District ("air district") has not developed or adopted a threshold of significance for GHGs from land use development projects that can be used as guidance by local lead agencies, such as the county. In the absence of local or regional GHG threshold guidance, the methodology described below is used.

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Analysis Methodology

The significance of GHG emissions from the proposed project is evaluated by examining mobile source emissions separately from the balance of GHG emissions sources. This methodology looks first at mobile source emissions in the context of vehicle miles travelled (VMT) generated by the project and a quantified threshold of significance for this emissions source as recommended by the California Office of Planning and Research. GHG emissions from other project sources (e.g., electricity, area sources, water, wastewater) are quantified and qualitatively compared to values derived by modifying past quantified thresholds of significance from two adjacent air districts.

This "bifurcated" analysis approach is supported by several published sources. These include: 1) California Office of Planning and Research's Discussion Draft CEQA and Climate Change Advisory (December 2018), which discusses CEQA streamlining for GHG impacts by examining VMT effects (mobile source emissions) separately from energy and natural gas sources; 2) California Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018), which provides guidance on evaluating VMT impacts that affect the state's ability to meet it long-term climate goals; and 3) Association of Environmental Professionals' Final Whitepaper - Beyond 2020 and Newhall: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California (October 2016), which identifies two hybrid analysis concepts using Senate Bill 375 and Senate Bill 743 that each evaluate transportation (mobile source) GHG emissions separately from non-mobile sources. Senate Bill 375 was enacted in 2008. Its overall purpose is to reduce GHGs from passenger vehicles by setting regional emissions targets with which local communities can align their land use and transportation policies to help achieve. Senate Bill 743, enacted in 2013, is designed to help achieve state climate policy and sustainability goals. It eliminates traffic delay as an environmental impact under CEQA and instead, requires an assessment of VMT as a basis to encourage development that reduces VMT and associated mobile source GHG emissions.

VMT and Mobile Source GHG Emissions

Based on the California Office of Planning and Research's VMT technical advisory, retail uses with building sizes of 50,000 square feet or less can be presumed to have a less-than-significant VMT impact. Projects above this size are generally considered to be

regional serving – retail/commercial project types that drawn new vehicle trips specifically to the project site from non-local origins. Given that the project size is far below this threshold and its fundamental function is to capture pass-by trips and divert local trips from more distant similar uses, the VMT impact is presumed to be less than significant. Consequently, the mobile source GHG emissions the project generates can also be assumed to have a less-than-significant impact.

Non-Mobile Source GHG Emissions

GHG emissions from constructing and operating the proposed project were estimated using CalEEMod. The modeling assumptions made and modeling results are included in Appendix A.

Construction activity would generate a total of approximately 270 metric tons of carbon dioxide equivalent (MT CO_2e) as shown in Section 2.1 of the CalEEMod results. To account for the contribution of construction emissions to the project's non-mobile source annual emissions profile, construction emissions are amortized over an assumed 30-year operational timeframe; amortized annual emissions equal about 9 MT CO_2e.

Project operations would generate GHG emissions from other sources listed in Table 1, Non-Mobile Unmitigated Operational GHG Emissions. Refer to Section 2.2 of the CalEEMod results for reference to these emissions volumes. The results in Section 2.2 include emissions from area sources. However, the applicant is committing to eliminating use of natural gas as part of the project. Therefore, area source GHG emissions (e.g., emissions from gas-fired water heaters, space heaters, etc.) are assumed to be negligible and are not listed in Table 1. To ensure this GHG reduction is realized, the county should prohibit natural gas use as a condition of project approval.

Table 1 Non-Mobile Unmitigated Annual Operational GHG Emissions

Emissions Sources	GHG Emissions (MT CO_2e)
Energy	4.4
Waste	6.0
Water	0.6
Amortized Construction	9.0
Total	**20.0**

SOURCE: EMC Planning Group 2022

As previously noted, the air district has not developed a threshold of significance for GHG impacts for use by local lead agencies. Therefore, thresholds of significance that were developed by two adjacent air districts – the Bay Area Air Quality Management District and the San Luis Obispo Air Pollution Control District, are used as reference for qualitatively assessing the relative magnitude of non-mobile source emissions from the proposed project. Both of these districts are in the process of updating their respective GHG impact determination guidance.

The Bay Area Air Quality Management District provided GHG impact assessment guidance in its 2017 California Environmental Quality Act Air Quality Guidelines. As part of that guidance, it derived a bright line threshold of 1,100 MT CO_2e/year. The San Luis Obispo Air Pollution Control District did the same in its 2012 CEQA Air Quality Handbook, and derived a bright line threshold of 1,150 MT CO_2e/year. The substantial evidence used by each agency to develop their respective thresholds is included their CEQA guidance documentation.

The bright line thresholds were developed to guide new development within each district with the goal of meeting the state's Assembly Bill 32 statewide GHG emissions reduction target of 20 percent below 1990 levels by 2020. Assembly Bill 32 was passed in 2006. With the subsequent passage of Senate Bill 32 in 2016, the state set a deeper GHG reduction target of 40 percent below 1990 levels by 2030. Consequently, the bright line thresholds identified above are no longer valid after 2020. Reducing these bright line thresholds by an additional 20 percent, to 880 MT CO_2e/year and 920 MT CO_2e/year, respectively, would approximate bright line values of 40 percent below 1990 levels to meet the 2030 emissions reduction target. Neither agency has adopted these scaled down values as thresholds of significance, nor has the air district or county adopted either value as such. Rather, as noted above, these values are being used to qualitatively assess the relative magnitude of non-mobile source emissions from the proposed project. The non-mobile source project emissions of 20 MT CO_2e/year are a fraction of both values. Consequently, project GHG emissions should be considered to have a less-than-significant impact on the environment.

Conflict with an Applicable GHG Reduction Plan, Policy or Regulation

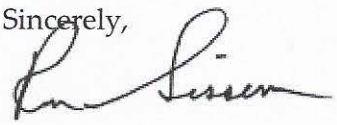
As described above, neither the county, nor air district have adopted plans for reducing GHG emissions. Consequently, the significance of mobile source GHG impacts is evaluated in the context of state legislation embodied in SB 743, and the non-mobile source GHGs are evaluated in the context of scaled quantified thresholds of significance guidance from adjacent air districts used in the past as part of their respective plans for reducing GHG emissions. Because the project impacts from generating GHG emissions have been determined to be less than significant based, the project would have no impact from conflict with regulations or plans for reducing GHG emissions.

Conclusion

As concluded above, the proposed project would have a less-than-significant impact from generating GHG emissions and no impact from conflict with an applicable GHG reduction plan.

If you have any questions about the analysis or findings, please do not hesitate to contact me.

Sincerely,



Ron Sissem
Senior Principal

CalEEMod Results

APPENDIX A

Travelers Station Project San Benito County - San Benito County, Unmitigated Annual GHG Emissions

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Travelers Station Project San Benito County

San Benito County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Convenience Market with Gas Pumps	4.00	1000sqft	2.60	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.5	**Precipitation Freq (Days)**	50
Climate Zone	4			**Operational Year**	2024
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assumed 1 yr construction, for modeling purposes assumed fully operational in 2024 (see CalEEMod User Guide)

Land Use - Description, acreage and building size from plans (Kelley Engineering and Surveying, Sheet C-3) and application materials: 4,000sf convenience market including 190sf food prep area.

Table Name	Column Name	Default Value	New Value
tblLandUse	LotAcreage	0.09	2.60

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Travelers Station Project San Benito County - San Benito County, Unmitigated Annual GHG Emissions

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022											0.0000	268.8532	268.8532	0.0543	4.0000e-004	270.3291
2023											0.0000	2.9215	2.9215	5.7000e-004	0.0000	2.9366
Maximum											**0.0000**	**268.8532**	**268.8532**	**0.0543**	**4.0000e-004**	**270.3291**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	1.0000e-004	1.0000e-004	0.0000	0.0000	1.1000e-004
Energy											0.0000	4.3448	4.3448	6.3000e-004	8.0000e-005	4.3858
Waste											2.44	0.0000	2.4400	0.1442	0.0000	6.0449
Water											0.0940	0.2071	0.3011	9.6900e-003	2.3000e-004	0.6125
Total	0.0184										0.0940	**4.552**	**7.086**	**0.1545**	**0.0003**	**11.0433**

5.0 Energy Detail

Historical Energy Use: N

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Unmitigated											0.0000	3.8453	3.8453	6.2000e-004	8.0000e-005	3.8833

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NaturalGas Unmitigated											0.0000	0.4995	0.4995	1.0000e-005	1.0000e-005	0.5025

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market with Gas Pumps	9360											0.0000	0.4995	0.4995	1.0000e-005	1.0000e-005	0.5025
Total												**0.0000**	**0.4995**	**0.4995**	**1.0000e-005**	**1.0000e-005**	**0.5025**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas Pumps	41560	3.8453	6.2000e-004	8.0000e-005	3.8833
Total		**3.8453**	**6.2000e-004**	**8.0000e-005**	**3.8833**

6.0 Area Detail

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Unmitigated	0.0184	0.0000	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-004	1.0000e-004	0.0000	0.0000	1.1000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	1.0000e-004	1.0000e-004	0.0000	0.0000	1.1000e-004
Total											**0.0000**	**1.0000e-004**	**1.0000e-004**	**0.0000**	**0.0000**	**1.1000e-004**

7.0 Water Detail

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	0.3011	9.6900e-003	2.3000e-004	0.6125

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas Pumps	0.29629 / 0.181597	0.3011	9.6900e-003	2.3000e-004	0.6125
Total		**0.3011**	**9.6900e-003**	**2.3000e-004**	**0.6125**

8.0 Waste Detail

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	2.4400	0.1442	0.0000	6.0449

Travelers Station Project San Benito County - San Benito County, Unmitigated Annual GHG Emissions

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market with Gas Pumps	12.02	2.4400	0.1442	0.0000	6.0449
Total		**2.4400**	**0.1442**	**0.0000**	**6.0449**