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Tanya S. Cottle
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VIA email: TCottle@davidjpowers.com

SUBJECT: Condit-UCP Single Family Development Project in Morgan Hill, CA – Air Quality and GHG Emissions Analyses

Dear Tanya:

The purpose of this letter is to address air quality and greenhouse gas emissions associated with the proposed Condit-UCP Single Family Development Project in Morgan Hill, California. We understand that the project proposes a General Plan Amendment and rezoning changes. The site is bordered by San Pedro Avenue to the south, Condit Road to the west, Murphy Road to the east and vacant land to the north. The 18.18-acre site is located east of U.S. Highway 101. The site's existing General Plan land use designation is Commercial. The proposed General Plan Amendment would allow development of 5 to 10 single-family dwelling unites per acre or 68 to 136 units. For the purposes of this analysis, a mid-range of 102 units were assumed, based on 7.5 units per acre. If the General Plan Amendment and rezoning are approved, and a specific development application is filed for a project with more than 102 units, then the City would require subsequent California Environmental Quality Act (CEQA) analysis. This report addresses air quality and climate change environmental checklist questions for compliance with CEQA, assuming the ultimate development of 102 single-family homes. This analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).

Setting

The project is located in the southern portion of Santa Clara County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$).

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NOx). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempt to reduce ozone levels. The highest ozone levels in the Bay Area occur in the eastern and

southern inland valleys that are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants listed above. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and Federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the CARB, diesel exhaust is a complex mixture of gases, vapors and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the state's Proposition 65 or under the Federal Hazardous Air Pollutants programs.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In 2008 CARB approved a new regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled vehicles[1]. The regulation requires affected vehicles to meet specific performance requirements between 2011 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. These requirements are phased in over the compliance period and depend on the model year of the vehicle.

The Bay Area Air Quality Management District (BAAQMD) is the regional agency tasked with managing air quality in the region. The California Air Resources Board (a part of the California Environmental Protection Agency) oversees regional air district activities and regulates air quality at the State level. The BAAQMD has recently published CEQA Air Quality Guidelines that are used in this assessment to evaluate air quality impacts of projects[2].

[1] http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm
[2] Bay Area Air Quality Management District. 2010. BAAQMD CEQA Air Quality Guidelines. June.

Project Impacts

Impact 1: Conflict with or obstruct implementation of the applicable air quality plan? *No Impact*

The most recent clean air plan is the *Bay Area 2010 Clean Air Plan* that was adopted by BAAQMD in September 2010. The proposed project would not conflict with the latest Clean Air planning efforts since (1) the project would have emissions well below the BAAQMD thresholds (see Impact 2), (2) development of the project site would likely result in lower emissions than if developed with commercial uses, and (3) he project is too small to incorporate project-specific transportation control measures listed in the latest Clean Air Plan (i.e., *Bay Area 2010 Clean Air Plan*)

Impact 2: 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)? *Less than significant*

The Bay Area is considered a non-attainment area for ground-level ozone and fine particulate matter ($PM_{2.5}$) under both the federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for respirable particulates or particulate matter with a diameter of less than 10 micrometers (PM_{10}) under the California Clean Air Act, but not the federal act. The area has attained both State and federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for ozone and PM_{10}, the BAAQMD has established thresholds of significance for air pollutants. These thresholds are for ozone precursor pollutants (ROG and NOx), PM_{10} and $PM_{2.5}$ and apply to both construction period and operational period impacts.

Due to the project size, construction period emissions would be less than significant. In their latest update to the *CEQA Air Quality Guidelines*, BAAQMD identified the size of land use projects that could result in significant air pollutant emissions. For construction impacts, the single-family project size was identified at 114 dwelling units. For operational impacts, the project size was identified at 325 dwelling units. Since the project proposes 102 single-family units, it is concluded that emissions would be below the BAAQMD significance thresholds for both construction exhaust and operational emissions.

Impact 3: Violate any air quality standard or contribute substantially to an existing or projected air quality violation? *Less than significant*

As discussed under Impact 2, the project would have emissions less than significance thresholds adopted by BAAQMD for evaluating impacts to ozone and particulate matter. Therefore, the project would not contribute substantially to existing or projected violations of those standards. Carbon monoxide emissions from traffic generated by the project would be the pollutant of greatest concern at the local level. Congested intersections with a large volume of traffic have the greatest potential to cause high-localized concentrations of carbon monoxide. Air pollutant monitoring data indicate that carbon monoxide levels have been at healthy levels (i.e., below State and federal standards) in the Bay Area since the early 1990s. As a result, the region has been designated as attainment for the standard. There is an ambient air quality monitoring station in San Jose that measures carbon monoxide concentrations. The highest measured level over any 8-hour averaging period during the last 3 years is less than 2 parts per million (ppm), compared to the ambient air quality standard of 9.0 ppm. The project would generate a

small amount of traffic (about 100 trips per busiest hour), so the contribution of project-generated traffic to these levels would be minimal and the project would not cause or contribute to a violation of an ambient air quality standard.

Impact 4: Expose sensitive receptors to substantial pollutant concentrations? *Less-than-significant with mitigation measures*

The operation of the project is not expected to cause any localized emissions that could expose sensitive receptors to unhealthy air pollutant levels. Construction activity would generate dust and equipment exhaust on a temporary basis. Nearby sources of air pollutant emissions are not anticipated to adversely affect new residents, which are considered sensitive receptors.

Construction Activity

Construction activity is anticipated to include some grading, building construction, paving and application of architectural coatings. During demolition and construction activities, dust would be generated. Most of the dust would result during grading activities. The amount of dust generated would be highly variable and is dependent on the size of the area disturbed at any given time, amount of activity, soil conditions and meteorological conditions. Typical winds during late spring through summer are from the north. Nearby sensitive land uses include rural residences located to the east and outdoor sports fields located to the south. These receptors could be adversely affected by dust generated during construction activities. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices are employed to reduce these emissions.

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known Toxic Air Contaminant. As indicated under Impacts 2 and 3, these emissions would not be considered to contribute substantially to existing or projected air quality violations. Diesel exhaust from construction equipment operating at the site poses both a health and nuisance impact to nearby sensitive receptors. The sensitive receptors that could be most adversely affected are residential dwelling units located about 100 to 200 feet east of the project site along Murphy Avenue. Construction activities are expected to occur during a relatively short time (about one to two years), and therefore, the impacts are considered to be less than significant if reasonable available control measures are applied. Although construction activities would be temporary, they would have the potential to cause both nuisance and health air quality impacts. PM10 is the pollutant of greatest concern associated with dust. If uncontrolled, PM10 levels downwind of actively disturbed areas could possibly exceed State ambient air quality standards. In addition, dust fall on adjacent properties could be a nuisance. If uncontrolled, dust generated by ground clearing, grading and construction activities represents a potentially significant impact.

Mitigation Measure: Include measures to control dust and exhaust emissions during construction.

Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less than significant. The contractor shall implement the following Best Management Practices that are required of all projects:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

8. Avoid staging construction equipment within 200 feet of existing residences or sensitive receptors.

9. Large construction equipment (i.e., over 50 horsepower) working for more than 3 days on the site shall be equipped with diesel particulate matter filters that reduce diesel particulate matter by at least 85 percent.

10. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Existing Sources of Air Pollution Affecting the Site

The proposed project would include new residences, which are considered sensitive receptors. Substantial sources of air pollution can adversely affect sensitive receptors proposed as part of new projects. A review of the area indicates that there are no stationary sources of air pollution that are permitted by BAAQMD near the project site that would adversely affect new sensitive receptors. However, U.S. 101 is located about 580 feet west of the western site boundary. Since the freeway is located within 1,000 feet of the site, a health risk assessment was prepared. This report is included as Attachment 1.

The BAAQMD adopted "Thresholds of Significance" for local community risk and hazard impacts that apply to both the siting of a new source and to the siting of a new receptor. Local community risk and hazard impacts are associated with TACs and $PM_{2.5}$ because emissions of these pollutants can have significant health impacts at the local level. BAAQMD guidelines recommend

<u>Project Level Impacts Thresholds</u>

If emissions of TACs or $PM_{2.5}$ exceed any of the Thresholds of Significance listed below, the proposed project would result in a significant impact.

- Non-compliance with a qualified risk reduction plan; or,

- An excess cancer risk level of more than 10 in one million, or a non-cancer (i.e., chronic or acute) hazard index greater than 1.0 would be a cumulatively considerable contribution; An incremental increase of greater than 0.3 micrograms per cubic meter ($\mu g/m^3$) annual average $PM_{2.5}$ would be a cumulatively considerable contribution.

Cumulative Level Impact Thresholds

According to BAAQMD, a project would have a cumulative considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000 foot radius from the fence line of a source, or from the location of a receptor, plus the contribution from the project, exceeds the following:

- Non-compliance with a qualified risk reduction plan; or,
- An excess cancer risk levels of more than 100 in one million or a chronic non-cancer hazard index (from all local sources) greater than 10.0; or
- 0.8 $\mu g/m^3$ annual average $PM_{2.5}$.

The primary community risk impact issues associated with traffic emissions are cancer risk and exposure to PM2.5. Non-cancer risk would occur at higher exposures, therefore, non-cancer risk was assumed to be less than significant if cancer risk and PM2.5 exposure would also be less than significant. As a result, non-cancer risk impacts were not quantified.

Since Morgan Hill does not have a qualified risk reduction plan and the site, and any future project to be constructed on that site, would be located near a freeway, an analysis of TAC and PM2.5 impacts upon sensitive receptors was necessary.

This analysis involved the computations of DPM, organic TAC and $PM_{2.5}$ emissions for traffic on U.S. Highway 101 using the latest version of the CARB EMFAC2007 emission factor model with the traffic mix published by Caltrans[3]. Because traffic emission rates decrease in the future, emissions were computed for several years beginning in 2013. Traffic and emission factors were input to the CAL3QHCR line-source dispersion model, which is recommended by the BAAQMD for this type of analysis. Inputs to the model included road geometry, hourly traffic volumes, and the DPM, TOG and $PM_{2.5}$ emission factors. The modeling receptors were placed across the site to represent potential dwelling units at the site. A five-year set (2001 – 2005) of hourly meteorological data for the San Martin Airport, located about 3.6 miles southeast of the project site, obtained from the BAAQMD was used in the dispersion modeling.

Using the modeled long-term average DPM and total organic gas concentrations, the individual cancer risks were computed using the most recent methods recommended by BAAQMD[4] and the California Office of Environmental Health Hazard Assessment (OEHHA)[5]

The factors used to compute cancer risk are highly dependent on modeled concentrations, exposure period or duration, and the type of receptor. The exposure level is determined by the modeled concentration; however, it has to be averaged over a representative exposure period. The averaging period is dependent on many factors, but mostly the type of sensitive receptor that would reside at a site. This assessment conservatively assumed long-term residential exposures. OEHHA has developed exposure assumptions

[3] See http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/
[4] BAAQMD, *Air Toxics NSR Program Health Risk Screening Analysis (HSRA) Guidelines*, January 2010.
[5] OEHHA 2003. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.* Office of Environmental Health Hazard Assessment. August 2003.

for typical types of sensitive receptors. These include nearly continuous exposures of 70 years for residences. It should be noted that the cancer risk calculations for 70-year residential exposures reflect use of BAAQMD's most recent cancer risk calculation method, adopted in January 2010. The cancer risk calculations were based on applying age sensitivity factors for each emissions period modeled. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. This analysis, therefore, presents the most conservative cancer risk for various types of exposures.

The maximum total risk was computed at 7.8 excess cancer cases per million. This was modeled at the receptor representing a potential dwelling unit that would be closest to U.S. Highway 101 (receptor height = 1.5 m). Under the BAAQMD CEQA Air Quality Guidelines, an incremental risk of greater than 10 cases per million for a 70-year exposure duration at the Maximally Exposed Individual or MEI would result in a significant impact. Based on the air quality modeling discussed above, cancer risks for the proposed project are expected to be less than 10 cases per million.

Computed $PM_{2.5}$ Concentrations

In addition to evaluating the health risks from TACs, potential impacts from $PM_{2.5}$ emissions from vehicles traveling on U.S. Highway 101 were evaluated. $PM_{2.5}$ concentrations were modeled to evaluate the potential impact of exposure to exhaust produced from all traffic near the site. The same basic modeling approach that was used for assessing TAC impacts (described above) was used in the modeling of $PM_{2.5}$ concentrations. $PM_{2.5}$ emissions from all vehicles were used, rather than just the diesel powered vehicles, because all vehicle types (i.e., gasoline and diesel powered) produce $PM_{2.5.}$ The maximum annual average $PM_{2.5}$ concentrations occurred at the same receptors that had the maximum cancer risks. The maximum annual average $PM_{2.5}$ concentration was modeled at 0.06 $\mu g/m^3$. This is below the BAAQMD threshold of 0.3 $\mu g/m^3$.

Impact 5: Create objectionable odors affecting a substantial number of people? *Less-than-significant*

The project would generate localized emissions of diesel exhaust during equipment operation and truck activity. These emissions may be noticeable from time to time by adjacent receptors. However, they would be localized and are not likely to adversely affect people off site in that they would result in confirmed odor complaints. The project site is not affected by existing odor sources that would cause odor complaints from new residents. This would be a *less-than-significant* impact.

Impact 6: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? *Less-than-significant*

GHG Significance Thresholds

In June 2010, BAAQMD adopted its updated CEQA Guidelines that contain methodology and thresholds of significance for evaluating greenhouse gas (GHG) emissions from land use type projects. The BAAQMD thresholds were developed specifically for the Bay Area after considering the latest Bay Area GHG inventory and the effects of AB 32 scoping plan measures that would reduce regional emissions. BAAQMD intends to achieve GHG reductions from new land use developments to close the gap between projected regional emissions with AB 32 scoping plan measures and the AB 32 targets. The BAAQMD applies GHG efficiency thresholds to projects with emissions of 1,100 metric tons of CO2e (carbon dioxide equivalency) or greater. Projects that have emissions below 1,100 metric tons of CO_2e per year are considered to have less than significant GHG emissions. The project size, 102 single-family dwelling

units, exceeds the screening size listed by BAAQMD as having less than significant GHG emissions. Therefore, a refined analysis that includes modeling of GHG emissions from the project was conducted

Methodology

Greenhouse gas (GHG) emissions were computed for the full build out scenario of the proposed project. Specifically, construction emissions were computed for an assumed 2-year construction period with operational emissions in 2020. The URBEMIS2007 model was used to compute annual air pollutant emissions. The URBEMIS2007 input files were then processed with the Bay Area Air Quality Management District's (BAAQMD) new Greenhouse Gas Model (BGM).

Construction Emissions

The URBEMIS2007 model was used to predict construction emissions in the form of CO_2. An approximate 2-year construction schedule was assumed in the modeling. Construction phases included the following:

- Fine site grading, utilities, and paving was assumed to last 2 months;
- Trenching was used to address the installation of wet and dry utilities that would last about 1 months;
- Paving was assumed to occur at the same time as trenching. This phase would last one month; and
- Building construction would start when site preparation is completed and last for 10 months.

CO_2 emissions associated with construction were assumed to occur in 2012 and 2013. Under this scenario, construction of the project would emit 465 metric tons of CO_2 (or 513 US tons). These would be temporary emissions. Neither the City of Morgan Hill nor the BAAQMD have quantified thresholds for construction activities. However, the emissions would be below the lowest threshold adopted by BAAQMD.

Operational Emissions

BAAQMD developed a GHG model referred to as the BAAQMD GHG Model or BGM. BGM is an Excel workbook tool that uses the URBEMIS2007 file to provide GHG emissions in the form of equivalent CO_2 emissions or CO_2e in metric tons per year. Unless otherwise noted below, the model defaults for the San Francisco Bay Area were used. BGM provides emissions for transportation, areas sources, electricity consumption, natural gas combustion, electricity usage associated with water usage and wastewater discharge, and solid waste land filling and transport.

Model Year
The model uses mobile emission factors from the California Air Resources Board's EMFAC2007 model and adjusts these based on the effect of new regulations to reduce GHG emissions. These regulations include the Pavley Rule that increases fleet efficiency (reducing fuel consumption) and the low carbon fuel standard. This model is sensitive to the year selected, since vehicle emissions have and continue to be reduced due to fuel efficiency standards and low carbon fuels. The Year 2020 was selected, since BAAQMD thresholds are based on meeting the AB32 reduction goals by 2020.

Traffic
The project traffic study predicted both the number of daily trips generated by the project and the daily vehicles miles travelled. These data were input to the URBEMIS2007 model. According to the traffic projections, the 102 single family residential units would generate 1,059 daily trips (10.38 trips/unit). The project was forecasted to generate 5,401 daily vehicle miles (5.10 miles per trip). The URBEMIS2007 model used these inputs.

Area Sources (including Natural Gas and Electricity Consumption)
The proposed project would have to meet 2010 Title 24 standards that are approximately equivalent to LEED Silver certification. Adjustments were made either in the BGM model or to the model output for area sources. These include:

- Energy efficiency of the project, as discussed above, was assumed to be 20% greater than pre-2005 Title 24 standards;
- A minimum waste diversion rate of 50%, consistent with the rate currently met in Santa Clara County.
- Emissions associated with electricity consumption output by BGM were adjusted to account for Pacific Gas & Electric utility's (PG&E) lower emission rate. BGM uses a Statewide rate of 805 pounds of CO_2 per megawatt of electricity produced, while the rate for PG&E is much lower[6]. The PG&E rate was also adjusted to account for increased use of renewable sources. The current renewable portfolio of 13 percent was assumed to increase to 20 percent by 2020[7]. The derived 2020 rate for PG&E was estimated at 526 pounds of CO_2 per megawatt of electricity delivered.

Per Capita Rate
The per capita rate is the total annual GHG emissions expressed in metric tons divided by the population (i.e., number of residences). The number of persons that would be living at the project was calculated assuming that there would be an average of 3.08 persons per residential unit (single-family unit and secondary units). This average occupancy rate is based on the average persons per household assumed in the Morgan Hill General Plan. This equates to 314 new residents.

GHG Emissions

Attachment 2 is a table that presents the results of the URBEMIS2007 and BGM model analysis in terms of annual metric tons of equivalent CO_2 emissions (MT of CO_2e/yr). Assumptions are contained in the technical data also provided in Attachment 2. As shown in Table 1 below, the project would exceed the bright-line-thresholds of 1,100 MT of CO_2e/yr. Therefore, the rate of project GHG emissions (in terms of annual emissions per person) was compared to the GHG significance threshold of 4.6 MT CO_2e/year established by BAAQMD. The project per capita emissions would be 3.52 MT CO_2e/year, which would be below the BAAQMD significance threshold.

[6] CARB, CCAR, ICLEI, and the Climate Registry. 2010. Local Government Operations Protocol For the quantification and reporting of greenhouse gas emissions inventories, Version 1.1 May. *Table G.6 of Appendix G provides PG&E's Utility-Specific Verified Electricity CO2 Emission Factors. The years 2005 through 2007 were averaged.*
[7] 2010. BAAQMD. CEQA Guidelines Update – Thresholds of Significance. June. Page 19 discusses the effect of the renewable portfolio Standard (rules) on PG&E's portfolio.

Consistency with Adopted Plans to Reduce GHG Emissions

The project would be subject to new requirements under rule making developed at the State and local level regarding greenhouse gas emissions and be subject to local policies that may affect emissions of greenhouse gases.

* * *

This concludes our assessment of the GHG impacts from this project. If you have any questions or comments, please feel free to contact me at (707) 766-7700 x24. We appreciate the opportunity to assist you.

Sincerely,

James A. Reyff
Illingworth & Rodkin

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Attachment 1: Evergreen Residential Project Air Quality Community Risk Assessment
Attachment 2: GHG Emission Computations

Table 1 - GHG Emissions Computations from the Proposed Condit-UCP Project

Project Name:	**Condit-UCP Project,Morgan Hill**				
Project Years:	**2020**				
	Emissions of CO2e in Metric Tons Per Year				
Source Category	**Unmitigated Emissions**	**Emissions with Project and City Conditions**		**Emissions with Converted for PG&E rates adjusted for RPS**	BAAQMD Threshold of Significance
Transportation:	698	686		686	
Area Source:	1	1		1	
Electricity:	226	180		118	
Natural Gas:	269	215		215	
Water & Wastewater:	20	20		13	
Solid Waste:	147	73		73	
Total:				**1106**	1,100
New Population	102 Single Family units	3.08 people/unit	314		
	Emissions per capita			**3.52**	4.6
Model Adjustments:	1) Traffic forecasted trip generation rate for single-family residences and vehicle miles travelled				
	2) Used PG&E emission rates and adjusted for 2020 RPS target of 20%				
	3) Assumed 20% redcution in energy usage due to Build it Green rating				
	4) Assumed 50% waste diversion through recycling programs				