

**Appendix A:  
Air Quality Supporting Information**

## **A.1 - Health Risk Assessment**



January 20, 2015

City of Fremont  
Clifford Nguyen, Associate Planner  
3300 Capitol Avenue, Building A  
Fremont, CA 94537

**Re: Warm Springs Lennar Project Type B Health Risk Screening Analysis**

Dear Mr. Nguyen:

FirstCarbon Solutions (FCS) has prepared a Type B screening level assessment of the impacts from toxic air contaminant (TAC) emissions from existing sources on the proposed Lennar project in the Warm Springs/South Fremont Community Plan area. The site is located in an area with a number of emission sources in the vicinity including industrial, rail, and roadways. FCS used Bay Area Air Quality Management District (BAAQMD) screening tools, results of a previous assessment in the Warm Springs area, and limited modeling to provide an estimate of the health risk to future sensitive receptors at the project site.

## **Introduction**

The project applicant (Lennar) proposes a Master Plan for Planning Area 4 that would remove the existing uses and improvements, and redevelop the site with a mixed-use transit-oriented development consisting of 2,214 dwelling units, ±1.4 million square feet of commercial and industrial uses, a five-acre elementary school, a four-acre urban park, and public plazas. The residential and school uses are sensitive receptors that should avoid siting in locations with exposure to high pollutant concentrations. The project is located between Interstate 880 and Interstate 680 and is near existing industrial development and a rail line. The impact of the individual sources and cumulative sources were assessed to determine their impact on the project at a screening level of analysis.

## **Analysis Methodology**

The BAAQMD adopted thresholds of significance in May 2011 in its CEQA Air Quality Guidelines (Guidelines) for air quality and greenhouse gas impacts of projects and plans proposed in Bay Area. Although the Guidelines are currently not in effect due to a legal challenge, they provide thresholds supported by substantial evidence that can be used by local agencies based on their own authority to adopt and use thresholds. The BAAQMD threshold for health impacts are provided in Table 1.

**Table 1: BAAQMD Health Risk Significance Thresholds**

| Scenario                                 | Cancer Risk (in a million) <sup>1</sup> | Chronic Hazard Index <sup>2</sup> | Acute Hazard Index <sup>3</sup> | PM <sub>2.5</sub> <sup>4</sup> (mg/m <sup>3</sup> ) |
|--|---|-----------------------------------|---------------------------------|---|
| Individual Impact                        | 10                                      | 1                                 | 1                               | 0.3   |
| Community Cumulative Impact <sup>5</sup> | 100                                     | 10                                | 10                              | 0.8   |

Notes:  
 BAAQMD = Bay Area Air Quality Management District.  
<sup>1</sup> Cancer risk units are in number of additional cancer incidents out of one million people.  
<sup>2</sup> Non-cancer chronic hazard index is the ratio of the annual average concentration of pollutants to the chronic reference exposure level.  
<sup>3</sup> Non-cancer acute hazard index is the ratio of the 1-hour average concentration of pollutants to the acute reference exposure level.  
<sup>4</sup> PM<sub>2.5</sub> = annual average particulate matter with aerodynamic diameter less than 2.5 microns.  
<sup>5</sup> Community Cumulative Impacts are determined based on an assessment of TAC emissions from emission sources located within a radius of 1,000 feet from the project (also known the zone of influence).  
 Source: BAAQMD, 2010.

The analysis used the following screening tools and methodologies:

- BAAQMD Stationary Source Screening Analysis Tool
- BAAQMD County Surface Street Screenings Tables
- BAAQMD Highway Screening Analysis Tool
- ISC Screening Model
- Environ Synopsis of Air Quality and Health Risk Study for Proposed Warm Springs Development

The BAAQMD Screening Tools are available at <http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx>.

The BAAQMD's screening tables for local roads provide pre-calculated modeling results in table format at different distances and directions from the emission sources. The Highway Screening Analysis Tool uses a Google Map tool to plot BAAQMD-prepared modeling results in a Google Earth interface. The health risk at various distances is identified for each highway in the Bay Area. The Stationary Source Screening Analysis Tool also uses Google Earth to plot the location coordinates of stationary emission sources such as gas stations, diesel emergency generators, incinerators, etc. Health risk data is provided for each facility. Google Earth's measurement tool is used to determine the distance from the emission source to the location of the sensitive receptor.

The BAAQMD recommends assessments of impacts from sources within 1,000 feet of the nearest project sensitive receptor. If large sources are located just beyond the 1,000-foot radius, the BAAQMD recommends that those sources also be included in the analysis. The project includes a school site in the center of the project site. Schools are required to identify TAC sources within one-quarter mile of the school site (1,320 feet) to comply with state regulations. The California Air Resources Board (ARB) in its 2005 Air Quality Land Use Handbook identifies distance threshold guidance for siting sources and receptors as shown in Table 2. The project does not exceed any ARB land use siting guidelines listed in Table 2.

**Table 2: Recommendations on Siting New Sensitive Land Uses Near Toxic Air Contaminant Sources**

| Source Category  | Advisory Recommendation  |
|--|--|
| Freeways and High-Traffic Roads  | Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.   |
| Distribution Centers   | Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). |
|  | Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.   |
| Rail Yards   | Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.   |
| Refineries   | Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.   |
| Chrome Platers   | Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.   |
| Dry Cleaners Using Perchloroethylene   | Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult with the local air district.   |
|  | Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.   |
| Gasoline Dispensing Facilities   | Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.                               |
| <p>Note:<br/>                     These recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.<br/>                     Source: ARB Air Quality Land Use Handbook, 2006.</p> |  |

Public school siting is subject to Education Code Section 17213(b) and Public Resources Code Section 21151.8(a)(2). Under this code, the local educational agency (school district) shall consult with the administering agency and the local air pollution control district or air quality management district to identify facilities within a quarter mile of the proposed site that might reasonably be anticipated to emit hazardous air emissions or handle hazardous materials, substances, or wastes and shall provide written notification of those findings. The school district must make the finding either that no such facilities were identified, or that they do exist but the health risks do not or will not constitute an actual or potential endangerment of public health at the site, or that corrective measures will be taken that will result in emissions mitigation to levels that will not constitute endangerment. In the final instance, the school district should make an additional finding that

emissions will have been mitigated before occupancy of the school. These written findings, as adopted by the school district governing board, must be submitted to the Department as a part of the site approval package. The school district intends to submit the project CEQA Checklist (including the Type B Health Risk Assessment) to the State to satisfy school siting requirements.

Review of BAAQMD Stationary Source Screening Tool results showed no facilities are located within one-quarter mile of the school site; however, the northwest portion of the Tesla Motors, Inc. plant is located less than one-quarter mile from the school site and was assessed with the ISC Air Dispersion model. There are other sources of TAC emissions beyond one-quarter mile from the school site that will be described in the assessment.

## Air Quality Impact Assessment

### Stationary Sources

FCS identified stationary sources within 1,000 feet of the project boundary using the BAAQMD's Stationary Source Screening Tool. Figure 1 illustrates the 1,000 buffer and the locations of the sources. Four stationary sources were identified within 1,000 feet. In addition, the Tesla automobile plant is located south of the project site and some of the facility is located within 1,000 feet; however, the BAAQMD location indicator is outside the 1,000-foot contour line. Information regarding these sources is provided in Table 3.

**Table 3: Health Risk from Stationary Sources Less than 1,000 Feet of the Project**

| ID Number     | Source Name               | Cancer Risk (in a million) <sup>1</sup> | Chronic Hazard Index <sup>2</sup> |
|---------------|---------------------------|---|-----------------------------------|
| 19556         | Tri-City Cabinets         | ND                                      | ND                                |
| 18107         | South Bay Door            | 0                                       | 0                                 |
| 4553          | Dutchman Doors            | 0                                       | 0                                 |
| 13122         | Eurocar Collision Repair  | 0                                       | 0                                 |
| 11273         | Unigen                    | 0                                       | 0.001                             |
| 9536          | Truck Rail Handling, Inc. | 0.94                                    | 0.001                             |
| 1479          | Global Plating, Inc.      | 0.03                                    | 0                                 |
| 1438          | Tesla Motors <sup>3</sup> | 0.75                                    | 0.404                             |
| <b>Totals</b> |                           | <b>1.72</b>                             | <b>0.406</b>                      |

Notes:

ND – No Data

<sup>1</sup> Cancer risk units are in number of additional cancer incidents out of one million people.

<sup>2</sup> Non-cancer chronic hazard index is the ratio of the annual average concentration of pollutants to the chronic reference exposure level.

<sup>3</sup> Tesla cancer risk from ISC Screening using 2012 BAAQMD Toxic Inventory. Data for Chronic Hazard is from Stationary Source Tool for NUMMI Plant, which appears to overstate emissions compared to Tesla's current emissions.

Figure 1: 1,000-Foot Buffer for Screening Analysis



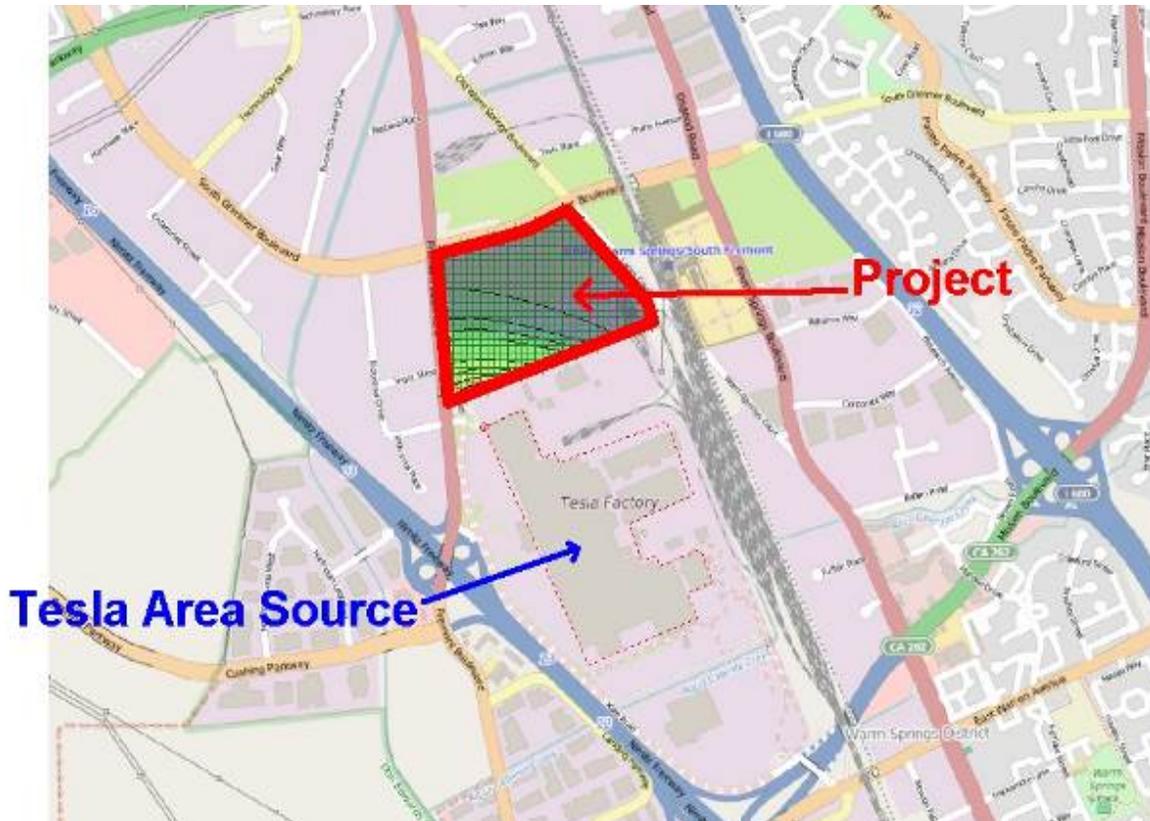
Source: ESRI Aerial Imagery, BAAQMD, FirstCarbon Solutions, 2015.



1,000 Foot Buffer for  
TAC Screening Analysis

FCS assessed the impacts of the Tesla Motors, Inc. factory located to the south of the project site using the ISC Air Dispersion Model and the 2012 BAAQMD Toxic Inventory for this facility. The results of the modeling are provided in Attachment 1. The emissions from the factory were modeled as an area source. Impacts from this facility are based on the cancer risk at the nearest sensitive receptor. The location of the Tesla plant in relation to the project is shown in Figure 2. Although the project site is adjacent to the Tesla plant, based on the analysis, the cancer risk impact at the nearest receptor location of 0.75 in a million is less than the BAAQMD significance thresholds.

**Figure 2: Project and Tesla Motors Location**



Several sources were identified at locations greater than 1,000 feet screening distance from the project site that could contribute to the health risk in the area; however, for screening purposes, they are not included in Table 3. The sources shown in Table 4 are approximately 2,000 to 4,000 feet from the site. ARB indicates that risk declines about 80 percent within 1,000 feet due to dispersion effects. The BAAQMD CEQA Air Quality Guidelines describes a study that indicates that emissions over 1,000 feet cannot be distinguished from background emissions. The BAAQMD Diesel Internal Combustion Engine Distance Adjustment Tool provides a reduction factor of 0.04 at 980 feet from the source. The adjusted risk at 1,860 feet is presented for several sources over this distance from the project site and confirms that the contribution to project risk is insignificant at this distance.

**Table 4: Health Risk from Stationary Sources over 1,000 Feet from the Project**

| Facility ID | Facility Name         | Cancer Risk (in a million) at facility | Distance to Site (feet) | Adjusted Cancer Risk (in a million) |
|-------------|-----------------------|--|-------------------------|-------------------------------------|
| 15565       | Western Digital Corp. | 52.78                                  | 2,700                   | 0.08                                |
| 16605       | Verizon Wireless      | 4.66                                   | 3,000                   | 0.0074                              |
| 7590        | Cyantek               | 8.27                                   | 3,900                   | 0.013                               |

Note:  
 Cancer risk at facility from BAAQMD Stationary Source Screening tool. Distance to site measured with Google Earth. Adjusted cancer risk based on the BAAQMD Diesel Internal Combustion Engine Distance Adjustment Tool adjustment factor of 0.04 at 980 feet and reapplied to estimate the risk at 1,860 feet.

### Emissions from Freeways

Emissions from freeways near the project site were estimated using the BAAQMD Highway Screening Analysis Tool. The tool provides risk values at up to 1,000 feet from the edge of the roadway. The closest freeway to the project is Interstate 880, which lies approximately 1,500 feet south of the project site at its closest point to a sensitive receptor in the project. Interstate 680 is located approximately 2,300 feet east of the project site. The sites are beyond the distance required for screening; however, using the rate of decrease with distance from the BAAQMD Freeway Modeling Tool to determine the risk at the actual distances from the project site, the estimated cancer risk is 6.04 in a million.

**Table 5: Health Risk from Freeways near the Project Site**

| Freeway            | Cancer Risk (in a million) at 1,000 feet from Freeway | Chronic Risk | Acute Risk | Distance to Site (feet) | Adjusted Cancer Risk (in a million) |
|--------------------|---|--------------|------------|-------------------------|-------------------------------------|
| Interstate 880 (N) | 21.52   | 0.019        | 0.010      | 1,500 NE                | 3.20                                |
| Interstate 680 (W) | 28.66   | 0.023        | 0.010      | 2,300 W                 | 2.84                                |
| <b>Total Risk</b>  |   |              |            |                         | <b>6.04</b>                         |

Notes:  
 Cancer risk from BAAQMD Highway Screening Analysis Tool at 6 feet in elevation. Distance to site measured with Google Earth. Adjusted cancer risk based on rate of reduction for 500 feet from Screening tool applied to risk at 1,000 feet of distance from the source for I-880. Rate of reduction for 1,000 feet applied to risk at 1,000 to estimate risk at 2,000 feet to estimate the impacts of I-680.

### Emissions from Roadways

The project site is served by one road with projected volumes within BAAQMD screening table reporting levels. Roadways with average annual daily trips fewer than 10,000 require no analysis, and no risk estimates are provided by the BAAQMD screening table. Fremont Boulevard runs along the western project boundary. South Grimmer Boulevard runs along the northern boundary of the project. Other roads within 1,000 feet of the project are low-volume access roads without annual daily trip data.

**Table 6: Health Risk from Roadways near the Project Site**

| Roadway   | Traffic Volume<br>(average daily trips) | Distance to the Project<br>(feet) | Cancer Risk<br>(in a million) |
|---|---|-----------------------------------|-------------------------------|
| Fremont Boulevard.  | 12,539                                  | 50                                | 3.99                          |
| Grimmer Boulevard   | 3,361                                   | 50                                | —                             |
| <b>Total Risk</b>   |   |                                   | 3.99                          |
| Note:<br>Traffic volumes for 2020 were used in the analysis.<br>Source for AADT: Alameda County Transportation Commission. Motor Vehicle Volumes Uploaded 12/29/14. Website:<br><a href="http://www.alamedactc.org/app_pages/view/8079#shortcutMaps">http://www.alamedactc.org/app_pages/view/8079#shortcutMaps</a> .-<br>Source for Risk: BAAQMD Roadway Screening Table for Alameda County. |   |                                   |                               |

### Rail Emissions

No screening tool is available to estimate rail emissions. In order to estimate emissions from rail, FCS reviewed the results of a health risk study prepared by Environ for another project located within the Warm Springs plan area east of the project site that included an analysis of rail emissions from the rail line located along the eastern side of the project (Synopsis of Air Quality and Health Risk Study for Proposed Warm Springs Development). The Environ study was provided as Appendix B.2 to the Warm Springs/South Fremont Community Plan Draft EIR. The results showed a cancer risk from the rail emissions of 0.65 in a million. The project-sensitive receptors are located slightly closer to the rail line than the project analyzed by Environ. The nearest receptor at the project site is approximately 600 feet west of the rail line, and the other project is located about 900 feet east of the rail line. The switchyard is located approximately 2,100 feet southeast of the project site and approximately 1,400 feet southwest of the project analyzed by Environ. The switchyard would be expected to provide most of the emissions and risk from idling locomotives and switch engine operation. Therefore, using the 0.65-in-a-million for the other project that is located closer to the switchyard provides a conservative estimate.

### Screening Analysis Results

The cancer risk from the sources with potential to impact the project is compiled in Table 7. No individual source of emissions would exceed the BAAQMD project threshold of 10 in a million. The cumulative emissions from all sources impacting the project site would not exceed the BAAQMD cumulative TAC threshold of 100 in a million. The cumulative analysis is conservative in that the risk is based on the distance to the closest receptor to each source and not on the effect of the maximally exposed individual receptor. Receptors more distant from the sources would experience a lesser impact than the receptor closest to the source.

**Table 7: Health Risk Screening Results**

| Source             | Risk<br>(Cancer Risk per Million) |
|--------------------|-----------------------------------|
| Stationary Sources | 1.72                              |
| Freeways           | 6.04                              |
| Roadways           | 3.99                              |
| Rail               | 0.65                              |

**Table 7 (cont.): Health Risk Screening Results**

| Source   | Risk<br>(Cancer Risk per Million) |
|--|-----------------------------------|
| Single source impacts greater than 10 in a million?<br>(Yes or No)   | No                                |
| <b>Total of Cumulative Sources</b>   | <b>12.4</b>                       |
| Cumulative Emissions greater than 100 in a million?  | No                                |
| Significant (Yes or No)  | No                                |
| Notes:<br>City of Fremont General Plan cumulative TAC threshold is 100 in a million for infill projects.<br>BAAQMD project threshold is a cancer risk of 10 in a million and a cumulative impact of 100 in a million from sources within 1,000 feet of a sensitive receptor. |                                   |

**Project Design Features to Reduce Impacts**

**Tree Plantings.** The project conceptual site plan indicates that the development will include tree plantings along the periphery of the residential portions of the project. Although not required to show that impacts to sensitive receptors would be less than significant, tree planting is expected to reduce the potential impact. The amount of reduction will vary depending on the type of tree and density of the planting. For projects that locate sensitive receptors near major sources of diesel particulate matters (DPM) such as freeways, major roadways, railroads, and rail yards, BAAQMD Guidelines recommend tiered plantings of trees such as redwood, deodar cedar, live oak, and oleander to reduce DPM exposure. This is based on studies that have shown that vegetative landscaping can reduce particulate emissions by up to 65 to 85 percent at lower wind speeds, with greater removal rates expected for ultra-fine particles less than 0.1 µm in diameter as reported by Fujii et al in a 2008 report, *Removal Rates of Particulate Matter onto Vegetation as a Function of Particle Size, Final Report to Breathe California of Sacramento-Emigrant Trails Health Effects Task Force (HETF) and Sacramento Metropolitan AQMD*. A single line of trees would produce fewer reductions than a tiered tree planting. The species of trees to be planted is not known.

**Air Filtration Systems.** In accordance with Mitigation Measure AIR-4, air filtration with a minimum efficiency reporting value (MERV) of 13 or greater will be required for new sensitive receptors. The American Society of Heating, Refrigerating, and Air-Conditioning Engineers reported in its Standard 52.2-2007 Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size that particle-size removal efficiency for MERV13 is 90 percent for particles ranging from 1 to 3 µm, and less than 75 percent for particles ranging from 0.3 to 1.0 µm. MERV16 filters are reported to provide removal efficiency of 90 percent or higher for particles ranging from 0.3 to 3.0 µm. In a 2002 study conducted by Fisk et al. (*Performance and Costs of Particle Air Filtration Technologies on the Performance and Costs of Particulate Air Filtration Technologies*), it was shown that MERV13 (ASHRAE Dust Spot 85%), filters provide an 80 percent or greater reduction of outdoor fine particulate matter (such as DPM) if the ventilation systems are operated with one air exchange per hour of outside air and four air exchanges per hour of recirculated air.

**Discussion**

The BAAQMD Screening Tools used in this analysis are intended to provide conservative results. A full health risk assessment with dispersion modeling using the latest emission factors would likely result in lower risk factors. Risks are decreasing each year as state regulations on diesel engines and vehicles are implemented. However, the Office of Environmental Health Hazard Assessment has issued new guidance that may result in

revisions to the model assumptions that increase risk. The timeline for adopting new guidance and model updates is not known.

In conclusion, the project would not expose sensitive receptors to emission concentrations that would exceed BAAQMD and City of Fremont thresholds for toxic risk. The amount of risk estimated using screening tools includes a degree of uncertainty with the expectation that they overstate the risk.

If you have any questions, please call me at 559.246.3732, or via email at [dmitchell@fcs-intl.com](mailto:dmitchell@fcs-intl.com).

Sincerely,

A handwritten signature in black ink that reads "David M. Mitchell". The signature is written in a cursive style with a large, prominent "D" and "M".

David M. Mitchell, Air Quality Services Manager  
**FirstCarbon Solutions**  
7265 N. First Street, Suite 101  
Fresno, CA 93720

Attachment A: Roadway Screening and ISC Air Dispersion Model Results

**Attachment A:  
Roadway Screening and ISC Air Dispersion Model Results**

## Cancer Risk from Freeways

### Interstate 880 Cancer Risk - North at 6 Feet Elevation

| Distance from Roadway   | 10 Feet | 500 Feet | 1000 Feet | 1,500 Feet |
|-------------------------|---------|----------|-----------|------------|
| Cancer Risk             | 281.078 | 41.759   | 21.552    | 3.201922   |
| Reduction with Distance |         | 0.851433 | 0.923324  | 0.988608   |

### Interstate 680 Cancer Risk - North at 6 Feet Elevation

| Distance from Roadway   | 10 Feet | 500 Feet | 1000 Feet | 2000 Feet |
|-------------------------|---------|----------|-----------|-----------|
| Cancer Risk             | 276.794 | 48.464   | 28.057    | 2.843975  |
| Reduction with Distance |         | 0.824909 | 0.898636  | 0.989725  |

BAAQMD Highway Screening Tool

## Cancer Risk from Roadways

|                    | AADT   | Risk 50 ft |
|--------------------|--------|------------|
| Alameda County N/S | 10,000 | 3.83       |
| Alameda County N/S | 20,000 | 4.63       |
| Fremont Blvd       | 12,539 | 3.991991   |

**Estimated Toxics Emissions from the Tesla Motors, Inc in Fremont, CA  
Cancer Risk with Age-Specific Factors**

Emission Inventory for 2012

Source: BAAQMD Toxics Inventory

| <b>Pollutant</b> | <b>Annual Emissions<br/>(pounds/year)</b> | <b>Average Emissions<br/>(grams/sec)</b> | <b>Note 1</b> |
|------------------|---|--|---------------|
| Benzene          | 11.24                                     | 0.000161814                              |               |
| Diesel PM        | 14.24                                     | 0.000205003                              |               |
| Dioxane, 1,4-    | 283.24                                    | 0.004077529                              |               |

**Note 1: assumes that the facility operates 24/7/365**

| <b>Pollutant</b> | <b>Cancer Potency Factor<br/>(mg/kg-day)<sup>-1</sup></b> |
|------------------|---|
| Benzene          | 0.1   |
| Diesel PM        | 1.1   |
| Dioxane, 1,4-    | 0.027   |

Size of the Area Emission Source: 381015 meters squared **Note 2**

| <b>Pollutant</b> | <b>Area Emissions<br/>(g/sec-m2)</b> |
|------------------|--------------------------------------|
| Benzene          | 4.24691E-10                          |
| Diesel PM        | 5.38043E-10                          |
| Dioxane, 1,4-    | 1.07018E-08                          |

**Note 2: the area source encompasses the entire building area and assumes the emissions are uniformly distributed over the area; average release height = 20 feet**

**Estimation of TAC Air Concentrations from the ISC Air Dispersion Model (at the nearest project location to the Tesla facility)**

|   |                |   |
|---|----------------|---|
| Maximum Unit Air Concentration Using a Unit Emission Rate of 1 g/sec: | 1133847 ug/m3  | Average concentration from the ISC dispersion model |
| Maximum Benzene Concentration Using Actual Emission Rate:             | 0.000482 ug/m3 | (Unit Concentration x Actual Emission Rate)         |

Maximum Diesel PM Concentration Using Actual Emission Rate: 0.00061 ug/m3 (Unit Concentration x Actual Emission Rate)  
 Maximum Dioxane, 1,4 Concentration Using Actual Emission Rate: 0.012134 ug/m3 (Unit Concentration x Actual Emission Rate)

**Calculation of Cancer Risk Including Age-Specific Factors**

**Cancer Risk = Air Concentration x Cancer Potency Factor x Daily Breathing Rate x Exposure Duration x Exposure Frequency x Age Sensitivity Factor / Averaging Time**

Exposure Duration: 70 years  
 Exposure Frequency: 350 days  
 Averaging Time: 25550 days

Age-Specific Factors

| Age        | Age Sensitivity Factor | Daily Breathing Rate (liters/kg-day) |
|------------|------------------------|--------------------------------------|
| 0-2 years  | 10                     | 581                                  |
| 3-15 years | 3                      | 581                                  |
| >15 years  | 1                      | 302                                  |

|                            |             |
|----------------------------|-------------|
| Cancer Risk From Benzene = | 0.03        |
| Cancer Risk from DPM =     | 0.48        |
| Cancer Risk from Dioxane = | 0.23        |
| <b>Total</b>               | <b>0.75</b> |

## **A.2 - Odor Complaints**



Chryss Meier &lt;cmeier@fcs-intl.com&gt;

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**Public Records Request No. 2014-12-0006**

1 message

**Rochelle Reed** <publicrecords@baaqmd.gov>

Tue, Dec 2, 2014 at 1:35 PM

To: Chryss Meier &lt;cmeier@fcs-intl.com&gt;

Dear Chryss Meier,

Thank you for your request. We have searched our records and have no records that respond to your below request for:

NUMMI (New United Motor Manufacturing)  
East Industrial Area, Kato Road, Fremont & Grimmer  
Fremont

If you have any questions or concerns, please call or e-mail me.

Sincerely,

Rochelle Reed  
Public Records Section  
BAAQMD  
[415-749-4784](tel:415-749-4784)



Chryss Meier &lt;cmeier@fcs-intl.com&gt;

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**Public Records Request No. 2014-12-0007**

1 message

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**Rochelle Reed** <publicrecords@baaqmd.gov>  
To: Chryss Meier <cmeier@fcs-intl.com>

Wed, Dec 3, 2014 at 10:56 AM

Dear Chryss Meier,

Thank you for your request. We have searched our records and have no records that respond to your below request for:

Tesla Motors  
East Industrial Area, Kato Road, Fremont & Grimmer  
Fremont

If you have any questions or concerns, please call or e-mail me.

Sincerely,

Rochelle Reed  
Public Records Section  
BAAQMD  
[415-749-4784](tel:415-749-4784)