

August 8, 2006

Mr. Gary W. Johnson  
**Granite Construction, Inc.**  
38000 Monroe Street  
Indio, CA 92203

**Subject: Air Emissions: Liberty Quarry vs. Interstate 15 Emissions**

Dear Mr. Johnson:

This draft letter report presents the results of an analysis of the emissions associated with traffic on Interstate 15 (I-15) through the City of Temecula and City of Murrieta compared to air emissions associated with the proposed Liberty Quarry.

**SUMMARY**

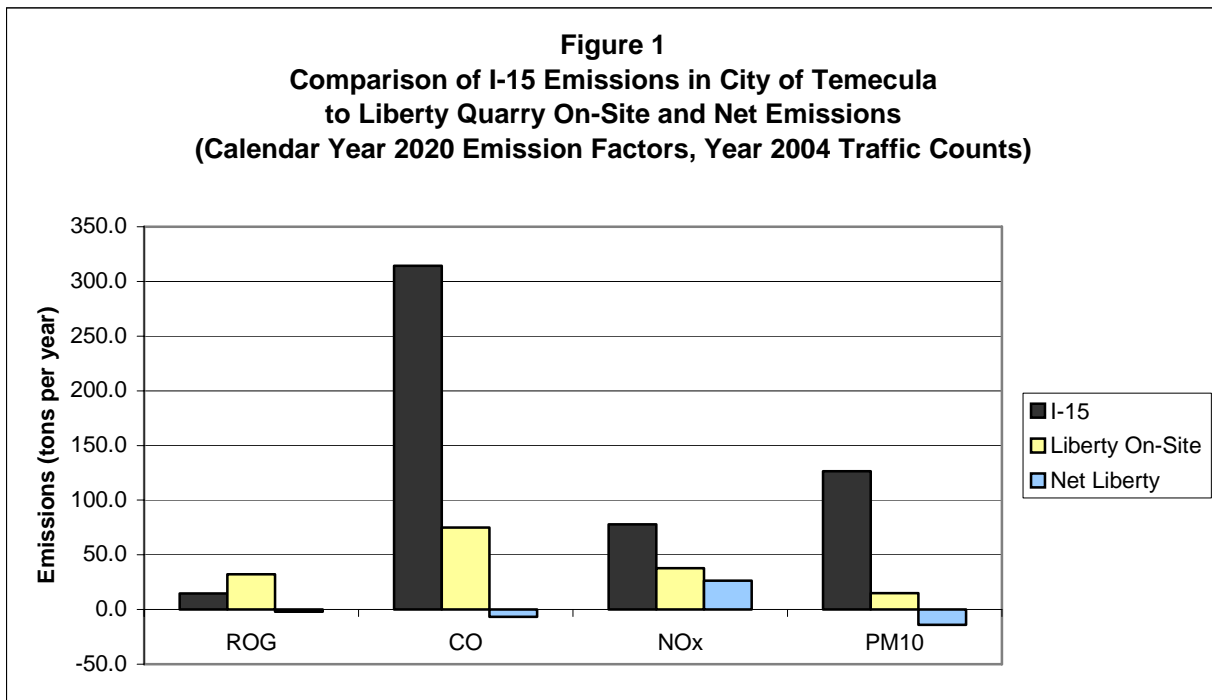
The City of Temecula is located about 2.5 to 7 miles north-northeast of the proposed Liberty Quarry and the City of Murrieta is located north of Temecula. I-15 passes through the cities for about 5.25 miles from the southern to northern City limits of each City (i.e., 5.25 miles through Temecula and 5.25 miles through Murrieta). The California Department of Transportation (Caltrans) routinely counts traffic on California highways, including I-15. The most recent data available are for 2004, and indicate the average daily vehicle traffic on I-15 in the City of Temecula is about 134,300 vehicles per day (two-way, i.e., about 67,000 vehicles per day each way). The I-15 traffic in the City of Murrieta averages about 155,700 vehicles per day (two-way).

The California Air Resources Board (CARB) mobile source emissions model, EMFAC 2002, was used to estimate the tailpipe, brake, and tire wear emissions from this traffic. The CARB Paved Road Dust methodology was used to estimate emissions of re-entrained dust from this traffic. Table 1 shows the results of the emission modeling for I-15 traffic compared to Liberty Quarry on-site and net emissions. Figure 1 compares the on-site emissions from Liberty Quarry to I-15 emissions in the City of Temecula. Emissions in the City of Murrieta are about 15% greater than for the City of Temecula. The net emissions shown in the last column of Table 1 reflect emission reductions due to required new source offsets and emissions reductions due to truck miles saved.

**Table 1**  
**I-15 Traffic Emissions Through the City of Temecula**

	I-15 Traffic Emissions Through Temecula (tons per year)	I-15 Traffic Emissions Through Murrieta (tons per year)	Total I-15 Traffic Emissions Through Temecula and Murrieta (tons per year)	Liberty Quarry On-Site Emissions (tons per year)	Net Liberty Quarry Emissions (tons per year)
ROG	14.8	17.1	31.9	32.3	-6.7
CO	314.3	364.4	678.7	74.9	26.3
NO <sub>x</sub>	78.0	90.4	168.4	37.9	-14.0
PM <sub>10</sub>	126.5	146.7	273.2	15.0	-2.1

**Figure 1**  
**Comparison of I-15 Emissions in City of Temecula to Liberty Quarry On-Site and Net Emissions**  
**(Calendar Year 2020 Emission Factors, Year 2004 Traffic Counts)**



**METHODOLOGY**

Emissions associated with I-15 traffic were estimated with the CARB-published EMFAC 2002 emissions model (Version 2.2, April 23, 2003). Calendar year 2020 emission factors for Riverside County were used to be consistent with the maximum emission factors used for estimating full production emissions from the proposed Liberty Quarry. The EMFAC model was run in emission factor mode to calculate emission factors in terms of grams per vehicle mile traveled. These factors do not account for cold starts,

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idling, etc., which if included would have made the I-15 emissions larger. An average speed of 50 miles per hour was assumed. This assumption also underestimates emissions for I-15 compared to a speed of 65 miles per hour.

To be conservative (i.e., underestimate I-15 emissions), Caltrans-published actual traffic counts for calendar year 2004 (most recent data available) were used for I-15, without extrapolation to the year 2020. The traffic counts used for the City of Temecula were an average of the traffic counts at the Riverside County/San Diego County line, State Road 79 south intersection, and State Road 79 north intersection. For the City of Murrieta, the average traffic counts from the State Road 79 north intersection and the I-215 intersection were used. Traffic counts in the City of Murrieta are about 15% greater than Temecula.

The EMFAC emissions model does not calculate emissions from re-entrained dust. To calculate those emissions, the CARB Entrained Paved Road Dust methodology dated July 1997 was used, with Riverside County parameters.

The Liberty Quarry on-site emissions include all fugitive emissions (including re-entrained dust), aggregate plant, possible on-site power plant, hot mix plants, concrete plant, recycled asphalt plant, blasting, storage piles, material movement, on-site off-road equipment (bulldozers, graders, etc.), reclamation, fuel storage tanks, and on-site vehicle tailpipe emissions (including both on-road and off-road equipment and vehicles).

The net Liberty Quarry emissions include the emission reductions due to the reduction of 16.5 million truck miles per year on I-15 in Riverside County, the required emission offsets for new sources, and off-freeway truck emissions. These data are detailed in our draft report dated July 17, 2006.

We are prepared to finalize this report after getting feedback from you and others involved. If you would like for us to meet with you or others to go over the report in detail, please let us know.

Sincerely,  
**KLEINFELDER, INC.**



Russell E. Erbes, CCM  
Senior Principal

Cc: Mr. Martin Derus, Lilburn Corporation