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Fact Sheet: Lehigh Permanente Cement Plant

Many people have contacted me about the Lehigh Permanente Cement Plant. Here are the primary regulations that apply to the Cement Plant.

Use Permit: Lehigh Permanente Cement Plant operates under a Use Permit that was first issued by Santa Clara County in 1939. The Cement Plant has the legal right to operate under the conditions of this Use Permit. There is no expiration date to this Use Permit.

Air Quality Regulation: Air quality issues are regulated by the Bay Area Air Quality Management District (BAAQMD) with a Title V permit. Lehigh currently operates under a valid Title V Permit issued by the BAAQMD. The BAAQMD will soon issue a new Title V permit that reflect much tougher air quality standards recently approved by the US Environmental protection Agency (EPA).

Here are some specific air quality issues.

Health Risk Assessment: The BAAQMD completed a Health Risk Assessment (HRA) for the Cement Plant for the Air Toxics Hot Spots Program. The HRA indicates that the Cement Plant's toxic air contaminant (TAC) emissions are **under** thresholds that require public notification or mandatory risk reduction measures.

Mercury: Mercury occurs naturally in the Santa Cruz Mountains, which explains the history of mercury ("quicksilver") mining in the area and even the name of the *San Jose Mercury News*. Mercury is contained in the limestone mined by the Lehigh Quarry and processed by the Lehigh Cement Plant. Mercury is not imported to the site. The BAAQMD has determined that current mercury health risks are below Cal/EPA's Reference Exposure Levels (RELs), designed to protect the most sensitive individuals in the population. Emission controls under the new Title V permit are expected to further reduce mercury emissions by 90 percent.

NO_x and SO₂: Nitrogen oxides (NO_x) and sulfur dioxide (SO₂) are TACS that are emitted by cement manufacturing. The Cement Plant's kiln exhaust is equipped with NO_x and SO₂ continuous emissions monitors to determine compliance with regulations. The new Title V permit will further reduce NO_x and SO₂ emissions.

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Particulate Matter (PM): PM is also a TAC that is emitted by cement manufacturing. The emission of PM (and of metallic TACs) is controlled at the Cement Plant by fabric filtration technology. The BAAQMD has installed a PM monitoring station in Cupertino near the Cement Plant. The raw data from this monitoring station is available on line and in real time on the BAAQMD web site. Ambient levels of PM measured by this station tend to be among the lowest in the Bay Area.

Hexavalent Chromium (hex chrome): Some cement plants have emitted hexavalent chromium. The US EPA installed a detection system at Stevens Elementary School near the Lehigh Cement Plant to measure hex chrome. After six month of testing in 2009-2010, the US EPA announced that no hex chrome at all was detected in about half of the tests, and that the very small level of hex chrome detected in the other tests was below the “background”, or usually expected, level for this area.

Single Stack: Compliance with the new Title V permit will require cement plant emissions to be released through one conduit (a “single stack”). This will allow for the Cement Plant emissions to be actually measured, instead of estimated from measuring the air quality from off-site or from production data.

Bay Area Air Quality Health Risks: Bay Area air quality is much improved. Most of the cancer risk now comes from mobile sources (tailpipes), not stationary sources (smokestacks). Recently, the BAAQMD analyzed the Bay Area Ambient Air Monitoring Data for Carcinogenic Toxic Air Contaminants (TACs) for about 25 monitoring stations. This analysis concludes that the average risks have been reduced by about 70% over the last 18 years. The analysis also concluded that most of the risk is driven by three toxics: diesel PM, benzene and 1,3-butadiene, with the vast majority of all three coming from mobile sources. Areas in the Bay Area with the most elevated risks correlate to areas that are higher in terms of diesel PM concentration.

The BAAQMD expects that the future reduction in diesel PM to comply with regulations from the California Air Resources Board (CARB) will yield the greatest reduction in cancer risk; BAAQMD staff expects that over the next 10 years on a percentage basis, reductions would be at least at the same magnitude.

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I welcome your questions and comments, and I encourage your participation in the public processes of monitoring the Use permit and the Title V Permit.

Note: The Use Permit and the Title V Permit do NOT address the issues related to the Lehigh Quarry. Quarry issues are explained in my *Fact Sheet: Lehigh Permanente Quarry*.

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