BAY AREA AIR QUALITY MANAGEMENT DISTRICT

LEHIGH SOUTHWEST CEMENT PLANT
Formerly: Hanson Permanente Cement (#A0017)
#24001 Stevens Creek Boulevard
Cupertino, CA 94014

January 2, 2009

FACT SHEET

Background

- The Lehigh Southwest Cement Plant (formerly Hanson) is located in unincorporated Cupertino. Mining on the site dates back to the 1880's, and the cement plant was established in 1939.

- This facility excavates limestone from an on-site quarry for use as a raw material. The raw materials are crushed into a fine powder and blended in the correct proportions. This blended raw material is heated in a rotary kiln where it reaches a temperature of about 2,800 degrees Fahrenheit. The material formed in the kiln, known as "clinker", is subsequently grinded and blended with gypsum to form cement.

- Nitrogen oxides (NOx), sulfur dioxide (SO_2), and particulate matter (PM), are the primary criteria air pollutants emitted from cement manufacturing. Small quantities of volatile organic compounds (VOC), including the toxic air contaminant (TAC) benzene, are also emitted from incomplete combustion in the kiln. TAC emissions also include trace metals such as mercury, cadmium, chromium, arsenic, nickel, and manganese. The kiln exhaust is equipped with NOx and SO_2 continuous emissions monitors to determine compliance with applicable emission limitations. PM and metallic TAC emissions are controlled at the facility by fabric filtration, which is used at various material crushing, grinding, and loading operations, and at the kiln which is the largest source of emissions.

- Lehigh is subject to a variety of District, State, and federal air quality rules and regulations that are delineated in the facility's lengthy Title V permit. A Health Risk Assessment (HRA) completed under the Air Toxics Hot Spots program indicates that the maximum public health risks associated with facility's TAC emissions are under thresholds requiring public notification.

Public Comments/Issues

- In November 2007, District staff met with representatives of the West Valley Citizen Air Watch (WVCAW) to discuss the Quarry Reclamation Project, and other air quality issues associated with the facility. The Reclamation Project entails modification of the existing Reclamation Plan for mining and reclamation activities at the facility's quarry, which expires

in March 2010. The proposed Reclamation Plan Amendment, issued by Santa Clara County, would expand the existing Reclamation Plan area, include a new quarry pit that would potentially be located closer to the residential area, and extend the quarry's termination date by 25 years.

- WVCAW submitted a lengthy set of questions to the District regarding the Reclamation Project, and other aspects of the facility's existing operation. The District finalized a response to this information request in March 2008. The District has subsequently processed a number of public records requests submitted by WVCAW regarding information associated with the Hanson facility.

- On October 22, 2008, District staff participated in a community meeting organized by the Santa Clara County Office of Planning to answer questions about the facility and the Reclamation Project. A variety of concerns were expressed at this meeting including the use of petroleum coke as a fuel, general dust emissions, mercury emissions, hexavalent chromium emissions, and emissions from truck traffic.

Facility Status

- The facility started using 100% petroleum coke as a fuel on May 30, 2007, after receiving a permit from the District for this fuel change. Prior to this project, the typical fuel mix had consisted of 90% coal and 10% coke. Emissions data show that this fuel change has reduced SO_2 and CO emissions, and has had no significant effect on the emissions of other regulated air pollutants. On October 31, 2008, at the request of EPA Region IX, Lehigh submitted a demonstration that the fuel change project did not trigger federal PSD permit requirements. EPA has not yet finalized their review of this submittal.

- District staff conferred with staff of MBUAPCD and SCAQMD regarding the reason for elevated levels of hexavalent chromium reported downwind of cement plants located in Davenport and Oro Grande, California. This issue received Bay Area press coverage earlier this year. It is believed that these elevated chromium levels are the result of the use of steel slag as a raw material and/or the use of uncovered clinker storage piles. The Lehigh facility in the Bay Area uses a naturally occurring iron ore that has much lower chromium levels than steel slag, and also utilizes enclosed silos rather than storage piles for clinker storage. The District has requested that Lehigh collect additional data regarding chromium (as well as mercury and other metallic TACs) levels in fugitive dust samples at the facility. This information is due to be submitted to the District in the first quarter of 2009.

- Following an article appearing in the San Francisco Chronicle, District staff has provided community members with information regarding the health effects associated with mercury emissions from the Lehigh cement kiln. Based on HRA results, the mercury health risks are expected to be well below reference Exposure Levels established by Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA

- Lehigh has withdrawn a permit application that had been submitted to further increase the permitted coke usage at their facility. A separate application for the use of biofuels in the kiln has been placed on an inactive status at the request of the applicant.

- District staff has contacted representatives of Hanson for the purpose of conducting outreach to truckers regarding the availability of goods movement program grants to reduce emissions from on-road trucks using the facility.

- In November 2008, the District started-up an ambient air monitor in the vicinity of the Hanson facility adjacent to Stevens Creek Boulevard. The monitor continuously records particulate matter levels in the air.

- Santa Clara County has indicated that the Hanson Quarry Reclamation Plan Amendment is currently on hold pending additional geologic studies.