UPDATED FACT SHEET (6/09)

EPA SCHOOLS MONITORING INITIATIVE

STEVENS CREEK ELEMENTARY SCHOOL

10300 Ainsworth Drive
Cupertino, CA 95014

SUMMARY: EPA will be working with the Bay Area Air Quality Management District to monitor the outdoor air at Stevens Creek Elementary School for hexavalent chromium (chromium VI) as part of a school air toxics monitoring initiative. While we do not anticipate finding levels of chromium VI that would result in potential health risks to children, we want to make sure, which is why we are doing this monitoring initiative.

What is EPA's School Air Toxics Monitoring Initiative?

On March 31, 2009, EPA released a list of 62 priority schools for outdoor air quality monitoring, as part of a nationwide initiative to measure toxic air pollution around schools. The schools selected for monitoring include schools near large industries that are sources of air toxics and schools in urban areas, where emissions of air toxics come from a mix of large and small industries, cars, trucks, buses and other sources. EPA, with the support of local air agencies, will:

- Collect samples of outdoor air near selected schools over 60 days,
- Analyze those samples for selected air toxics,
- Report to the community on levels of air toxics found,
- Evaluate actions that may be needed to reduce levels of pollutants

Why is EPA Monitoring at Stevens Creek Elementary School?

Reports of monitoring studies over the past year have raised concerns about the potential for elevated levels of hexavalent chromium (chromium VI) near cement plants.* This is a new and emerging issue. Stevens Creek Elementary School was selected for monitoring under EPA's new school air toxics monitoring initiative to see if chromium VI is present in elevated levels in the air.

What is Hexavalent Chromium?

Chromium is a naturally occurring element found in rocks, animals, plants, and soil. It can exist in several different forms. Two common forms are trivalent (chromium 3+ or chromium III) and hexavalent chromium (chromium 6+, or chromium VI).

Chromium III is an essential nutrient that helps the body use fat, sugars, and protein. Chromium III is stable in the environment, while Chromium VI is more reactive. Chromium VI is a toxic form that, when inhaled in large quantities, can cause damage to the respiratory system.

Air and health agencies are concerned about chromium VI because workers who have been exposed to high levels of chromium VI over long periods of time have higher than normal levels of certain health effects, including lung cancer.

Chromium VI can come from several sources, such as cement plants, ferrochrome production (an alloy used in making stainless steel), ore refining, chemical and refractory processing, automobile brake lining and catalytic converters for automobiles, leather tanneries, and chrome pigments.

'WHY NOW'

In 2008, the South Coast Air Quality Management District released results from a routine air toxics monitoring study in Southern CA. These results showed unexpected levels of hexavalent chromium in the air at one monitoring site. Subsequent analysis traced the source of the hexavalent chromium to two cement plants in the area of the monitor. The South Coast Air Quality Management District reported their findings to residents in late April 2008. Later that summer, the Monterey Bay Unified Air Pollution Control District began monitoring at a school and fire station near a cement plant in Davenport, CA. They reported elevated hexavalent chromium levels in October 2008. In August 2008, the Mojave Desert Air Quality Management District released results of monitoring conducted near their cement plants and did not find high levels of hexavalent chromium.

When Will Monitoring Occur?

Monitoring will begin as soon as possible after we receive the equipment. Monitors will be in place for 60 days and will sample air quality on 10 different days during that time. We anticipate that monitoring will begin in July; however, we are still waiting for all of the monitoring equipment to arrive. Once the equipment arrives it will need to be inspected for damage or other problems, and installed at the school. We also need to remain flexible to ensure that the cement plant is operating during the study.

When Will Results Be Available?

There is a lag-time between when monitoring begins and when results are available. Here's how it works. Experts will collect samples every 6 days over the monitoring period. Each sample will be sent to a lab for analysis. When we receive the results from the lab we then check the results. As soon as we finish checking the results, we will post it on the website at www.epa.gov/schoolair. We anticipate being able to start sharing results within a few weeks after monitoring begins. We'll share complete results from this phase of monitoring about three months after monitoring begins.

What Will EPA Do If Levels Are High?

If we find chromium VI in high levels in Cupertino we will need to work with the community, the local air district, and the cement plant to determine the most likely sources of the chromium VI and to identify methods to reduce the chromium VI levels in the air. In addition to there being multiple potential sources of chromium VI in a community, there are several potential sources of chromium VI in the cement manufacturing process. Because this is an emerging issue, we are still learning about which sources of chromium in the cement manufacturing process may be the most important, and those sources vary from cement plant to cement plant.

Does EPA Have the Right School?

We received several requests to consider other schools in the Cupertino area, however Stevens Creek Elementary School was selected based on an extensive analysis of wind patterns during the time of year the monitoring will be taking place. In addition, we will be monitoring wind patterns during the time that we monitor to know if the winds are blowing from the facility toward the school, or in a different direction.

Why Isn't EPA Monitoring Mercury or Other Pollutants?

Mercury is also a naturally occurring element that can be present in both the raw materials and the fuel used in cement manufacturing. EPA has recently proposed a rule to control and monitor emissions of mercury and other hazardous air pollutants from cement plants that the public may comment on. Several residents have asked EPA to consider monitoring for mercury as part of this initiative. EPA and the Bay Area Air Quality Management District are analyzing recent monitoring data to identify if additional monitoring in the area is needed at this time.

About the US Environmental Protection Agency and the Bay Area Air Quality Management District

The mission of the United States Environmental Protection Agency is to protect human health and the environment across the nation. EPA employs 17,000 people across the country, including our headquarters offices in Washington, DC, 10 regional offices, and more than a dozen labs. EPA's Region 9 office works to protect public health and the environment in the southwestern United States, with main offices in San Francisco.

The Bay Area Air Quality Management District -- the state's first regional agency dealing with air pollution - was created by the California Legislature in 1955. The Bay Area Air Quality Management District is committed to achieving clean air to protect the public's health and the environment in the San Francisco Bay region.

Where Can I Go For More Information?

EPA has created a national website for the school monitoring initiative. http://www.epa.gov/schoolair/. Results will be posted on this website once they are available. EPA, Region 9 has created a separate website with additional resources for the schools being monitored in Region 9, including Stevens Creek Elementary School. http://www.epa.gov/region/air/schools-monitor/

You can find information about resources for healthy school environments, such as EPA's Indoor Air Quality Tools for Schools, at: http://epa.gov/schools/index.html.

You can always call EPA with questions or concerns as well. Kathleen Stewart can help direct you to the best person within or outside of EPA to address your concern.

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