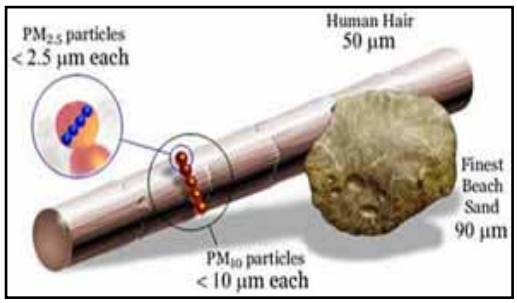
PM10 MONITORING STATION

On June 4, 2006, the City of Alexandria in partnership with the Virginia Department of Environmental Quality (VADEQ) began monitoring ambient concentrations of PM10 (particulate matter in the 10-micron size or smaller) at Armistead Boothe Park.

What is PM10?

PM10 are tiny drops of liquid or small particles of dust, metals and other materials that remain suspended in the air. These particles are emitted directly from sources such as earth-moving/aggregate operations or can be formed in the atmosphere when gaseous pollutants react together. PM10 particles are approximately 5 to 10 times smaller than a human hair—as illustrated in the picture to the right of the page.



What are the health effects?

When particles in this size range are inhaled, they can travel into your lungs and other parts of the respiratory system. As the particles journey through the respiratory system they stick to the sides of airways or travel deeper into the lungs leaving behind scar tissue. Research has shown that prolonged exposure to elevated levels of particulates can cause inflammation and irritation of the respiratory tract, lower resistance to colds and pneumonia, damage lung tissue and intensify heart and lung disease. The most susceptible are children, seniors, and individuals with respiratory ailments, however individuals of any age can be affected.

What do the numbers mean?

PM10 is reported in micrograms per cubic meter or ug/mg^3. The particulate is collected on a filter and weighed. This weight is combined with the known amount of air that passed through the filter to determine the concentration in the air. The 24-hour National Ambient Air Quality Standard (NAAQS) for PM10 is 150 ug/mg^3 and the annual standard is 50 ug/mg^3.

What does the data show?

At present, the measured concentrations at the monitoring station do not exceed the NAAQS for PM10. The City's historical ambient air monitoring data collected within the vicinity of the current monitoring station from 1991 to1996 indicates that particulates were well below NAAQS. In August 2004, the City conducted some limited PM10 monitoring at Cameron Station and the results show compliance with National Ambient Air Quality Standards as well.

What's next?

The City will perform periodic analyses of the data gathered from the station. The first of these analysis will be posted on the Division of Environmental Quality's (DEQ) website (http://alexandriava.gov/tes/DEQ/airqualityhome.html) by the end of August 2006. You may also visit this site to learn additional information about the City's Air Quality program and up-to-date air quality forecasts for the metro region.

Please feel free to contact Erica Bannerman at 703-838-4334 if you have questions related to this article and its content.