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THE BATTELLE STUDY

West Virginia Air Quality Assessment Near a Surface Coal Mine Blasting Operation

In February 2012, the state Department of Environmental Protection, in response to coalfield citizens' concerns regarding air quality near surface mine blasting sites in West Virginia, commissioned a two-week ambient air quality study in Clear Fork, Raleigh County. It was determined from sampling data that the local air quality was well within applicable health-based standards and there was not any conclusive evidence of impact of blast emissions on air quality in the study area.

The air quality study was conducted by Columbus, Ohio-based Battelle at a cost of \$249,000. The Battelle Memorial Institute is a non-profit global research and development organization with clients in both government and industry worldwide.

Two comprehensive primary monitoring sites -- at Clear Fork Elementary and at a local residence, and a third meteorological-only site at a nearby surface mine -- were used during the study. Data collected at the sampling locations was used to determine ambient air concentrations and to compare results to historical levels and regulatory/health-based standards. Among the pollutants of concern were particulate matter (PM), carbon monoxide (CO), nitrogen oxides (NO/NO₂/NO_x), and volatile organic compounds (VOCs).

During the two-week study period, a total of 37 blasting events were carried out on two different surface mine permit areas near Clear Fork. During that time frame, monitoring of local meteorological conditions, volatile organic compounds and metals, as well as the characterization of different size fractions of airborne PM and of a variety of gaseous air pollutants, occurred.

The DEP feels that the two-week study is an important step in giving the agency a clearer picture of air quality near surface mine blasting sites and addressing the concerns of coalfield citizens.

For more information about the study, contact Tim Carroll at 304-926-0499 (ext. 1248) or Tim.J.Carroll@wv.gov; or Renu Chakrabarty at 304-926-0499 (ext. 1246) or Renu.M.Chakrabarty@wv.gov.

To read the study click [here](#)