

# EMISSIONS STUDY SUMMARY

*How low are emissions from a typical asphalt plant? The answer: extremely low. In one of the most closely monitored emissions categories - volatile organic compounds (VOCs) - a single asphalt plant gives off in one year what two residential fireplaces do. Or about the same as an average commercial bakery does in only two days.*

*Those are among the findings of the respected independent Clayton Group Services in a study. Issued in December 2000, the study compared emissions from a hot mix asphalt plant with those from a number of other common sources.*

*For purposes of the comparison, the hot mix asphalt plant was defined as one with an annual production rate of 100,000 tons. The consumer-oriented sources tested for comparison included: residential fireplaces and wood stoves, bakeries, gasoline filling stations, barbeque grills and fast-food restaurants.*

*The sources were chosen for frequent occurrence in communities and the ready availability of emissions data for comparison. The Clayton Group study found that during the course of a year an asphalt plant gave off:*

- the VOCs for two residential fireplaces during the course of one year*
- the VOC emissions of a typical commercial bakery operating for two days*
- the total organic compounds (TOCs) emissions of three gasoline filling stations during the course of a year*
- the TOC emissions of five fast-food restaurants during the course of one year*
- the polycyclic aromatic hydrocarbons (PAH) emissions of 10 residential wood stoves over the course of a year*

- the benzene emission of a gas station operating for five months*

*Volatile organic compounds (VOCs) are carbon-containing compounds that readily evaporate at normal air temperature. Some examples include hair sprays, household cleaning products and dry-cleaning fluids, as well as from a variety of adhesives, copier fluids and other common chemicals. Trees, grasses and other kinds of vegetation also emit VOCs.*

*TOCs are any organic compounds, volatile or not, containing carbon atoms.*

*PAHs are found in wood smoke and diesel exhaust.*

*Benzene is a clear, colorless aromatic liquid used as a solvent in printing, paints, and dry cleaning. Benzene is released in the fumes and exhaust of gasoline, from other natural fuels, as a result of the combustion process, and in the manufacturing of other chemicals.*

*For a complete copy of the report "Emissions Comparison Between Asphalt Plants and Selected Sources Categories," contact the CAPA office at 303-741-6150.*

*For complete environmental information on the uses of asphalt, see [www.beyondroads.com](http://www.beyondroads.com)*

*Sources: Clayton Group Services, U.S. EPA, National Oceanic and Atmospheric*