Historic blaze fueled a boom in tire recycling, advances in fire monitoring

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An historic tire fire 30 years ago that blazed on for nine months in the northwest Virginia Appalachians, releasing giant plumes of toxic smoke, sparked a recycling revolution and advances in fire-monitoring methods. The fire's environmental legacy is the topic of the cover story in *Chemical & Engineering News*, the weekly newsmagazine of the American Chemical Society.

Stephen K. Ritter, C&EN senior correspondent, explains that the massive fire left firefighters and government officials at a loss. They considered how to use every conceivable firefighting tool at their disposal to battle the unprecedented blaze, but they could see nothing was going to work. The fire had to burn itself out, creating an environmental disaster. When burned, tires release a number of harmful compounds, crude oil and metals that can be toxic to aquatic life. The U.S. Environmental Protection Agency added the site to its fledgling Superfund program, which aims to remediate an array of hazardous waste sites. About 20 years and $12 million later, the site was officially declared remediated.

In the meantime, tire use and disposal has only grown, but scientists, entrepreneurs and environmental managers have made considerable progress to stanch the rubber waste stream. About 45 percent of tire waste is now destined for shredding plants and is repurposed as mulch for playgrounds, fill material for road construction and plastics. Some of it helps power cement kilns and paper mills and is used to generate electricity. Chemists have also been inspired to find sustainable ways to

reuse the rubber in old tires to make new ones rather than rely on virgin rubber. In addition to advancing tire recycling, the historic fire fueled progress in air monitoring techniques that help firefighters and local governments track pollutants from fires, and model and predict how blazes will behave in order to put them out faster.

More information: "Tire Inferno" cen.acs.org/articles/91/i43/Tire-Inferno.html

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