

"EPA'S NATIONAL FUELS SURVEILLANCE NETWORK" - Robert H. Jungers, Robert E. Lee, Jr. and Darryl J. von Lehmden, Environmental Protection Agency, National Environmental Research Center, Research Triangle Park, North Carolina 27711.

Implementing the Clean Air Act as amended in 1970 may require manufacturers of fuel and fuel additives to register their products with the Environmental Protection Agency. As an integral part of this program, a Fuels Surveillance Network was established in 1972 for the nationwide collection of fuel samples through the EPA regional offices. These samples are submitted to the National Environmental Research Center, Research Triangle Park, North Carolina, for extensive trace element analysis and for major fuel additive component analysis. The analytical data derived from the network samples will be used in a multiplicity of ways. The information will be used to verify manufacturer-registered data and to provide research input to studies on combustion emissions and health effects since trace elements in fuels can be emitted into the atmosphere during combustion. The information will also be used to develop emission factors to detect potentially toxic components introduced through contamination, and to provide a mechanism for enforcing Federal fuel additive standards (such as lead and phosphorous limits in gasoline). Samples collected in the 1972 operation were predominantly gasoline, although a limited number of samples of other types of fuels and fuel additives was collected. Trace analytical methods used included neutron activation, spark source mass spectrometry, isotope dilution, atomic absorption including carbon rod atomizer, anodic stripping voltammetry, isotope separation techniques, and lead screening techniques. Impact on the environment is discussed.