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Abstract

Kyrock is a coarse grained sandstone with a complex mixture of organic and inorganic compounds. Mining of Kyrock was for use in road construction and roofing. Kyrock samples were analyzed using Scanning Electron Microscopy to obtain Elemental analysis. High levels of carbon indicate the presence of organic compounds. Analysis of an acid digestion of the samples using Inductively Coupled Plasma spectroscopy inorganic compounds such as titanium oxide, vanadium oxide along with traces of a arsenic. Elemental analysis of samples shows a six percent of carbon, and 5-6 percent sulfur with no notable traces of Nitrogen. Pyrolysis of the samples was done using Gas Chromatography Mass Spectroscopy with a gradual increase in temperature to 160o C to obtain a series of inorganic-organic compounds. Synthetic Rainwater was prepared to examine the leaching of compounds and the leachate was analyzed using Liquid Chromatography Mass Spectroscopy and Gas Chromatography Mass Spectroscopy.