

ENVIRONMENTAL ORGANIC CHEMISTRY: THE ISOLATION AND IDENTIFICATION OF ORGANIC AND ORGANOMETALLIC COMPOUNDS FROM OIL SHALE RETORT WATERS.* Richard H. Fish and Mathilde J. Kland. Energy and Environment Division, Lawrence Berkeley Laboratory, University of California, Berkeley, CA 94720.

The complex nature of the inorganic, organic and organometallic contaminants found in oil shale retort waters is important to elucidate in order to evaluate the potential problems connected with the release of these compounds to the environment.

Our efforts have focused on more clearly defining the organic and the organometallic species, either synthesized or released during the retorting process, that eventually end up in the retort waters. Retort waters from LLL and LETC simulated in situ retorts and from Occidental's Logan Wash experiments were extracted with methylene chloride and the components separated and analyzed by a combination of dry column, thin layer and high performance liquid chromatography as well as capillary gas chromatography-mass spectrometry and nuclear magnetic resonance spectroscopy.

A discussion of the classes of organic and organometallic species identified, together with some of their toxicological and environmental implications, will be presented.

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