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The roots of green chemistry (1983-84) at the US environmental protection agency

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Trevor Kletz of Imperial Chemical Industries (ICI) is generally credited with inventing the concept of “Green Chemistry” in 1978 although the term was not coined until 1991 by Paul Anastas of the US EPA. But, the concept was most likely born in the Toxic Substances Control Act of 1976 (PL94-469). By the early 1980s, the USEPA-OTS was incorporating the concepts of substitution of hazardous chemicals with less hazardous chemicals and process modifications into its analyses of chemicals subject to Pre-Manufacturing Notice (PMN) and Test Rules Development. In this presentation, the author will discuss the historical origin of epichlorohydrin as an industrial chemical and the analysis provided in 1984 for the potential substitution of epichlorohydrin in one of its largest applications (epoxy resins).

Biography

George E Parris received his BS NCSU (1969) and PhD Georgia Tech (1974). For USEPA Office of Toxic Substances (OTS, 1975-77) and FDA (1977-80), he led projects to monitor industrial chemicals in the environment. As a consultant (1980-88), he managed projects for the EPA OTS and OSW. He managed a CoE PA/ SI/RI/FS program (1991-96) and coordinated the Environmental Restoration analysis for a DoE Programmatic EIS (1991-94). For a trade association (1996-2003) he led in waste minimization and recycling efforts (1996-2003). Since 2003, he has held adjunct positions teaching general, organic and environmental chemistry and is doing medical research.

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