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INTRODUCTION

In recent years, the contamination of drinking water with a toxic and carcinogenic by chlorinated solvents has been recognized as a serious and widespread problem throughout the industrial world (Westrick *et al.* 1984; Mackay & Clowry 1993; Vogel 1994). Because many chlorinated solvents are proven or suspected carcinogens or mutagens, the occurrence, transformation, and fate of these contaminants in the environment are of high interest. Among these solvents, the chlorinated solvents, tetrachloroethylene (PCE), perchloroethylene (PERC), 1,1,1-trichloroethane (TCE), and trichloroethylene (TCE), 1,1,1-trichloroethane (TCE), and trichloroethylene (TCE) are encountered most fre-

quently (ATSDR 2005). Here, we focus on three that have distinct chemical features: TCE, TCA, and CP.

TCE, the most prevalent chlorinated solvent, is widely used as an industrial solvent and cleaning agent. It has the potential to cause liver damage, as well as malfunctions in the central nervous system (Aviardo *et al.* 1976; USEPA 1990). The USEPA is currently assessing TCE's carcinogenicity potential, and extant data suggest that TCE is a likely human carcinogen (USEPA 1998, 2000). TCE has a drinking-water maximum contaminant level (MCL) of 5 µg/L (Bradley 2000).