TCE (TRICHLOROETHYLENE) AND PERCHLOROETHYLENE: NEW AND UNNECESSARY EXPOSURE PROBLEMS IN EMBALMING ROOMS.
Part 2
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ALTERNATIVES: Fortunately, there is no need at all to use TCE or PERC as a drywash/cleaning solvent in the embalming room. There are acceptable and effective substitute solvents that can be used in place of the undesirable chlorinated ones such as TCE. An example is Champion’s new cleaning solvent which is acetone/multi-alcoholic based. These solvents are virtually as effective as TCE-type solvents and can be easily used in place of them. They present no new exposure dangers than already exist in embalming rooms. Tissue builders and nail polish removers contain similar types of solvents and are already in wide use in embalming rooms. Consequently, the complexity of chemical exposure in the embalming room is not increased.

The chemicals that are in the new non-TCE based solvents are all rated as non-carcinogenic by various Federal and international agencies and watch groups. They present no exceptional disposal or use problems in regards to EPA regulations. Consequently, there is a minimum liability involved in the storing and usage of them as compared to TCE solvents. The only disadvantage is that they are classified and shipped as flammables. However, numerous flammable chemicals are already present in the embalming room, so this would add no additional burden of safety and handling. Vapor pressures for the non-TCE solvent and the TCE solvent are similar, consequently, both will very readily evaporate after use.

CONCLUSION: TCE or PERC, in my opinion, is a bad choice for a replacement drywash/cleaning solvent in embalming rooms. There are excellent acceptable alternatives that accomplish all the tasks required for a cleaning solvent in the embalming room and funeral home. The liabilities associated with use and disposal [as per EPA regulations and guidelines] in addition to the exposure potential and possible carcinogenicity of TCE and related chlorinated solvents (i.e. PERC) should be justification for eliminating the usage and storage of TCE based solvents in a workplace environment such as the embalming room. Eliminate the use of TCE or PERC solvents in the embalming room and replace them with the available alternatives, the evidence, in my opinion, is strongly in favor of the alternative non-TCE/non-PERC type solvents.
REFERENCES: The literature on TCE and PERC is extensive, following are selected current references.


Trichloroethylene, Environmental Defense Fund Scorecard, 1999 (update Aug 2000), New York, N.Y.


Poet, TS., et.al., Assessment of the percutaneous absorption of trichloroethylene in rats and humans using MS/MS real-time breath analysis and physiologically based pharmacokinetic modeling, Toxicol Sci; Vol. 56, ISS 1, 2000, p. 61-72.


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