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Date: July 27, 2006

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FOR IMMEDIATE RELEASE

EVIDENCE GROWING ON HEALTH RISKS FROM TCE;
CURRENT DATA ARE SUFFICIENT FOR EPA TO FINALIZE RISK ASSESSMENT

WASHINGTON -- A new report from the National Academies' National Research Council recommends re-examining our understanding of how the environmental contaminant trichloroethylene causes cancer and other adverse health effects. The report says that enough information exists for the U.S. Environmental Protection Agency to complete a credible human health risk assessment.

In 2001 EPA issued a draft risk assessment on trichloroethylene, a solvent widely used as a degreasing agent in air, soil, and water at several military installations and hundreds of waste sites around the country. The release of the assessment was followed by much debate about the quality of evidence on trichloroethylene and how that evidence was assessed. This prompted an interagency group to request that a Research Council committee review the issue: health risks from exposure to trichloroethylene, commonly referred to as TCE. The committee was not asked to conduct its own assessment of its own.

The evidence on cancer and other health risks from TCE exposure has strengthened since 2001, the committee said. Research, including studies of human populations, supports the conclusion that TCE is a potential cause of cancer. Research shows that the chemical may cause other kidney problems as well, but the level of exposure needed to cause damage is not clear. Animal data indicate that relatively high doses of TCE are needed to induce liver toxicity. Epidemiology studies indicate a higher incidence of liver cancer among populations exposed to TCE, but the data are inconsistent. Studies of people exposed to TCE at work do not show a strong association between exposure and cancer, report notes.

Animal research and human population studies suggest that TCE exposure may also be associated with other health problems, including reproductive and developmental problems, impaired neurological function, and autoimmune disease. The committee recommends that EPA fund studies to advance understanding of the mechanisms by which TCE causes cancer and other health problems; identify the most sensitive to TCE's effects; and how exposure to a mixture of TCE and other chemicals affects human health.

A large body of epidemiological data on TCE and cancer is available, but a new analysis of that data is needed to assess the hazard that TCE presents to humans, the committee said. It found several weaknesses in the current risk assessment, as well as in an analysis developed by researchers since the draft was issued. To overcome these weaknesses, the new analysis should establish clear criteria for including epidemiological studies based on objective characteristics. The committee said. It added that it would be appropriate for EPA to use a model jointly developed with the U.S. Air Force that simulates how the body metabolizes TCE, although the model does not resolve uncertainty about the mechanisms by which the chemical causes cancer.

A model is being used to extrapolate from animal studies an estimate of the cancer risk posed by TCE at low exposure levels. The committee said. Extrapolated below a "point of departure," which is associated with an incremental effect, such as 5 percent increase in cancer risk, the committee recommended. Because of the uncertainty about the mechanisms by which TCE causes cancer, the committee recommended that EPA should consider a range of points of departure in its risk assessment, the committee recommended. Because of the uncertainty about the mechanisms by which TCE causes cancer, the committee recommended that EPA should consider a range of points of departure in its risk assessment, the committee recommended.

evidence on how TCE triggers cancer to choose the best model for relating the body's response to different dose-response model -- it is appropriate under EPA's cancer guidelines to extrapolate the risk using a linear risk rises in proportion to dose.

The committee's report was funded by the U.S. Environmental Protection Agency, U.S. Department of Defense, Energy, and NASA. The National Research Council is the principal operating arm of the National Academy of Sciences, National Academy of Engineering. It is a private, nonprofit institution that provides science and technology advice to the congressional charter. A committee roster follows.

Copies of [ASSESSING THE HUMAN HEALTH RISKS OF TRICHLOROETHYLENE: KEY SCIENTIFIC ISSUES](#) are available from the National Academies Press; tel. 202-334-3313 or 1-800-624-6242 or on the Internet at [HTTP://WWW.NATIONALACADEMIES.ORG](http://www.nationalacademies.org) obtain a pre-publication copy from the Office of News and Public Information (contacts listed above).

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