

Peer Consultation of *Neurotoxicity of Tetrachloroethylene (Perchloroethylene) Discussion Paper*

Peer Consultation Charge Questions

The charge questions below are provided to guide your review of the document prepared by EPA and entitled, *Neurotoxicity of Tetrachloroethylene (Perchloroethylene) Discussion Paper* and for the one-day meeting of experts. EPA's document is intended to be used as background information for this discussion to characterize certain endpoints of neurotoxic effects.

Below are charge questions to guide your review of the draft EPA document and associated primary references.

- a) What are the relative strengths and limitations of the existing human studies of the neurological effects of perc (e.g. sample size, statistical power, potential biases, biological or clinical relevance of the findings, degree of consistency)? Do the EPA materials adequately evaluate these issues?
- b) How consistent are the visual contrast sensitivity effects seen in one residential study (with two exposed groups) with findings of other visual effects seen in other occupational and residential studies (where visual contrast sensitivity was not tested)?
- c) Table 1 of the EPA document provides a summary of types of neurological tests that have been conducted measuring different effects with different populations exposed to perc. What is the biological and or clinical significance of the measured endpoints in these different studies?
- d) What weight should be attached to reported findings of neurological effects in residential populations at exposure levels below those seen in the occupational studies?
- e) Do the epidemiology studies identify susceptible populations, and in particular do the residential data indicate that children and elderly people may be more susceptible to the effects of perc?
- f) Do the studies reporting decrements in neurological function (including vision) in people exposed to organic solvents add support to conclusions about the hazards of perc?
- g) Can an association be made in the separate studies and in all studies collectively between perc exposure and observed neurotoxicity? Does the set of studies as a whole indicate that perc exposure to the general population presents a potential health hazard?
- h) Are there any published studies or data relevant to the neurotoxic risk of perc which are not included in the discussion paper?

As part of your review, please comment on the use of secondary data in the document. The term "secondary data" for the purpose of this review refers to the use of published or unpublished data in the development of the Agency's assessment of the neurotoxic effects of tetrachloroethylene (perchloroethylene) in humans. Please comment on the Agency's use of secondary data in the discussion paper, relative to the data validity in the context of the use in this assessment.