State of California
AIR RESOURCES BOARD

Resolution 92-50

June 11, 1992

Agenda Item No.: 92-9-5

WHEREAS, at a public meeting on October 10, 1991, the Air Resources Board (the "Board"), as authorized by sections 39600, 39601, and 39662 of the Health and Safety Code, and in accordance with the provisions and procedures set forth in sections 39650-39662 of the Health and Safety Code, identified perchloroethylene as a toxic air contaminant with no identifiable threshold exposure level below which no significant adverse health effects are anticipated;

WHEREAS, in identifying perchloroethylene as a toxic air contaminant, the Board found, as recommended by the Office of Environmental Health Hazard Assessment (OEHHA) and the Scientific Review Panel (established pursuant to section 39670 of the Health and Safety Code and also known as the SRP), that based on the upper 95 percent confidence limit of potency, the estimated range of lifetime (70 year) excess cancer risk from continuous exposure to one part per billion by volume (ppbv) of atmospheric perchloroethylene is from 2 to 72 x 10^{-6}, but did not endorse the recommended best value cancer risk of 54 x 10^{-6} per ppbv; rather, the Board requested that the OEHHA staff conduct a public workshop, with the participation of at least one SRP member, in order to determine whether any additional information or interpretation regarding perchloroethylene risk was available which would warrant changes to the best value of cancer risk, and that the OEHHA staff report its conclusions back to the Board;

WHEREAS, the Board further resolved that if the OEHHA staff determined that changes to the risk values were justified or that there was new scientific evidence regarding risk, the staff's conclusions would be presented to the SRP for a revised determination prior to reporting the matter back to the Board;

WHEREAS, a public workshop was held on February 4, 1992, as requested by the Board, and, as a result of additional scientific evidence, the OEHHA staff revised the recommended best value of cancer risk from 54 x 10^{-6} to 40 x 10^{-6} per ppbv based on an 18.5 percent estimate of human metabolism as opposed to the previous estimate of 25 percent;

WHEREAS, the SRP reviewed the OEHHA staff's April, 1992 report ("Revisions to the Technical Support Document, Part B, Proposed Identification of Perchloroethylene as a Toxic Air Contaminant") including the scientific procedures and methods used to support the data in the report, the data itself, and the conclusions and assessments on which the report was based; considered the public comments received regarding the report; and on

May 21, 1992, adopted "Findings of the Scientific Review Panel on Additional Information Pertaining to the Best Value of Risk for Perchloroethylene", for submittal to the Board, which included the following:

1. Additional scientific information on determining the best upper bound value for perchloroethylene cancer risk was presented at the February 4, 1992 workshop. The information included preliminary perchloroethylene in vitro human metabolism data (Dr. Richard Reitz of Dow Chemical) and a recent pharmacokinetic reanalysis of perchloroethylene metabolism (Dr. Dale Hattis of Clark University).

2. A revision to OEHHA's original "best value" of risk is warranted based on the data reanalysis by Dr. Dale Hattis.

3. An 18.5 percent estimate on metabolism best incorporates the variability of human metabolism at environmental levels. The SRP concurs with OEHHA's recommendation to lower the best value for human unit cancer to 40×10^{-6} per ppb (5.9×10^{-6} per ug/m^3). The range of unit risk, $2 - 72 \times 10^{-6}$ per ppb, remains unchanged. The range incorporates lower and higher metabolism rates and other model assumptions. This estimate represents the upper range of plausible excess cancer risk; the actual risk may be significantly lower.

WHEREAS, in consideration of the OEHHA staff's report, including its conclusions and recommendations, the available scientific evidence, the findings of the SRP, and the written comments and testimony received, the Board finds that:

1. The OEHHA staff has fulfilled the Board's request to hold a public workshop to review perchloroethylene cancer risk;

2. Based on available scientific evidence, the OEHHA staff and the SRP have determined that the recommended best value of perchloroethylene cancer risk should be revised from 54×10^{-6} to 40×10^{-6} per ppbv.

NOW, THEREFORE BE IT RESOLVED, that the Board hereby endorses the best value of perchloroethylene cancer risk recommended by the OEHHA and the SRP.

I hereby certify that the above is a true and correct copy of Resolution 92-50, as adopted by the Air Resources Board.

Pat Hutchens

Pat Hutchens, Board Secretary