Scientific Review Panel on Toxic Air Contaminants

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Chairman
Toxic air contaminant means an air pollutant which may cause or contribute to an increase in mortality or serious illness, or which may pose a present or potential hazard to human health.

Scientific Review Panel: A nine member Scientific Review Panel on Toxic Air Contaminants shall be appointed to advise the State Board and the Department of Pesticide Regulation.
Technical Peer Review

- The values below are used on a national and international basis for public health and policy purposes. They have had considerable impact. California is unique in having made these determinations.

- 29 toxic air contaminants (TACs)

- 189 Hazardous Air Pollutants (Clean Air Act Amendments of 1990) identified as TACs

- 299 health values for hazardous air pollutants as TACs
  - 51 acute reference exposure levels
  - 80 chronic reference exposure levels
  - 168 unit risk values
Technical Peer Review

Prioritization of TACs as disproportionately impacting children
- 6 established to date

- MTBE

- Health risk assessment guidelines for Hot Spots Program

- Formaldehyde/benzene petition

- Litigation over diesel particulate risk assessment
Children’s Environmental Health

SB 25 (1999) requires OEHHA to assess whether current air pollution standards are protective of infants and children.

- Requires OEHHA to ascertain which TACs and criteria pollutants differentially impact infants and children.
- Requires risk assessment of TACs and criteria pollutants to specifically account for children.
- Assessment to include exposure, sensitivity, impacts of multiple chemical exposure.
Highly relevant TAC examples

- Benzene
- Methylene chloride
- Perchloroethylene
- Diesel particulate
- Metam sodium
CANCER RISK FROM BENZENE

Figure A

1. Mantel-Bryan Mouse Preputial Gland
2. Mouse Preputial Gland, 95% UCL, Multistage Model
3. Mouse Mammary and Ovary, MLE Multistage Model
4. Mouse Leukemia & Lymphoma, MLE Multistage Model
5. Human Leukemia, Rinsky Data
6. Human Leukemia, CAG Assessment
7. Mouse Preputial Gland, Probit Model

INCREASED LIFETIME RISK (per million)

LIFETIME-AVERAGE DAILY EXP. (ppb)
Perchloroethylene

- ATCM amendments
- Prohibit installation of new Perc dry cleaning machines after 2004
- Eliminate the use of existing Perc machines at co-residential facilities (2010)
- Require converted machines be removed from service (2010)
- Require all machines be removed when they become 15 years old or by 2023
Diesel Exhaust Found to Pose Strong Cancer Risk

- **Air**: State must decide whether to declare fumes a toxic threat requiring safeguards. Business leaders attack report.
Occupational diesel exposure and lung cancer

“Our observation of lung cancer risk [in railroad workers] is similar to the risk noted by others in the literature. In more than 35 studies of workers with occupational exposure to diesel exhaust, excess risk of lung cancer is consistently elevated by 20–50%.”

“These results indicate that the association between diesel exhaust exposure and lung cancer is real.”
The Future

- What compounds should form the highest priorities for the future?
- Children’s protection
- Pesticides
- Global Climate Change