



# Fact Sheet

California Environmental Protection Agency

 **Air Resources Board**

## Environmental Tobacco Smoke: A Toxic Air Contaminant

### What is environmental tobacco smoke?

- Environmental Tobacco Smoke (ETS) is a complex mixture of over 4,000 gases and fine particles that are emitted by burning tobacco products (side stream smoke) and from the exhalations of smokers (mainstream smoke).
- Many of the substances in ETS have already been identified as toxic air pollutants and have known adverse health effects, these include: 1,3-butadiene, acetaldehyde, acrolein, arsenic, benzene, benzo[a]pyrene, cadmium, hexavalent chromium and formaldehyde.

### How did ARB identify ETS as a TAC?

- In 2001, the ARB entered ETS into the TAC identification phase of the program.
- An exhaustive review of the potential health effects of exposure to ETS was conducted by Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA).
- The Air Resources Board (ARB) staff prepared a comprehensive report on ETS exposure in California.
- In March 2004, ARB held a public workshop to discuss the findings.
- From November 2004 through June 2005, the state's Scientific Review Panel (SRP) held meetings to discuss and approve the ETS reports.

### How are Californians exposed to ETS?

- Four million Californians smoke despite an increasing number of smoking restrictions and a broad awareness of the health impacts.
- Exposure to ETS, especially among infants and children, continues to be a big public health concern.
- A smoker's home may have nicotine levels that are on average 30 times higher than a non-smokers' home. These exposures are especially dangerous for young children because they are likely to recur daily and impact the child's physical development.

- Vehicles with a smoker have very high average particulate concentrations. They can be up to 10 times higher than those found in the homes of smokers.
- According to an ARB study, nicotine concentrations in several different environments, such as outside office buildings, schools, businesses, airports and amusement parks are comparable to those found in some smokers' homes.

## **What are the health effects associated with ETS exposure?**

- Developmental effects, including an annual estimated:
  - 21 cases of Sudden Infant Death Syndrome (SIDS)
  - 1,600 cases of low birth weight in newborns
  - 4,700 pre-term deliveries
- Respiratory effects including:
  - acute lower respiratory tract infections in children (e.g., bronchitis and pneumonia)
  - asthma induction in children
  - asthma exacerbation in children (31,000 episodes per year)
  - middle ear infections in children
- Carcinogenic effects: lung cancer, nasal sinus cancer and breast cancer in younger, primarily pre-menopausal, women, with:
  - 400 additional lung cancer deaths per year
- Cardiovascular effects: acute and chronic coronary heart disease morbidity and an annual estimated:
  - 3,600 premature cardiac deaths

## **What will happen as a result of identifying ETS as a TAC?**

- ARB will develop a risk reduction report on the potential actions to reduce ETS exposures in California.
- The risk reduction report will review state and local anti-smoking programs, public education efforts regarding the effects of exposure and identify additional opportunities to reduce risk.

Please contact Kate MacGregor, MPH at (916) 327-5974 for more information on ETS TAC identification and risk reduction. Please contact the ARB toll-free at (800) END-SMOG/(800) 363-7664 (California only) or (800) 272-4572. You may obtain this document in an alternative format by contacting ARB's Americans with Disabilities Act Coordinator at (916) 322-4505 (voice); (916) 324-9531 (TDD, Sacramento only); or (800) 700-8326 (TDD, outside Sacramento).