

PRIORITIZATION OF TOXIC AIR CONTAMINANTS UNDER THE CALIFORNIA CHILDREN'S ENVIRONMENTAL HEALTH PROTECTION ACT.

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California's legislature enacted the Children's Environmental Health Protection Act requiring Cal/EPA to specifically consider infants and children in setting criteria for toxic air contaminants (TAC) including cancer potency factors and reference exposure levels. The law required the Agency to consider exposure patterns of infants and children, special susceptibility, effects of exposure to more than one TAC with a common mechanism of action, and interactions of TAC and criteria air pollutants in assessing risks to children. The law also requires re-evaluation of the criteria for toxic air contaminants over the next several years to ensure adequate protection of infants and children, and establishment of an initial list of up to 5 TAC that may disproportionately impact children by July 1, 2001. Cal/EPA prioritized the TAC based on known toxicity and exposure. We conducted a focused literature review on 37 TAC looking for specific information pertinent to infants and children's exposure and potential differential response relative to adults. We focused on chemicals associated with developmental, neuro-, respiratory, endocrine, or immune toxicity, and endocrine disruptors. We considered asthma induction and exacerbation as disproportionately impacting children. We considered whether existing criteria were adequate to protect infants and children. After public and peer review by a UC Panel, five TAC were chosen to constitute the initial list: acrolein, polychlorinated dibenzo-p-dioxins and dibenzofurans, lead, polycyclic organic matter, and particulate matter from diesel-fueled engines. This paper describes the results of our deliberations on decision-making criteria and reasons for listing these five chemicals. In addition, we describe efforts to evaluate the adequacy of our risk assessment methods to protect infants and children.