State Government Query

California Environmental Contaminant Biomonitoring Program

May 2008

Background

The California Environmental Contaminant Biomonitoring Program was authorized by Senate Bill No. 1379 and signed into law in 2006 (Health and Safety Code Sections 105440-105444). The Program will determine baseline levels of environmental contaminants in a representative sample of Californians, establish time trends in chemical levels, and assess the effectiveness of current regulatory programs.

The Program is being administered as a collaborative effort between the Office of Environmental Health Hazard Assessment (OEHHA), the Department of Toxic Substances Control (DTSC), and the California Department of Public Health (CDPH). A nine-member Scientific Guidance Panel will provide scientific peer review and make recommendations on program design and on selection of specific chemicals for biomonitoring. More details about the program are can be found at http://www.oehha.org/multimedia/biomon/index.html.

Selecting chemicals for biomonitoring will take place via a two-step process, with "priority chemicals" for biomonitoring chosen from a list of chemicals identified as "designated chemicals". Designated chemicals are defined as those chemicals known to or strongly suspected of adversely impacting human health or development. At present, the designated chemicals consist of chemicals or their metabolites that are included in the CDC biomonitoring program (the CDC list is attached). The Scientific Guidance Panel can recommend that additional chemicals be added to the list of designated chemicals.

Criteria for adding a chemical to the list of designated chemicals were specified in the legislation and includes: exposure or potential exposure to the public or to specific subgroups; known or suspected health effects based on peer-reviewed studies; the need to assess the efficacy of existing regulatory programs to reduce exposures; the availability of an adequate analytical method for biomonitoring, and the incremental analytic cost of performing the analyses.

The Scientific Guidance Panel will recommend that chemicals be identified as *priority chemicals* based on: 1) the degree of potential exposure to the public or specific subgroups, including, but not limited to occupational, 2) the likelihood of a chemical being a carcinogen or toxicant based on peer-reviewed health data, the chemical structure, or the toxicology of chemically related compounds and 3) the limits of laboratory detection for the chemical, including the ability to detect the chemical at low enough levels that could be expected in the general population.

The first meeting of the Scientific Guidance Panel was held in December 2007. At that meeting, the Program committed to various efforts to gather input on chemical selection

from a wide range of stakeholders. These include workshops, teleconferences and development of a survey geared to the lay public (which is available on the Program website). The survey asks about specific categories of chemical exposures and provides an opportunity to propose specific chemicals to be considered for biomonitoring. We are interested in your specific input in these areas as well.

Query to State Government Agencies

The Program has also committed to contacting boards and departments throughout State government. We want to know:

1. What chemicals, categories of chemicals or chemical exposures are currently of most concern to your program?

2. Are there any chemicals, categories of chemicals or chemical exposures that your program sees as an emerging concern because of exposure, potential toxicity, bioaccumulation or persistence?

3. Are there chemicals or categories of chemicals addressed by your program where exposures in California would be expected to differ significantly from typical national exposure levels?

4. Are there chemicals, categories of chemicals or chemical exposures that should be biomonitored to assess the effectiveness of your program?

5. As a public health scientist, what chemicals, categories of chemicals, or chemical exposures, whether or not they are chemicals of concern for your program, do you think should be biomonitored in California?

6. Do you have any information on the extent of exposure in California or in subgroups in California of chemicals you have identified?

7. For purposes of analysis, can you recommend the best chemical markers (e.g., the chemical itself, metabolite, Hb adduct) for any of the chemicals, categories of chemicals or chemical exposures you have identified that you think should be biomonitored?

8. The initial number of priority chemicals biomonitored in the California program will, of necessity, be limited. As laboratory capability is increased, the number of priority chemicals biomonitored will be expanded.

   Given the current limits, we would like your input on whether the program should put particular weight on any of the following focus areas:

   i. Chemicals widely used in California;
   ii. New or emerging chemicals whose use is expected increase;
   iii. Chemicals on the CDC list, to compare California levels with the national levels;

iv. Chemicals not biomonitored by CDC, to capture what is not being assessed by the federal program;
v. Chemicals where exposures are higher in California than national levels (e.g., due to mining, regulations on flame retardancy);
vi. Chemicals in the workplace where exposure may be the highest;
vii. Chemicals that pose the most risk for pregnant women, fetuses, and young children;
viii. Chemicals regulated by current state programs, to assess program effectiveness;
ix. Biomonitoring for chemicals that are likely to be higher in people in close proximity to polluting sources (e.g., near factories, ports, oil refineries or farms);
x. Chemicals that are persistent and bioaccumulative.

a. From the above list, would you choose and rank the top four areas of focus in terms of the importance they should have in selecting priority chemicals to biomonitor?

b. Do you recommend other areas of focus?