

## Risk Assessment News

# Cobbtown/Sweet Valley Community PCB Exposure Investigation Summary

## Anniston, Alabama

Alabama Department of Public Health

July 1996

### What Are PCBs?

Polychlorinated biphenyls (PCBs) are man made substances no longer produced in the United States. PCBs are a family of compounds used as insulation in electrical products. PCBs may be oily liquids or solids, and may vary from clear to light yellow. PCBs enter the environment through spills or landfill wastes. Once in the environment, PCBs stick to soil particles very strongly. They do not migrate very deep with rainwater, and usually do not leach into groundwater. Because PCBs strongly adsorb to soil particles, very little uptake into plants occurs.

#### In this Issue...

|                                                                                    |   |
|------------------------------------------------------------------------------------|---|
| What are PCBs? .....                                                               | 1 |
| What is an Exposure Investigation? .....                                           | 1 |
| Were PCBs found in my community? .....                                             | 1 |
| Source of the contamination .....                                                  | 2 |
| Am I being exposed? .....                                                          | 2 |
| Reducing exposure to PCBs .....                                                    | 3 |
| What is a Consent Order and how does it affect me? .....                           | 3 |
| Roles and responsibilities of ADEM, ADPH, ATSDR, USEPA, and Monsanto Company ..... | 3 |
| Personal responsibilities .....                                                    | 3 |
| For more information .....                                                         | 4 |
| Definitions & acronyms .....                                                       | 4 |

The purpose of this summary is to update the Cobbtown/Sweet Valley community of the findings of the PCB Exposure Investigation. It contains information from the *Health Consultation for the Cobbtown/Sweet Valley Community PCB Exposure Investigation Report* and the *Health Consultation for the Monsanto Company Site, Anniston, Calhoun County, Alabama, CERCLIS No. ALD004019048*. The Alabama Department of Public Health (ADPH) wrote this summary under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR).

### What is an Exposure Investigation and why was one conducted in the Cobbtown/Sweet Valley community?

An exposure investigation is a public health approach to find out if people have been exposed to hazardous chemicals. ADPH and ATSDR conducted an exposure investigation in the Cobbtown/Sweet Valley community east of the Monsanto plant. The Cobbtown/Sweet Valley Community is bound by the following: State Highway 202, Clydesdale Avenue, Tenth Street, and Montrose Avenue (Figure 1). An exposure investigation was done because a review of existing soil data showed that residents may be exposed to PCBs.

### Were PCBs found in my community?

Yes. ADPH, the Alabama Department of Environmental Management (ADEM), and the United States Environmental Protection (USEPA) collected soil, dust, groundwater, and surface water samples. Table 1 shows the sampling results for the Cobbtown/Sweet Valley community.

▼ Please continue reading.

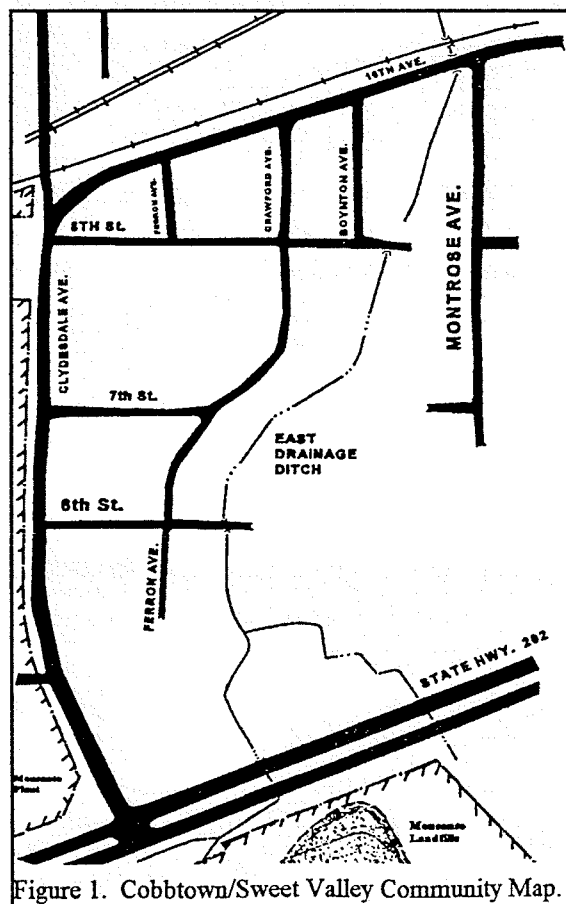


Figure 1. Cobbtown/Sweet Valley Community Map.

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Table 1. PCB Concentrations in the Cobbtown/Sweet Valley Community, Anniston, Alabama.

| Transport Media | Concentration Range | Background Level | Recommended Level | Federal Guideline               |
|-----------------|---------------------|------------------|-------------------|---------------------------------|
| Soil            | 0.50 to 496 ppm     | 0.18 ppm         | 1.0 ppm           | USEPA Recommended Action Level  |
| Dust            | 0.45 to 192 ppm     | NA               | 1.0 ppm           | USEPA Recommended Action Level  |
| Surface Water   | 52 ppb              | NA               | 0.5 ppb           | USEPA Maximum Contaminant Level |
| Sediment        | BDL to 215,000 ppm  | NA               | 1.0 ppm           | USEPA Recommended Action Level  |

ppm - parts per million      ppb - parts per billion  
BDL - below detection limits      NA - not available

The USEPA collected additional soil samples to find out if other contaminants from the site were present. These samples were analyzed for various compounds including pesticides, semivolatiles, and metals. The sampling results showed that PCBs are the only contaminants of concern.

ADPH and ADEM also sampled all municipal water supplies which were potentially affected by PCBs. The sampling results showed that the municipal water supplies are not contaminated with PCBs.

#### What is the source of the contamination?

The existing soil data indicate that there are several potential sources of PCBs. These include Monsanto's South Landfill, waste water discharge ditch, and past waste disposal areas. The largest potential source is Monsanto's South Landfill. The Department of Transportation partially removed the South Landfill during the widening of State Highway 202. Recent sampling suggests that PCB contaminated soil is still present and is being carried into the Cobbtown/Sweet Valley community by surface water.

Currently, Monsanto has proposed plans to develop a facility to control surface water. These plans include redirecting surface water near the landfills. The redirected water will be captured in a settling pond. After the sediment has settled out of the water, the water will be slowly released into the drainage system.

#### Am I being exposed to PCBs?

Blood testing showed that some residents of the

Cobbtown/Sweet Valley community are being exposed. In October 1995, ADPH offered testing to all individuals who lived or worked in the community and were at least one year old. The results from the 103 persons tested ranged from undetectable to 303 ppb. Twenty-eight of the 103 persons tested had levels above 20 ppb. A person was considered to have an elevated PCB blood level if their PCB concentration exceeded the level found in 95% of the U.S. population (20 ppb).

One-hundred and two individuals completed a questionnaire of their activities in the area. ADPH compared the answers to the questionnaire with the soil, dust, and blood results. As a result, three risk factors for exposure were found.

One of the risk factors is age. The results suggest that the older the person, the higher the PCB blood level. Elevated blood levels were found only in people older than 28 years of age. Additionally, about 61% of the people who were at least 50 years or older had elevated levels.

Another risk factor is length of residence. The results suggest PCB blood levels increase with the length of time that a person lived in their current home. Seventy-six percent of individuals who reported living in their current residence more than 25 years had elevated PCB blood levels.

The last risk factor is growing or eating locally grown vegetables. These activities increased the risk of elevated PCB blood levels 6.5 times. People who grew vegetables in home gardens were nearly 4 times more likely to have an elevated PCB blood level than persons not growing vegetables. People who ate locally grown vegetables were

2.13 times more likely to have elevated PCB blood levels than persons not eating locally grown vegetables. People who gardened appeared to have the highest risk of elevated PCB blood levels.

### How can exposure to PCBs be reduced?

You can reduce your exposure by breaking one of the five links in the exposure pathway. An exposure pathway connects the PCBs to the exposed person. The links of an exposure pathway are the source of PCBs; transport of the PCB contaminated soil into the community; a point of contact



with the PCB contaminated soil; a route for PCBs to enter the body (ingestion or skin contact with PCB contaminated soil); and the exposed population. Its unlikely that residents can control the source or the transport media, but they may be able to control the point of contact and the route that the contamination enters the body.

The following actions might help residents avoid a point of contact with PCB contaminated soil:

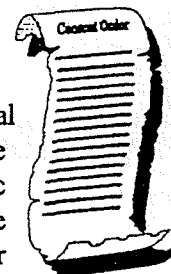
- Working and/or playing on cleaned concrete, asphalt or wooden surfaces.
- Working and/or playing where grass covers the ground.
- Keeping contaminated soil out the house by removing dirty shoes and clothing at the entrance.
- Closing doors and windows when the wind is blowing to prevent contaminated dust from entering the home.
- Cleaning floors, furniture, and drapes regularly to remove unwanted dust and dirt.
- Be aware that pets can bring contaminated soil into the home and be a point of contact.

The following actions might help residents avoid a route for PCBs to enter the body:

- Always wash your hands and face after being in contact with soil and before eating or sleeping.
- Never put things picked up off the ground into your mouth.
- Cover your mouth and nose while working or playing in the contaminated area.
- Carefully wash fruits and vegetables grown in the contaminated area, or

- Stop eating homegrown fruits and vegetables and begin buying them from the grocery.
- Do not eat fish or wild game from the Choccolocco Creek area.

### What is a Consent Order and how does it affect me?



A Consent Order is a written legal agreement between ADEM and the responsible party. It describes specific corrective actions, who must do the actions, and the deadlines for completing the actions. ADEM issued a Consent Order to Monsanto Company on March 8, 1996, to protect human health and the environment. Under the Consent Order, Monsanto is required to take specific actions which should reduce or end PCB exposure in the Cobbtown/Sweet Valley community. ADEM, ADPH, ATSDR, and the USEPA feel that these actions are protective of human health.

The Monsanto Company is offering to buy the 35 contaminated properties within the Cobbtown/Sweet Valley community. This would allow residents to move away from the contamination. If residents do not wish to sell their property, the Monsanto Company is offering to temporarily move residents at the company's expense and clean up the contamination.

### What are the roles and responsibilities of ADEM, ADPH, ATSDR, USEPA, and the Monsanto Company?

The Alabama Department of Environmental Management (ADEM) regulates the Monsanto facility according to state and federal law. ADEM holds Monsanto responsible for all actions that the company does under the Consent Order. ADEM is also responsible for ensuring that proper sampling and clean up occurs in contaminated areas.

The Alabama Department of Public Health (ADPH) assesses the human health hazards associated with the Monsanto site and was the lead agency for the PCB Exposure Investigation. ADPH is responsible for providing physicians and community members with information about PCBs and their health effects. ADPH also provides technical support to ADEM.

The Agency for Toxic Substances and Disease Registry and the United States Environmental Protection Agency provide scientific support and funding to ADPH and ADEM. Scientific support may be toxicological advice, health assessment advice, and graphical support.

Under current state and federal guidelines, the Monsanto Company must control and dispose of any waste produced at

the plant. They must also report any spills that occur at the facility. All disposal that occurred before 1980 was not regulated because state and federal guidelines had not been established. Under the Consent Order, Monsanto has agreed to propose a plan to reduce or end potential PCB exposure in the community and characterize other areas for PCB contamination.

### What are my personal responsibilities?

You should express your health and environmental concerns to the appropriate agency so that they can be properly answered. You can contact ADPH, ADEM, or Monsanto to get information about the site or PCBs. Then, you should decide how this information affects you and use it to protect your health.

### Whom do I contact for more information?



This summary contains information from the *Health Consultation for the Cobbtown/Sweet Valley PCB Exposure Investigation* and the *Health Consultation for the Monsanto Company Site, Anniston, Calhoun County, Alabama, CERCLIS NO. ALD004019048*. To find out how to get copies of these documents or to get information on site-related health issues, you may contact the following persons:

For information on the health consultations and site-related health concerns:

Brian J. Hughes, Ph.D.  
Environmental Toxicologist  
Alabama Department of Public Health  
Division of Epidemiology  
434 Monroe Street  
Montgomery, Alabama 36130-3017  
1-800-338-8374

For environmental issues:

Catherine Lamar  
Alabama Department of Environmental Management  
P.O. Box 301463  
Montgomery, Alabama 36130-1463  
1-800-533-2336

For relocation options:

Sherrie Wartell  
Prudential Residential Services  
(205) 231-8508  
or 1-800-544-2932 ext. 2711

### Definitions and Acronyms:

ADEM- Alabama Department of Environmental Management.

ADPH- Alabama Department of Public Health.

ATSDR- Agency for Toxic Substances and Disease Registry.

Background Level- The average presence of a substance as it occurs naturally in the environment.

Exposed population- Any group of persons who have been in contact with chemical contaminants.

Maximum Contaminant Level- The maximum amount of a substance delivered to any person using a public water system. Maximum contaminant levels are enforceable by law.

PCBs- Polychlorinated biphenyls.

Point of contact- Any place or medium where persons may come into physical contact with chemical contaminants.

Recommended Level- A nonenforceable health goal.

Route of exposure- Any method that allows chemicals to touch or enter the body. Examples are ingestion of soil by swallowing, inhalation of dust through your nose or mouth, and dermal contact with skin.

Semivolatile Compound- A broad description of an organic compound that does not rapidly evaporate but will vaporize over time.

Source- Any place or medium where contaminants originate. An example is the West End Landfill where PCBs were dumped in the past.

Transport Media- A substance that carries contaminants from the source to a point of contact. An example is surface water carrying PCB from a landfill. Other examples are soil, air, groundwater, and sediment.

USEPA- United States Environmental Protection Agency.

