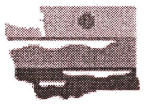


Results from soil contamination study of King County

The Department of Ecology (Ecology) and Public Health – Seattle & King County (Public Health) studied soils in mainland southern King County for the presence of arsenic and lead. The study's purpose was to get an overall view of the general "footprint" of contamination in the county. The information helps establish the "big regional picture," but cannot determine specific levels on a smaller scale, such as a particular property or even a city.

The study focused on undeveloped locations, where the highest levels of contamination are most likely to be found.

Key facts about the study:

- The arsenic and lead levels measured to date are a concern, not an emergency.
- Hygiene and housekeeping measures in and around the home, work and recreation areas reduce your exposure to the lead and arsenic potentially associated with soil and dust.
- Soil studies to date provide a general understanding of the arsenic and lead "footprint," but not the contamination levels at individual properties.
    - Concentrations can vary greatly over short distances; no conclusions can be drawn about your property based on what we found at a place sampled nearby.
    - The study only evaluated undeveloped areas, which are most likely to have the highest contamination.

  Ecology and Public Health are working together to
    - Provide guidelines to help people reduce their exposure to contaminated soils
    - Provide information about the location and extent of lead and arsenic soil contamination from the old Ruston smelter
    - Coordinate with local governments

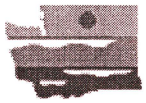
  Ecology will
    - Develop sampling guidance and ways to remediate the contamination;
    - Identify and formally notice potentially liable persons (Asarco)

Where we found the highest contamination

Arsenic and lead concentrations tend to be higher closer to the former smelter at Ruston. Vashon and Maury Island have higher contaminant levels than the mainland. Undeveloped locations on the islands had the highest levels of contamination with up to 460 ppm for arsenic and 1,300 ppm for lead.

The highest readings appear to follow the prevailing wind patterns in the central Puget Sound basin. The wind blows from the southwest to the northeast about 60 percent of the time. Wind blows from the northeast to the southwest about 40 percent of the time. Local topography affects wind patterns and historic contaminant deposition.

On mainland King County, we found the highest arsenic and lead concentrations closest to an imaginary line pointing to the Northeast from the former smelter site in Ruston. The further along this line a sampling place was from the former smelter, the lower the contaminant levels. Also,the



further away from this imaginary line to each side, the lower the concentration of contaminants. Contamination tends to be higher on the windward side of hills and ridges than on the leeward side (relative to the smelter).

Concentrations vary greatly over short distances

Arsenic and lead concentrations can be very different over short distances. Samples taken a few yards away from each other at the same location may have arsenic concentrations that vary by up to 500 percent. Therefore this study cannot be used to accurately predict the level of contamination anywhere that was not sampled. This study covered a 200 square mile area with just 75 sample locations. The information collected can help us understand more about the general footprint of the Tacoma Smelter Plume. It cannot be used to draw conclusions about individual properties, neighborhoods or cities.

Without testing individual properties we cannot predict the levels of arsenic or lead. However, we do know that there are a variety of sources of contamination affecting all our soils in addition to those associated with the former smelter. These reach from car exhaust to gardening products and lead paint, and include germs and bacteria that are naturally occurring. To reduce risks from exposure to contaminated soils follow Public Health's common sense guidelines.

Ecology's Next steps

The Tacoma Smelter Plume is an unusually large and complex contamination problem. It may take several decades to develop solutions. Ecology is pursuing the following:

- **King County** study of child use areas, beginning in summer 2003: This study will give us more information about developed areas; particularly those used by small children.
- **Pierce County**, spring 2002 and summer 2003: We'll sample undeveloped areas and some residential and child use areas in Pierce County on the Gig Harbor Peninsula and from Tacoma to the Thurston County line.
- **Property sampling guidance**: The Area-Wide Task Force is developing guidance for people who would like to sample their land for arsenic or lead contamination. This information will be available on Web later this year.
- **Legal Process**: Under Washington's Model Toxic Control Act, Ecology researches the source of a site's contamination. We have been gathering and evaluating scientific evidence that will prove that the former Asarco, Inc. smelter in Ruston is the primary source of lead and arsenic contamination in the Tacoma Smelter Plume area. Asarco is under order by EPA and other states for many other remedial actions, and has claimed recently that it does not have sufficient funding to continue many cleanups due to economic conditions.

The fallout from the smelter in Ruston reminds us of the need to prevent, control and reduce all forms of pollution from today's sources. Preventing pollution now will ensure that our activities do not leave another toxic legacy.

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