

Summary of ATSDR Health Consultation June 14, 2007

Background

On April 19, 2007, the same day that Swann Park was closed because of arsenic in the soil, the Commissioner of the Baltimore City Health Department contacted the federal Agency for Toxic Substances and Disease Registry (ATSDR) to request advice and recommendations regarding exposures to reported levels of contamination on the park.

ATSDR is a sister agency to the U.S. Centers for Disease Control and Prevention (CDC). ATSDR scientists specialize in evaluating public health exposures to hazardous chemicals, including arsenic.

The ATSDR Health Consultation

Over the last two months, ATSDR conducted a public health evaluation of arsenic exposures at Swann Park, Baltimore Maryland and prepared a health consultation document. This evaluation included review of available data, interviews with individuals with knowledge of the park and exposure to the park, and a community meeting.

The main question evaluated by ATSDR is whether anyone is likely to get sick from playing or working at Swann Park after the closure of the Race Street plant in 1977.

ATSDR's Health Consultation document is now available for public review and comment at the City of Baltimore's website at <http://www.baltimorehealth.org>

Summary of ATSDR's Findings

Until its recent closure, Swann Park was a highly used recreational property. Activities at the Park included baseball, softball, football, soccer, and lacrosse, as well as general recreation and visitation by community members. City employees regularly maintained the park.

Key findings of ATSDR's health consultation include:

- **Many people had exposure to soil at Swann Park.** ATSDR found that recreational users, park visitors, and park workers had exposure over a period of several decades.
- **Arsenic is the key concern.** After reviewing tests conducted to date, ATSDR found that only arsenic was detected above its environmental guideline in the soil at Swann Park.
- **Normal park activities do not pose significant risk.** ATSDR found that normal park activities, such as field sports and park maintenance, would not expose individuals to enough arsenic to be likely to produce adverse health effects. This conclusion extended to individuals who participated in these activities for many years.
- **Children with pica who eat dirt could have transient illness.** ATSDR found that children who eat about a teaspoon of soil at a time (and have a condition called pica)

may experience temporary nausea, diarrhea, vomiting or stomach cramps. These acute effects are unlikely to continue. Other long term adverse health effects, including cancer, are unlikely for all exposures.

- **Review of historical data does not change conclusion.** ATSDR found that dose estimates based on historic soil sampling present the same conclusions as the recent soil data. That is, with the exception of pica children, estimates of arsenic doses based on the above park activities are not likely to produce adverse health effects. As noted above, ATSDR limited its analysis to after 1977, when the Race Street facility was not operational.

ATSDR has prepared a graphic *Health Effects from Ingesting Arsenic*, which illustrates the range of exposure to arsenic at Swann Park in relation to the exposure that causes health problems (Figure).

ATSDR's Conclusions

ATSDR concluded that exposure to arsenic contaminated soil at Swann Park does not present a short or a long term public health hazard likely to produce health effects in individual users of the park, with the exception of young toddlers visiting the park exhibiting pica behavior.

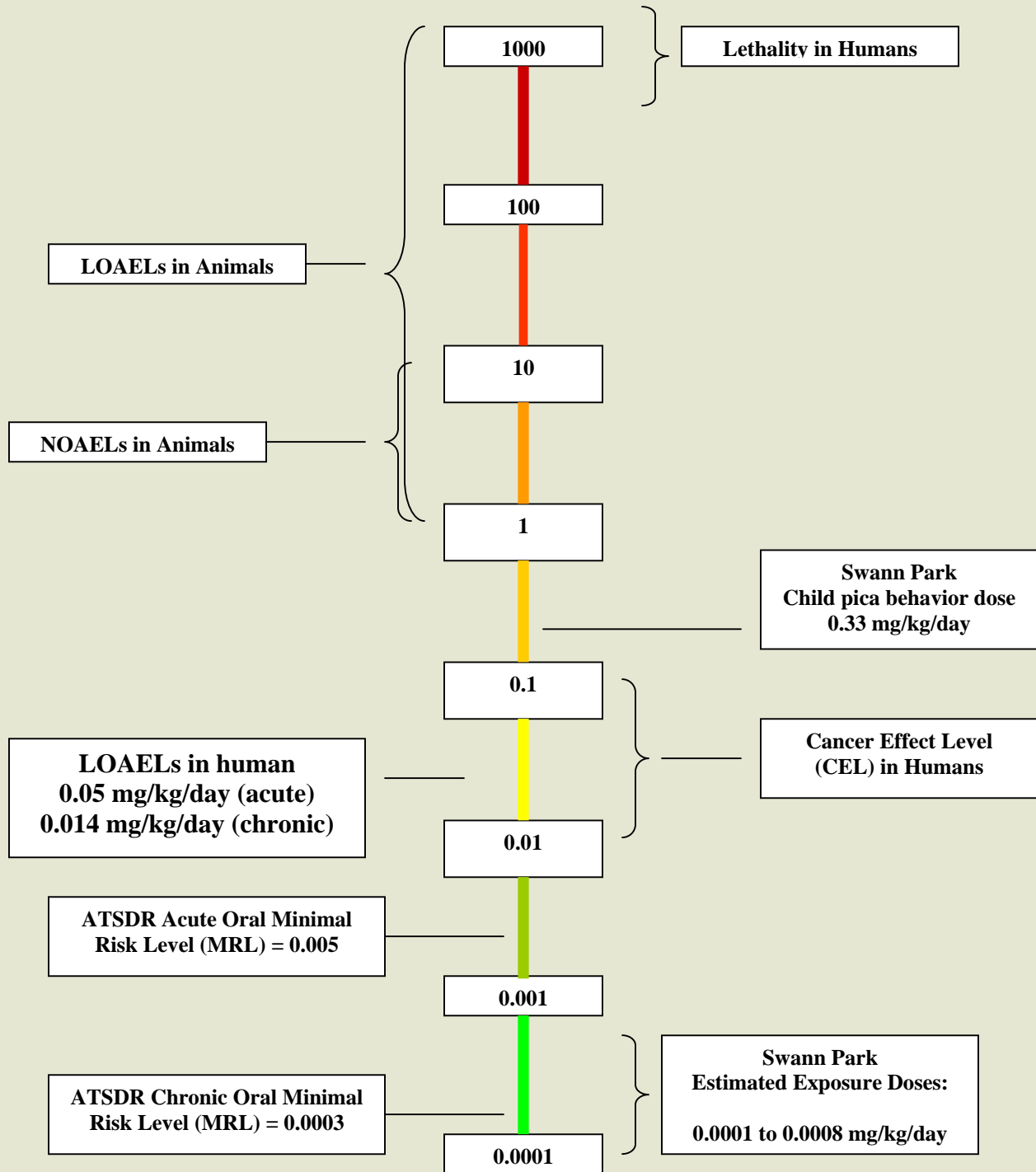
ATSDR does not recommend arsenic testing of individuals. According to the agency, any arsenic-specific test results may have little relation to Swann Park exposures. Community members who have already pursued hair testing may consult directly with ATSDR or have their physicians consult with ATSDR regarding interpretation of their results.

Additional collection and analysis of environmental samples for Swann Park is pending. ATSDR will evaluate these data as they become available and revise the conclusions and recommendations of this health consultation as appropriate.

Next Steps

There will be a community meeting to discuss the ATSDR Health Consultation at 6:30 at Digital Harbor High School on June 14, 2007. The agency will update its report based on any new information and testing that becomes available.

Health Effects from Ingesting Arsenic Exposure Dose (mg/kg/day)



Definitions: mg/kg/day = milligrams of arsenic / per kilogram of body weight / per day
 Acute exposure = up to 14 days; intermediate exposure = 15-364 days; chronic exposure = ≥ 365 days.
 NOAEL = No Observed Adverse Effect Level; LOAEL = Lowest Observed Adverse Effect Level