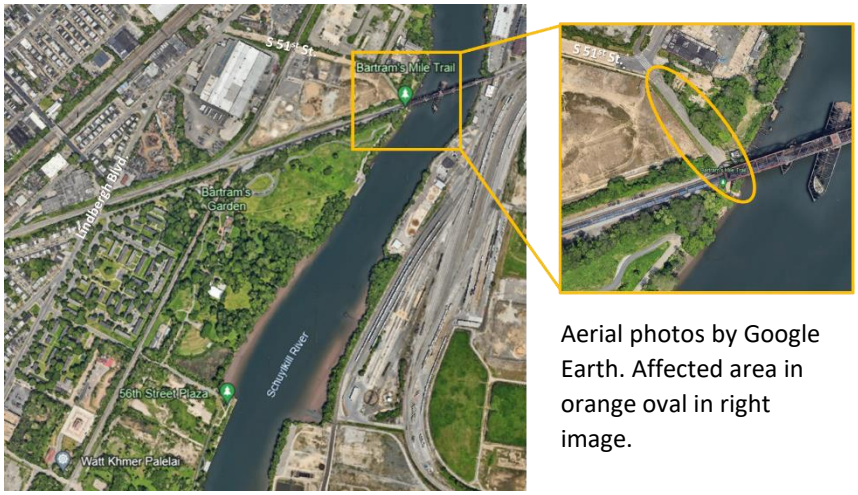
pennsylvania
DEPARTMENT OF HEALTH

BARTRAM'S GARDEN

POTENTIAL CHROMIUM CONTAMINATION NEAR BARTRAM'S MILE TRAIL

WHAT HAPPENED?

On July 17, 2024, the Pennsylvania Department of Health (DOH) was informed of possible chromium contamination at an area of Bartram's Mile Trail north of Bartram Garden Dock and Community Boathouse in southwest Philadelphia. This area of the park is adjacent to a former industrial site. In response to the suspected contaminant release, Bartram's Garden has closed the section of the trail and posted signs urging visitors to avoid the affected area. The Pennsylvania Department of Environmental Protection (DEP) is aware of the affected area and will be conducting environmental testing to determine if chromium is present.



Aerial photos by Google Earth. Affected area in orange oval in right image.

WHAT IS CHROMIUM?

Chromium is a naturally occurring element found throughout nature in several forms, most commonly as chromium (0), chromium (III), and chromium (VI). The form of chromium will determine the potential for toxicity, where chromium (III) is far less toxic than chromium (VI). Chromium is used in many industries, including metal production, and those involved in chemical and heat-resistant applications. Chromium (VI) is found in steel foundries and welding industries, cement production and application, electroplating, wood preservation, and textile dye industries. Chromium (III) is also used in some of these industries; in addition, small amounts of chromium (III) occur naturally in a variety of foods, such as fruits, vegetables, nuts, beverages, and meats. Small amounts of chromium (III) are needed for good health. The metal chromium, which is the chromium (0) form, is used for making steel. There is limited information about the health effects of chromium (0).

HOW CAN I BE EXPOSED TO CHROMIUM?

Chromium exposure can occur by breathing in (inhaling) contaminated air or dust. Inhalation exposure is of greatest concern for chromium, but this is most commonly a concern for workers who work in jobs that use chromium. You can also be exposed to chromium by skin contact with contaminated soil or water, unintentional ingestion (eating) of contaminated soil, or eating food or drinking water containing chromium.

WHAT HEALTH EFFECTS ARE RELATED TO CHROMIUM EXPOSURE?

Inhalation exposure to high levels of chromium (VI) may result in nasal cavity irritation and runny nose. It may also impact the respiratory system, causing shortness of breath, wheezing, coughing, and asthma. Skin exposure may result in skin ulcers and allergic reactions (which may present as redness and swelling).

Symptoms of chromium exposure from unintentional ingestion may be nonspecific. Some people might not experience any symptoms. Short-term (acute) ingestion of chromium exceeding dietary recommendations may result in abdominal pain, nausea, vomiting, diarrhea, anemia, and/or kidney and liver dysfunction.

Date updated: 07/19/2024

pennsylvania
DEPARTMENT OF HEALTH

BARTRAM'S GARDEN

Long-term (many years) inhalation exposure to chromium (VI) has been linked to lung cancer. This is most common among workers who are exposed to high levels of chromium on a regular basis for many years. It is unlikely that short-term exposure to chromium at low/moderate levels found in the environment will result in cancer or other severe health effects.

Symptoms for children are likely similar to those of adults.

HOW CAN I REDUCE THE RISK OF CHROMIUM EXPOSURE IN THIS AREA?

The risk of harmful effects from chromium exposure are dependent upon the amount of chromium present, in what form (III or VI), how you are exposed (breathing, touching, ingesting), how frequently you are exposed, and how long (days or years) you are exposed.

The potentially impacted area is frequented by visitors biking, walking, kayaking, and fishing. Visitors walking, running, or riding a bike on the trail through the area are at very low risk for exposure. Exposure to chromium can be reduced by washing hands or exposed skin thoroughly with soap and water to remove soil residue. Children should avoid playing in soil contaminated with chromium. Workers should avoid spending long periods of time in this area to reduce the risk of inhaling contaminated dust until it is known how much chromium is in the affected area. Workers should also thoroughly wash any skin exposed to the soil with soap and water to remove soil residue.

The risk of chromium exposure from consuming fish caught nearby is low since fish do not accumulate much chromium in tissue from water. Anglers should follow fish cleaning and preparation guidance provided by PA Fish and Boat Commission. Additionally, follow current fish consumption guidance for the waterbodies where you fish.

WHAT IS BEING DONE AT THE SITE NOW?

The DEP will perform soil sampling in the closed section of the trail where the discharge was observed in April 2024, and may conduct additional sampling, if deemed appropriate.

As a precaution, until sampling is completed, visitors to the park should avoid spending time in the area. If you have recently visited the affected area and are concerned about health effects related to potential exposure to chromium, please contact your primary care provider. You may also contact the Poison Control Center at (800) 222-1222 if you are concerned about possible chromium exposure.

RESOURCES FOR MORE INFORMATION

ATSDR Chromium ToxFAQs

NIEHS Hexavalent Chromium Health and Education

EPA Chromium Compounds Hazard Summary

PA Fish Consumption Advisories – 2024 PA Fish and Boat Commission Fishing Summary Booklet Excerpt

Updates from Bartram's Garden about the affected area

If you have any health-related questions, contact DOH at 717-787-3350, dehe@pa.gov or fill out an environmental health complaint form. If you have any environmental questions, please contact DEP's Southeast Regional Office at 484-250-5900.

Date updated: 07/19/2024