

# Fact Sheet

## Evaluation of PCBs in soil adjacent to walking path along Chesapeake Park Plaza roadway

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Lockheed Martin Middle River Complex  
2323 Eastern Boulevard  
Middle River, Maryland

Over the past three years, environmental sampling and investigations conducted in advance of the Block E soil cleanup at the Middle River site have identified areas of low-level concentrations of polychlorinated biphenyls (PCBs) in the surface soil. The PCB soil contamination is located on the unpaved sidings to the Chesapeake Park Plaza roadway, and within the grass-covered median strip.

A human health risk evaluation indicates that the theoretical health risk to walkers in this area is very low. Observations indicate that people typically walk on the edge of the asphalt, not the soil, which reduces the health risk even further.

Lockheed Martin is committed to being open and transparent in its environmental remediation communications. Therefore, even with such a slight risk,

**Four drops of ink in one 55-gallon barrel of water (mixed thoroughly) would produce an ink concentration of 1 ppm.**

walkers and runners should be aware of the PCBs along the edges and in the median of Chesapeake Park Plaza roadway so they can make informed decisions about their choice to walk/run in this area.

The human health risk evaluation was designed to be conservative (health-protective) in nature. The health risk assessment finds that for a person to potentially experience a health risk estimate greater than Maryland Department of the Environment (MDE) acceptable levels, a person would have to be exposed to soil along the Chesapeake Park Plaza roadway every good-weather working day for



approximately 26 years. The risk assessment assumes walkers encounter only PCB-containing soil and no clean soil. Actual risks to walkers, including those walking in the area over periods longer than 26 years, will likely be lower due to the conservative assumptions made in the assessment.

This human health risk evaluation assumes people use the area for a walk. The risk evaluation also assumes people walk on the unpaved areas along the sides or in the median of the roadway. Other possible land use scenarios were not evaluated, as walking or running appears to be the primary use for this area.

The graphic on page one shows sampling locations and findings, which range from non-detectable to a maximum of 12 parts per million (ppm) of PCBs in surface soil (as deep as ½ foot) with the majority of samples being less than 1 ppm. For illustration, the figure depicts concentrations reported above 1 ppm, sample locations without a data tag were less than this value.

For reference, MDE allows a PCB site-specific cleanup goal of 10 parts per million (ppm) in surface soils at the Middle River Complex, and 0.7 ppm for sediment cleaned up in Dark Head Cove.

Excavation of the grassy median strip and north side of Chesapeake Park Plaza will be incorporated into the Block E soil cleanup. This excavation will be performed in an abundance of caution, though not necessary per the risk evaluation.

The lower PCB concentrations found in Block F soil along the unpaved edge on the south side of the Chesapeake Park Plaza roadway will be reviewed further; however, no cleanup of these low concentrations is thought to be likely necessary to protect human health and the environment. Studies are underway to confirm this conclusion for Block F.

## Frequently Asked Questions

### ***1. What are the risks if a child/pet (instead of an adult) walks through this area?***

The health risks considered in the risk evaluation are cumulative. The risk evaluation evaluated a person frequently walking through the area over a period of 26 years from childhood through early adulthood. If a person walked through the area only during their childhood years, the period of exposure would be less than 26 years. The lifetime risk estimate for a person walking through the area

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only during their childhood years would be less than that evaluated in the risk evaluation for a person exposed for 26 years as both a child and an adult.

In the case of pets, they will be exposed to soil from many areas throughout the

day. Only a very small part of their daily soil exposure would be from the portion of Chesapeake Park Plaza where PCBs were found in soil along the edges and in the median of the roadway. Risks to pets would be small.

### ***2. What if I wear my walking shoes home and the soil that the shoes collect fall into my carpet? What if I have a toddler/pet at home playing on that carpet; what is the risk?***

It is possible that a small amount of PCB-containing soil could be tracked into the home. Soil on shoes from along the PCB-impacted soil areas around Chesapeake Park Plaza roadway would be mixed with soil, dirt, and dust from everywhere else one walks during the day. Also, a fraction of household dust comes from indoor sources. The resulting concentrations of PCBs in dust in the home would be much smaller than the concentrations present along Chesapeake Park Plaza.

### ***3. How long has Lockheed Martin known about the PCBs in the surface soils at this site? Why hasn't something been said before?***

This investigation has been ongoing for the last three years. Based on the risk evaluation there is little cause for concern. Following our ongoing practice of sharing our data, we are providing this information so walkers and runners so they can make their own informed decisions about where they walk around the facility.

### ***4. Will there be any restrictions put into place limiting access to this area?***

No restrictions are required due to the relatively low level of risk to walkers around the site.

### ***5. Is the general public at risk? Many people in the neighborhood have lived here all their lives and walk their children and pets through the area.***

The risk evaluation performed for people walking along Chesapeake Park Plaza are applicable for the general public. MDE's acceptable risk level is an increased risk of cancer of 1 in 100,000 people or less. This is considered to be negligibly small compared to the overall background risk of cancer. The background risk of getting cancer is about 1 in 3 and the background risk of dying from cancer is about 1

in 5. While we cannot say there is no added risk by walking along the roadway, the added risk is small.

**6. I often sit near this area and eat lunch, am I in any danger from wind-blown PCBs?**

Inhalation of dust containing PCBs and accidental ingestion of very small amounts of soil are included in the risk evaluation performed for the site. Eating lunch near this area would not result in greater risks than those estimated for walkers. The area soil on the edge of the road and in the median is generally stable with established grass cover which limits wind-blown dust.

**7. How did the PCBs come to be in the surface soil?**

It's possible PCBs moved out of the adjacent Tax Block E, possibly when Building D was demolished.

**8. What are the known potential health effects of prolonged PCB exposure?**

At higher levels than those observed along Chesapeake Park Plaza roadway, the Agency for Toxic Substances and Disease Registry (<https://www.atsdr.cdc.gov/ToxProfiles/tp.asp?id=142&tid=26>) says PCBs can potentially cause skin conditions similar to acne in adults and may cause irritation of the nose and lungs, gastrointestinal discomfort, changes in the blood and liver, and depression and fatigue. In children, PCBs can cause low birth weight, neurobehavioral and immunological changes. EPA considers PCBs to be a probable human carcinogen.

**9. I have worked at this facility, lived in this neighborhood for 50-years, and walked on Chesapeake Park Plaza roadway every day; what is my risk?**

The risk estimates are based on 26 years of exposure. A similar calculation performed based on 50 years of exposure would result in risks about twice as high as those estimated for the person who walks there for 26 years. These risk estimates would be higher than the screening level established by MDE, but it is important to remember that the calculations are designed to be conservative and health-protective. Actual risks would almost certainly be less than those estimated in the risk evaluation. Individuals are not exposed solely to PCB-impacted soil, as is assumed in the risk assessment. The soil concentration that should be used in the analysis to obtain a more realistic health estimate would be the average soil concentration to which a person is exposed over the course of a day, which would include mostly clean soil averaged with the small part of the day when a person walks along the affected portion of Chesapeake Park Plaza.

**10. My children and grandchildren have walked along the Chesapeake Park Plaza roadway as they travel to and from school at Hawthorne Elementary. What is their risk of exposure?**

The risk calculations included 26 years of exposure during childhood and early adulthood. Because the health effects evaluated are cumulative, risks to children walking through the area during their school years (a period less than 26 years) would be less than those calculated for a walker exposed for 26 years as both a child and an adult.