

Palmerton Zinc Site

Palmerton, Pennsylvania

EPA Region III



February 1996

EPA RESPONDS TO FLOOD EMERGENCY



At approximately 8:00 a.m. on Monday, January 22, a concerned citizen of Palmerton informed the U.S. Environmental Protection Agency (EPA) that the Aquashicola Creek had flooded over the weekend. The citizen reported that the basements of people living in the 500 through 600 blocks of Lehigh Avenue and the 500 through 900 blocks of Delaware Avenue now were covered with mud. EPA immediately assembled a team of specialists to travel to Palmerton, sample the mud in these homes, and determine whether the mud posed a threat to the health of the residents.



By that afternoon, EPA's team had arrived in Palmerton and begun sampling. The team arranged with a contracted lab to analyze the samples and provide results within 24 hours. EPA then examined the results and determined that the mud may pose a potential threat, especially to children, based on how it is handled.



EPA immediately drafted a document describing the threat posed by the mud and listing guidelines for citizens to follow when cleaning the mud from their basements. EPA hand-delivered copies of the document to the homes that were sampled and provided a copy to the local press. For your information, EPA has also provided a copy of the document on the other side of this fact sheet.



The lead levels in the mud ranged from approximately 120 parts per million (ppm) to 930 ppm. Cadmium levels ranged from approximately 5.7 ppm to 130 ppm. Zinc levels ranged from 1,100 ppm to 24,000 ppm. These levels are typical of the levels found in Palmerton soil. Parts per million is a measurement term referring to how many ounces, pounds, etc. of a substance can be found in one million ounces, pounds, etc. of another substance (e.g., soil).



The flood emergency was an unfortunate occurrence. But due to the quick action of citizens, borough officials, and EPA, the potential threat posed by the mud was considerably lessened. EPA greatly appreciates the cooperation and quick response of borough personnel, particularly Rodger Danielson, the Borough Manager, who met with the EPA team during the sampling. EPA also appreciates the efforts of citizens who cooperated with the sampling and followed the guidelines in cleaning up their homes. And finally, EPA thanks the citizen who first alerted the Agency to the situation.



During the flood cleanup, someone circulated handmade bulletins inviting residents to contact EPA to have their homes cleaned and carpets replaced because of the flood. EPA informed all citizens who called that the levels of lead, cadmium, and zinc in the flood mud did not meet the criteria established under the interim removal action and therefore their houses were not eligible for cleanup. Most residents had begun cleaning their homes immediately after the flood and further cleanup was unnecessary.



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The mud that was washed into Palmerton homes during the flooding of the Aquashicola Creek that occurred on January 19 and 20, 1996 may pose a potential health threat, based on the levels of lead, cadmium, and zinc it contains and how it's handled. EPA's preliminary sampling results suggest that any threat will be primarily to children. Adults who wish to clean the mud out of their homes can do so safely if they follow a few simple procedures.

Because the contaminants in the mud are metals, uptake through the skin is not of great concern. Therefore, slight skin contact with mud should pose no significant risk. Incidental ingestion of mud (for example, from eating or smoking with unwashed hands) has a moderate potential for risk. The most dangerous exposure would be from inhaling dust raised by vacuuming or sweeping dried mud.

Exposure to metals in mud can be minimized by following a few simple procedures:

1. Keep small children away from the mud. If they contact it, wash the mud off as soon as possible, especially if the mud is on their hands.
2. During cleaning, wear rubber boots, rubber gloves, long pants, and a long-sleeved shirt. Keep the mud off your skin to the extent possible. In particular, try to keep mud out of your boots and gloves.
3. Wash your hands carefully before eating or smoking. When you're finished working for the day, wash the mud off your gloves and boots, and put your clothes in the laundry. Bathe. Put on clean work clothes before starting work again.
4. Keep the mud wet. Don't sweep or vacuum dried mud. Instead, wash the last of the mud up and collect it with a mop or wet vacuum. In general, don't do anything that would turn the mud into dust.

Given the moderate concentration of lead, cadmium, and zinc in EPA's preliminary samples, risk from exposure is not likely to be great. However, these common-sense precautions will further reduce any possibility of harm.

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