

FREQUENTLY ASKED QUESTIONS #1 Environmental Health & Safety Issues Raymark Superfund Site, Stratford, CT

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U.S. Environmental Protection Agency
Connecticut Department of Environmental Protection
Connecticut Department of Public Health
Stratford Health Department

1. What is Raymark waste?

Raymark waste (RW) is a manufacturing waste material from the former Raybestos Industries, Inc. facility formally located at 75 East Main Street. This material contained many chemicals now known to be hazardous. As a result of intensive sampling at the former Raymark facility, it was determined that in nearly all cases RW was found to contain asbestos, lead, polychlorinated biphenyls known as PCBs (Aroclor 1268, a specific form of PCB), and copper. Based on these findings, and working closely with the Raymark Advisory Committee (RAC), RW in soil was defined as having both asbestos (above 1%) and lead (above 400 parts per million (ppm)) and either PCBs (Aroclor 1268)(above 1ppm) and/or copper(above 288 ppm) in a single sample from a single sampling depth.

2. How can Raymark waste affect health?

It is important to keep in mind that the excavation and transport of Raymark waste from the OU6 properties will not cause adverse health effects because engineering controls such as dust suppressants and access restrictions will be in place to prevent exposures. These controls are considered to be “standard engineering practices” and have been proven successful at many sites throughout the country.

For purposes of evaluating risks, however, when an individual is exposed to a hazardous substance, several factors determine whether harmful effects will occur and the type and severity of those health effects. Those factors include:

- the concentration of the chemical (how much),
- the duration and frequency of exposure (how long, how many times),
- the route of exposure (breathing, eating/drinking, skin contact), and
- the person’s individual characteristics (age, diet, lifestyle, genetics).

The main contaminants in Raymark waste are asbestos, lead and, PCBs. The following paragraphs provide information about health effects from high levels of exposure to lead, asbestos and PCBs.

LEAD

Lead can affect many organs and systems in the body but the most sensitive is the nervous system, particularly in children. If children get high levels of lead into their bodies (which most commonly happens when they eat lead-based paint chips), they can have slower mental and physical growth. High levels of lead exposure in adults can damage the nervous system and male reproductive system. Pregnant women who are exposed to high levels of lead can give birth to premature and smaller babies. For additional information about lead, consult the Federal Agency for Toxic Substances and Disease Registry (ATSDR) fact sheet available at: <http://www.atsdr.cdc.gov/tfacts13.pdf>

ASBESTOS

Asbestos is a fibrous mineral that occurs naturally in the environment. We are all exposed to some asbestos everyday in the air we breathe. Asbestos mainly affects the lungs and the membrane that surrounds the lungs. Breathing high levels of asbestos fibers for a long time, typical of exposures experienced by people who worked in the asbestos industry, may result in scar-like tissue in the lungs and in the pleural membrane (lining) that surrounds the lung. This disease is called asbestosis and is usually found in workers exposed to asbestos, but not in the general public. People with asbestosis have difficulty breathing, often a cough, and in severe cases heart enlargement. It is known that breathing high levels of asbestos can increase the risk of cancer in people. Studies of workers exposed to high levels, usually for long periods of time, indicate that two types of cancer are caused by exposure to asbestos: lung cancer and mesothelioma. Cancer from asbestos does not develop immediately, but shows up after many years (20-40). For additional information about asbestos, consult the ATSDR fact sheet available at: <http://www.atsdr.cdc.gov/tfacts61.pdf>

PCBs (POLYCHLORINATED BIPHENYLS)

Polychlorinated biphenyls are mixtures of individual chlorinated compounds that have been used as coolants and lubricants in electrical equipment because they don't burn easily and are good insulators. Workers exposed to large amounts of PCBs can get skin rashes and liver damage. Some babies born to women who ate lots of PCB-contaminated fish were smaller in size, and had slower development and immune system problems. PCBs are assumed to cause cancer based on studies in animals. For additional information about PCBs, consult the ATSDR fact sheet available at: <http://www.atsdr.cdc.gov/tfacts17.pdf>

Again, the health effects described above are possible impacts from exposures to **high** concentrations of these chemicals. As stated above, the excavation and transport of Raymark waste from the OU6 properties will not cause adverse health effects because engineering controls such as dust suppressants and access restrictions will be in place to prevent exposures.

3. Why does the waste have to be dug up, isn't it safer to leave it in place?

The concern about leaving Raymark waste (RW) on numerous properties in Stratford is that future exposures may occur (through improper maintenance, storm events, etc.). EPA did evaluate an alternative in the draft Feasibility Study (FS) that considered leaving all the RW in place (cap in place); identified as Alternative #2 in the FS report. Even with capping in place, however, excavation of approximately 2-4 feet of RW would be required to develop a stable sub-base in order to construct a cap. Additionally, at many properties, capping in place without first excavating the RW would result in the entrances of buildings being below ground level. Any RW excavated for the construction of a cap would still need to be addressed.

In addition, properties that have RW capped in place would require operation and maintenance (O&M) efforts (routine cap inspections and groundwater monitoring) for as long as the waste remains in that location (forever). These O&M efforts are expensive, ranging from \$20,000 – \$75,000 annually, depending on the size of the cap and number of monitoring wells on a parcel. Groundwater monitoring is typically performed quarterly for the first two years, then either every nine months or annually thereafter, depending on the monitoring results. The responsibility to perform and to pay for these O&M efforts, in accordance with the federal Superfund law, would first fall to the State of CT. The State of CT would then require either the property owner or the Town of Stratford be held responsible for O&M efforts and the associated costs for their property.

4. Why dig up Raymark waste when we have never had health problems in Stratford from the Raymark waste?

It is true that the health studies conducted in Stratford over the years have not found associations between exposure to Raymark waste and health effects. However, it is important to understand that decisions about cleanup are made based on evaluations of risk, not based on finding associations between exposures and disease. The evaluation of risk that EPA conducted to support the need to cleanup the OU6 properties included an evaluation of past, present and future risks. *Often, it is the potential for future risks that drives the need to clean up a site.*

5. What health studies have been conducted in Stratford?

In 1993, when it became known that Raymark waste in Stratford posed a health threat, the Stratford Health Department (SHD), in coordination with CT Department of Public Health (CTDPH), held 11 free, voluntary blood lead testing clinics. During these clinics, approximately 1500 Stratford residents had their blood lead levels analyzed. A small percentage had elevated blood lead levels. It was not possible to determine whether their elevated blood lead levels were from lead paint, exposure to Raymark waste, or some other source of lead. However, it was determined that people with elevated blood lead levels were

more likely to live in older homes. This suggests that exposure to lead paint was likely the significant source of their lead exposure.

In 1998, in response to concerns in the community about Raymark waste, the CTDPH, in coordination with the Federal Agency for Toxic Substances Disease Registry (ATSDR), completed a health study investigating whether low birth weight and cancer in Stratford were associated with how close residents lived to Raymark waste sites. The study found that bladder cancer was slightly higher among people who lived close to Raymark waste. However, this does not necessarily mean that living near Raymark waste caused more bladder cancer. The study can detect whether there is an association, but not cause and effect. There was no association found between Raymark waste and any of the other cancers looked at, or with low birth weight.

Again, responding to community concerns and using more recent cancer data that was not available at the time of the 1998 study DPH did a follow-up study of bladder cancer and Raymark waste in 2001. DPH found that the slight elevation in bladder cancer in earlier years was not present in the most recent time period.

6. Are there any plans to update these health studies?

The 2001 follow-up health study recommended that more recent bladder cancer data be reviewed by DPH when those data become available. Several years of cancer data are now in the tumor registry which was not available when the 2001 study was completed. DPH will update the previous health studies with an evaluation of recent cancer data.

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