

ST. LOUIS POST-DISPATCH

SUNDAY FEBRUARY 24, 2002

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Millions of U.S. homes have asbestos-tainted insulation

The government knows but hasn't warned the public about it

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Of the Post-Dispatch

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In 1951, Edward Harashe headed to the hardware store to make his one-story white house in St. Louis a little warmer and snugger.

He came home with 20 bags of Zonolite insulation, hauled them to his attic and spread the loose, silvery-tan, popcorn-like insulation between the joists.

Forty years later, that home improvement project killed him.

Hundreds of others have died from exposure to asbestos in Zonolite, which can be found in millions of homes across the country.

But the Environmental Protection Agency and other federal health and safety groups — all of whom know that Zonolite contains high levels of deadly asbestos fibers — have failed to warn the public about the potential hazard in their homes.

Zonolite came from ore in a now-closed 80-year-old vermiculite mine that was owned since 1963 by W.R. Grace & Co. in Libby, Mont. The small town near the Canadian border is where hundreds of miners and their relatives have died of asbestos-related diseases.

In August 2000, Dr. Hugh Sloan, an



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As EPA industrial hygienists and other health specialists examine 800 homes in Libby, Mont., to measure the levels of asbestos contaminating the vermiculite in Zonolite insulation. The EPA has stalled on telling the owners of millions of homes elsewhere in America that they also may have the same cancer-risk above their heads.

assistant U.S. Surgeon General, urged that the public be told about Zonolite.

"Even minimal handling (of Zonolite) by workers or residents poses a substantial health risk," Sloan wrote in a letter requesting help from the director of the National Institute of Occupational Safety and Health. Sloan said that investigations have shown that even casual handling of the insulation can generate airborne exposures up to 150 times the asbestos level that the Occupational Safety and

Health Administration considered safe for workers.

After months of intense research on the people of Libby who have contracted the disease, many of EPA's own health experts have joined Sloan in the call for public notification. Yet, no decision has come from Washington.

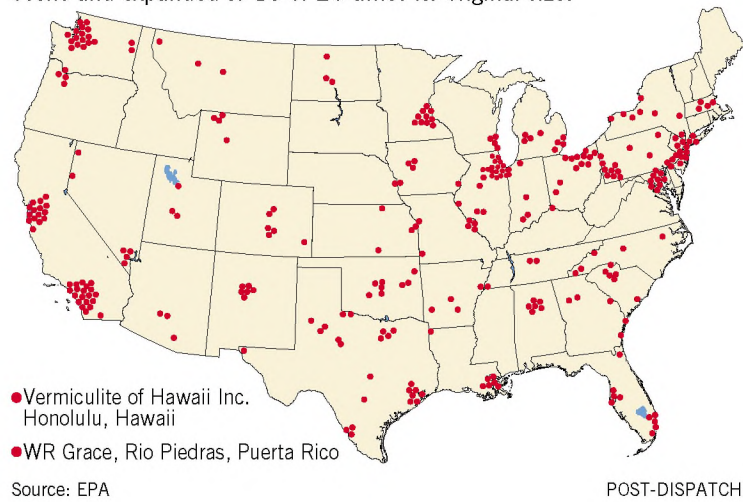
"While EPA has not made specific announcements about Zonolite insulation, the agency's Web site contains practical information for

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Vermiculite insulation plant locations

W.R. Grace and other companies shipped raw vermiculite ore to plants around the country. These plants are where the ore was passed through ovens and expanded to 15 or 20 times its original size.



homeowners to learn more about asbestos,” said Bonnie Piper, an agency senior spokeswoman.

“EPA is very concerned that homeowners and repair people have the information they need to ensure that their health is protected.”

Asked how this could happen when people haven’t been alerted to the existence of the potential danger, Piper said she would try to get an answer.

Meanwhile, government health experts say the best protection from asbestos is to stay away from it and leave it alone. If it’s in an attic where the Zonolite isn’t disturbed and the asbestos fibers don’t become airborne, the risks may be minimal.

Old houses in cold climates

The number and location of homes that may contain the tainted insulation is elusive. Grace sales reports, shipping papers, trial testimony and interviews with former Zonolite sales managers support estimates ranging from 12 million to 35 million homes, offices and schools.

Illinois may have as many as 800,000 homes with Zonolite; Michigan as many as 700,000. Missouri is likely to have Zonolite in 380,000 homes. There could be 60,000 homes, offices and schools with Zonolite in the St. Louis metro area.

In interviews with people from 12 metro area companies that install insulation, six said they wouldn’t recognize the vermiculite product if they saw it. Six others, who knew what to look for, estimated the asbestos-containing fluff is in at least one out of five homes that were built or insulated between 1950 and the early 1990s.

“Based on the Grace documents we’ve reviewed, it looks like old houses in cold sections of the country are likely places to look,” says Paul Peronard, EPA’s on-scene coordinator for the team working at Libby. “If you live in a community that had a vermiculite expansion plant, that increases the probability of heavy use of Zonolite.”

Peronard is talking about the more than 293 plants in 42 states to which Grace shipped raw vermiculite ore. At these facilities the mica-like mineral was heated in large vertical ovens until the ore expanded or popped to 15 or 20 times its size.

According to Grace and EPA records, four of these expansion plants were in St. Louis, one in Kansas City and another in Joplin, Mo. There were 22 vermiculite operations in Illinois, but none near St. Louis.

The mine at Libby was the world’s largest supplier of vermiculite for 80 years. Much of the expanded vermiculite was sold as insulation. It

also has been used in wall board and other construction products, in cement coatings for steel beams for fireproofing, as packaging material, as well as an expander for nursery and lawn products and animal feed.

While Libby is closed, vermiculite is still mined in Virginia and South Carolina. The owners of these mines — Virginia Vermiculite and W.R. Grace — say their ore is free of asbestos contamination. But testing by three federal agencies has found tremolite asbestos in the ore. Tremolite is one of the six asbestos fibers regulated by the government. It also is believed to be the most dangerous.

Battle within the EPA

The issue of announcing the dangers is mired in an internal dispute at the EPA. Many, even in headquarters, believe the public must be told of the potential danger they face. Others dread the agency’s doing so, fearing that the public would expect the government to pick up the cleanup tab, which one EPA manager estimates to be over \$10 billion.

Toxicologists, epidemiologists and environmental specialists working to evaluate and remove the asbestos contamination in Libby have clearly documented the health hazards of Zonolite insulation.

On Sept. 7, EPA Administrator Christine Todd Whitman went to Libby. In a town hall meeting that had the typically stoic Montanans applauding wildly, she promised to help those in Libby with contaminated insulation in their homes.

She said also that what her agency had learned about asbestos in Libby would be used throughout the country.

“We want to know if there are other problem areas out there,” the chief environmentalist said. “If there are, we’ll take the appropriate steps to address them.

“We want everyone who comes in contact with vermiculite — from homeowners to handymen — to have the information needed to protect themselves and their families,” she added.

It has been five months since Whitman made her speech, yet the agency has not issued a nationwide advisory, nor has it approved a Public Health Emergency Declaration which would allow the dangerous insulation to be removed from homes in Libby.

Several people in EPA headquarters say Whitman was outraged in a meeting this month when she learned that her agency had not OK'd the health declaration. She also expressed anger that the agency had made no progress in determining how the public elsewhere would be told of the potential danger in their homes.

"Ms. Whitman is being used as a scapegoat for the agency's mishandling of the contaminated dust from the World Trade Center and probably will wrongly take the heat for concealing the dangers from the attic insulation," said Cate Jenkins, a senior EPA scientist and 22-year veteran with the agency. "As the administrator, responsibility falls on her desk, but it's a huge agency, and she has to accept the information and guidance from those who claim to have the technical knowledge."

The EPA's Piper said Thursday that her agency was working rapidly to complete decisions on the declaration

and is "working closely with other federal agencies" on what to do about Zonolite in homes outside Libby. Fred Blosser, of NIOSH, said his agency had worked with the EPA's team in Libby but said his agency was "not involved in EPA's communication of its studies" to homeowners throughout the country.

At the Agency for Toxic Substances and Disease Registry, CDC's research arm, Kathy Skipper echoed that her agency had also worked on studying the dangers of Zonolite but said the agency knew nothing of the EPA's plans to notify homeowners. At the Consumer Product Safety Commission, the agency that most of those embroiled in the issue believe has the responsibility to advise the public, spokesman Ken Giles said the safety commission was "talking with EPA to make sure our statement is consistent with theirs."

Zonolite is a killer

Representatives of W.R. Grace did not respond to a request for comment on this story. Last year, William Corcoran, Grace's vice president for communication, said: "There is no proof that Zonolite insulation is dangerous. The extensive testing that we've done shows the material is safe."

It wasn't for Edward Harashe, according to a jury verdict against Grace.

The 68-year-old St. Louis plumber suffocated 40 years after being exposed to asbestos in the Zonolite he dumped in the attic and walls of his home on Alabama Avenue.

Harashe didn't feel well but didn't find out why until he went for a medical screening at his union hall on a muggy morning in August 1990. His X-rays showed suspicious shadows in his lung. A biopsy identified them.

The father of four and grandfather of ten had cancer of the lung, not just the garden variety, which was bad enough, but he had mesothelioma, which is cancer caused by asbestos, and it's fatal. It was a painful death because mesothelioma surrounds the lung and prevents it from expanding. Harashe slowly suffocated.

Dr. Arthur Baue, then chief of thoracic surgery at St. Louis University Hospital, said "the pleural lining of the chest wall, should only be a shiny membrane a few cells thick, but Ed's was roughly a half-inch thick." The lung was compressed.

"The average life expectancy with a tumor like this is between 10 and 15 months," Baue said.

Harashe worked 40 years as a plumber and pipefitter, first in a family business with his father and brothers, and then for the city's Board of Education.

In testimony in his suit, Harashe said he bought the Zonolite in 1951. "I bought 15 or 20 bags of it, shoved it through a trap door in the ceiling and spread it around the floor," Harashe recalled. "There was dust everywhere. My eyes, ears, nose, hair, everywhere."

Neither Grace nor the original Zonolite company that came before it added asbestos to the millions of tons of vermiculite pulled out of the mine. The asbestos fibers in the ore were a contaminant called tremolite.

Dr. James Millette, a physical scientist who was with the EPA for 11 years and headed its electron microscope



This is expanded vermiculite after the raw ore is passed through an oven at one of almost 300 plants in the country that produced Zonolite insulation and other products for gardening and construction. Millions of homes throughout America have the silverish-tan puffs, which usually are the size of a nickel or dime but can sometimes be pea-size.

operation, analyzed the insulation in Harashe's attic. He said each bag of vermiculite Harashe used contained 111 billion tremolite fibers.

Harashe testified: "I had no idea it was dangerous. The bags said it was safe and no mask or gloves were needed.

"I guess it wasn't that safe."

Harashe won his suit. In December 1991, the jury ruled that Zonolite had caused his mesothelioma. Grace appealed the decision. Harashe died on Jan. 25, 1993, 10 days before the appeals court upheld the jury's decision.

Grace has settled hundreds of suits that claimed death or illness from exposure to Zonolite.

A laboratory of the dead and dying

In the more than two years that the EPA's Paul Peronard and his team have worked in Libby, the tiny community has become an irreplaceable, and often painful, laboratory.

In Libby, they have studied the effects of asbestos exposure on the thousands of people who have clinical signs of asbestos-related disease and examined the medical records of some of the hundreds who died. With the aid of researchers from NIOSH and the Agency for Toxic Substance Disease Registry, the team has dispelled many of the 20-year-old theories that have guided government regulation of asbestos.

For example, they debunked the long-held belief that to become ill from asbestos a person had to have years of high-level workplace exposure.

Among the dead and dying in Libby

are the vermiculite miners who brought the fibers home on their clothes and their children and wives who were contaminated when they hugged their father or washed his work clothes.

Also among the body count are people who never worked at the mine, who had casual exposure to the tremolite in the air or in the Zonolite insulation.

"There is clinical proof now that a single relatively short exposure can result in disease," said Dr. Aubrey Miller, a U.S. Public Health Service epidemiologist working on the EPA team in Libby. "This research supports our position that Zonolite attic insulation poses a risk, even to those with casual exposure. It is not a risk that can be ignored."

Those researching the Zonolite threat say the average person goes into his or her attic three times a year.

"If it's an older house, it's probably more often," said Dr. Christopher Weis, an EPA toxicologist on the team. "If they sweep up the dust, move boxes around, do any repair work — like installing fans or light fixtures — they can stir up enough asbestos fibers to endanger their health."

Even former Grace employees urge caution dealing with the Zonolite insulation.

Tom Hamilton was an industrial hygienist for Grace for 12 years before the production of Zonolite has halted.

"Anyone who is involved with Libby vermiculite that is in the loose form should take great care to ensure that they do not expose themselves to the dust from this material," he said. "It will release high levels of tremolite on a short-term basis. I have measured this exposure potential on several occasions, and it is real."

Grace has always insisted that there was nothing hazardous in the insulation. The printing on the Zonolite bags found in many attics said: "Contains no harmful chemicals" and "masks, gloves or special (safety) equipment" were not needed.

But thousands of pages of Grace correspondence, memos and reports show the company was well aware of the asbestos in the insulation and the health hazards it presented.

For example, throughout the '70s, there were repeated discussions between Grace's lawyers and its sales and marketing managers over the need for, and the impact of, warning customers about the asbestos in the products.

Grace Executive Vice President E.S. Wood wrote in an internal memo on May 24, 1977, that he anticipated that the Consumer Product Safety Commission would take action to protect the public. He predicted a "high risk that our products will be banned in several significant uses," and cited the Zonolite attic insulation and horticultural vermiculite.

"We believe that a decision to affix asbestos warning labels to our products would result in substantial sales losses," he added.

Grace made the decision not to label products, taking the position that tremolite fibers that contaminated the vermiculite could go unnoticed.

Mother worries about people outside Libby

Shelly Spencer knew there was Zonolite in her attic when she bought her house in Libby in 1985. But she didn't know the insulation could be deadly until the EPA told her last year.

Now she knows, but she's trapped in a house she can't sell.

"No one would buy it with asbestos in the attic. I can't just move out. Where would the children and I live?" asked the 38-year-old single mother who works at least two jobs.

She ran her hand over the white door jam between the kitchen and living room. It's etched with lines from the floor up about four feet. The lines and names mark the growth of her two daughters — Tessa 11, and Tahnee, 9.

"I keep wondering what have I done to my kids. They were raised here from birth," she said. "They've been exposed to this poison from day one. W.R. Grace never told anyone how dangerous it was.

"I put the girls to bed and silently pray that they don't breathe any dust tonight. The fear grows every day as I wait for EPA to come clean up this stuff."

Last week, members of the EPA's Libby team spent days with lawyers from headquarters hammering out the final wording of the emergency

declaration for the Montana town.

“I think we’ve got a document that everyone can agree upon, and I hope it will be signed shortly and we can get on with removing this poison from Libby’s homes,” said Peronard.

But perhaps not.

On Friday, a manager in EPA’s office of toxic substances issued a memo opposing the Libby clean up. He repeated earlier concerns that a precedent will be set for cleaning up homes in the rest of the country.

The asbestos exposures in Libby are “no different from anywhere else in the country and as a result do not warrant removal,” the memo read.

Meanwhile, Spencer worries about the people who have Zonolite in their attics and don’t know it.

“The government says millions of homes across the country have the same poisonous insulation. What possible excuse could they have for not telling the public?” she asked. “They have a right to know. They need to know to protect their children and themselves.” Duc Nguyen is an environmental engineer with the EPA’s Libby team. He says he understands exactly how Spencer feels. “We both have children, and no one wants their children put in

danger,” said Nguyen.

The EPA will remove the Zonolite from Spencer’s home, when headquarters approves the emergency declaration.

Nguyen, who deals with the families of the dead, dying and endangered every day, said the tremolite in the insulation is a very dangerous fiber.

“The evidence is compelling,” Nguyen said. “People are dying here. The public should be made aware that it may be in their attics and walls. They should at least be told not to disturb it.

“If you know something is dangerous, you put it out. You can’t keep it from the people,” Nguyen said. “Even though the information will create a lot of concern, the public has a right to know. It’s their lives.”

Gayla Benefield lost her mother and father to the asbestos from the Zonolite mine. Now she and her husband, David, have been diagnosed with early signs of the disease.

“There is no excuse, absolutely none at all to keep this a secret from the people in danger,” she said. “People’s lives around the country are hanging in the balance waiting for their government to make a decision on whether to tell them the truth.”

No reason to panic

The feather-weight pieces of Zonolite insulation is usually silvery-tan in color and, most often, about the size of a nickle. However, some Zonolite that was sold was about the size of pea.

Government health experts say those with insulation in their homes should not be overly apprehensive.

The consensus is: leave it alone.

“If the attic is well sealed from the rest of the house there should be minimal danger to the rest of the house,” said Peronard. “If you have to work in the attic, do not disturb the insulation. Tests have shown that the slightest disruption can send the tremolite fibers into the air, where they can be drawn into the lungs.

“If you’re a do-it-yourselfer or someone who’s in attics every day — electricians, telephone people, cable installers, the heating and cooling people — get and wear the proper respirator and change your clothes before you go home.”

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