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Data Unclear on Possible Peril Of Asbestos in Drinking Water

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Special to The New York Times

WASHINGTON, July 15—How many other communities across the country may, like Duluth, Minn., have possibly hazardous quantities of asbestos in their drinking water?

The Federal authorities would like to know. But at this juncture, a panel of experts concluded last week, scientific imponderables preclude even a meaningful question for the answer.

The Environmental Protection Agency cautioned last month that asbestos particles from nearby large scale dumping of iron ore tailings into Lake Superior might be an undesirable element in the city's water supply.

While asbestos has been identified as a cause of lung cancer through inhalation, little is known about its effects when swallowed. Rather than declaring the Duluth water unsafe for general consumption, the E.P.A. suggested that pending clarification of the problem, the water not be given to infants and children who had not already had years of exposure.

Analysis Under Way

An extensive series of analysis of human tissue samples is being conducted to elucidate asbestos - ingestion effects, connection with a Federal suit in Duluth to stop the Reservoir Mining Company from putting crushed rock from which iron has been extracted.

Meanwhile, anxious queries have been coming into Washington from other communities and a task force of specialists from the E.P.A., the Council on Environmental Quality and the Food and Drug Administration is exploring the implications of the Duluth situation for the rest of the country.

"We know there's a fibrous material like asbestos in most water supplies, and asbestos is fairly ubiquitous geologically," one researcher said, adding that its occurrence generally was presumed to be "probably at levels that aren't harmful."

Millions of samples of air and water from all parts of the country have been put through chemical analysis in recent years, but none of this work is of any help now because asbestos was not one of the substances checked for.

Obstacles Noted

The interagency task force's immediate inclination was to mount a nationwide survey of the incidence of asbestos in water supplies.

However, at the panel's bi-weekly meeting here Tuesday, discussions produced two formidable obstacles to setting up such a survey.

"We don't know what size particles we're looking for, in terms of physiological damage," said Warren Muir, a chemist for the Council on Environmental Quality. "Secondly, we don't know yet of any analytical method that could be geared into a large scale survey to produce comprehensive findings in a relatively short time."

The particles we have to deal with range from two-tenths of a micron [which is a millionth of a meter] to two microns in size. They're long enough that theoretically you could see them in an ordinary microscope. But they're extremely narrow, and without width you can't see length. So you have to go to an electron microscope. Such a microscope in effect registers an electronic "shadow" of objects too small to be seen by plain magnification.

A Question of Capacity

"There aren't a lot of electron microscopes in use, and analysis is a fairly sophisticated operation," Mr. Muir continued. "One sample may take most of a day to check out. So the prospect of doing thousands upon thousands of analyses this way raises a big question about what our capacities are."

Only a few scientists have done much research on the medical affects of asbestos particles. One is Dr. Irving J. Selikoff, head of the Environmental Sciences Laboratory at Mount Sinai Hospital in New York City. He did the principal study of slow - developing lung cancer among New Jersey shipyard workers exposed to asbestos spraying during World War II.

Dr. Selikoff has been the principal medical consultant to the Government on the Duluth situation and has been directing the current tissue studies. Officials hope that some conclusions from these will be available for the next court hearing in the case Aug. 1.

Until considerably more information has been developed about Duluth, Dr. Selikoff told the task force last week, it would be difficult to organize a comprehensive study of possible asbestos hazards over the rest of the country.