The Seattle Times
seattletimes.com

Monday, May 8, 2006 - 12:00 AM

Water's arsenic levels seen as only slight risk at schools

By Emily Heffter and Warren King
Seattle Times staff reporters

The level of arsenic found in five Seattle schools' drinking water last month was so low that one doctor estimated kids would have to drink a liter every day for five years to face a 30-in-a-million increased risk of cancer.

But Seattle Public Schools cooks weren't even washing lettuce in tap water last week, and district officials have turned off all the drinking water while they search for the source of the arsenic. A lab discovered the dangerous mineral during a routine test of new fixtures the district installed to fix a lead-contamination problem.

Local and state health authorities, the School Board and the district's Water Quality Oversight Committee have supported Superintendent Raj Manhas' response, announced last Monday. Once the district figures out how the arsenic got into the water, it plans a scientific analysis to assess any impact on children's health.

Dr. Catherine Karr, director of the University of Washington's Pediatric Environmental Health Specialty Unit, said the long-term risk to children would be very low.

Her rough calculation: If 1 million children, each day for five years, each drank one liter of water with arsenic slightly above the federal standard of 10 parts per billion (ppb), about 10 to 30 more cancers of the bladder or lungs would result.

Water from drinking fountains at five schools — Gatewood, Leschi, Loyal Heights and Van Asselt elementary schools and Alternative Elementary No. 2 — was found to have arsenic levels between 11 and 18 ppb.

Only one of the fountains had been in use — at Van Asselt, for eight days, according to district officials.

A forensic-engineering lab has hauled several of the contaminated plumbing fixtures out of schools this week as the district continues to investigate. Arsenic sometimes turns up in well water, but the levels in Seattle's drinking water are minuscule. That indicates that the problem exists inside the schools, district officials said.

Investigators are looking into cleaning materials, substances used in the plumbing, the types of metal in fixtures and pipes, and other possibilities, district spokeswoman Patti Spencer said.

Karr said that some parents might be concerned enough to have their children tested for arsenic, but that she would not have her own child tested after such exposure.

"Given this kind of risk and not much exposure, measuring their arsenic level would not really give parents more information about the health risk," she said. "You couldn't translate it into better insight about what it means for the risk of cancer in 40 years."

Don't panic, expert says

Dr. David Eaton, UW professor of environmental and occupational health sciences, agreed that the arsenic levels found in the water did not pose an immediate threat to schoolchildren and that the long-term risk of harm from daily exposure is very low.

"They should look to find the source and try to get rid of it," he said. "But [school officials] and parents should not panic that this is a big health concern. It is not."

Eaton was part of a National Academy of Sciences panel that advised the Environmental Protection Agency to lower the recommended arsenic level from 50 ppb to 10 ppb.

The recommendation, recently implemented, was based on studies in Taiwan, where arsenic long has been found in drinking water.

Scientists calculated that drinking water exceeding the 10 ppb level would cause as many as 10 more cases of cancer of the bladder or lungs among 30,000 people if the residents regularly drank the water for 70 years. Cancer would be the only concern for that level of arsenic.

Eaton suspects there's a good possibility the arsenic in Seattle schools may be coming from plumbing fixtures with lead-free solder — fixtures that recently replaced older ones because of concerns about lead in the water. Arsenic was found in water that had been in the pipes for a while.

All five fixtures with unsafe levels of arsenic were new, but other fixtures both new and old have tested at safe levels. The district is testing every source of drinking water in all of its 100 schools.

After lead and iron were found in school water a few years ago, the district spent $13 million in levy money to pay for improvements to school water systems and has replaced about 1,000 fixtures so far in response to lead and copper contamination. Many parents say the district acted too slowly.

District spokeswoman Spencer said that, even without that history, the district would have responded aggressively to the discovery of arsenic.

"We worked very, very hard to restore public confidence and trust in the way in which this system manages its operations," she said. "This is an opportunity to underscore that we do take environmental and health issues very seriously and will continue to do so."

Addressing concerns

A proposal from the Water Quality Oversight Committee that the district replace all its pipes is on hold while the district tries to find a cheaper solution, Manhas said. Because the arsenic doesn't seem to be in too many schools, he said, it's more practical to learn the source of the arsenic and correct the problem fixture by fixture "before we jump to any conclusions."

But some parents are still concerned.

Ed Schwartz, a home inspector whose twin daughters are in second grade at Alternative Elementary No. 2, said the level of exposure is unknown because in the past the district has not regularly tested for arsenic. And he worried about other district tests that showed the level of arsenic was higher the longer the water had remained in the pipes.

"The scientists have a point when they say that the amount of exposure is probably not that great, and perhaps not great enough to cause a measurable increase in the risk of whatever the diseases are," said Schwartz, who also serves on the water-quality committee. "But as a parent, I don't want my kids to be drinking a glass full of arsenic on a Monday morning, you know?"

Trucks began delivering bottled water to the district's schools last week. School kitchens minimized water use Thursday and Friday, replacing hot breakfasts with cold cereal, for instance.

Bottled water for cooking was to be delivered Saturday. Kitchen sinks will be tested as soon as possible, and if clear of arsenic, they'll be turned back on.

Officials could not estimate the cost of the effort.

"We want our schools, our families, our principals, to be able to focus on achievement and not be concerned about this as a health risk," Spencer said.

Emily Heffter: 206-464-8246 or ehefftер@seattletimes.com

Warren King: 206-464-2247 or wking@seattletimes.com