

# THE BIG YELLOW THREAT

Think your kids are safe on the bus? Take a deep breath; reports indicate your children may not be able to



Ever since NBC's Tom Brokaw jolted me with the news, in June 1999, that "pollution was as high as 10 times more inside the car than it was outside," I've had a sense of resignation about driving.

The groundbreaking study, produced by the Research Triangle Institute with a \$400,000 grant from the California Air Resources Board, went on to say that "closing windows didn't keep pollution out. Neither did closing air vents nor using air conditioning."

In other words, your passenger cabin is not the safe retreat from the noxious, dirty air you might think it is. It's often a chemical cocktail. Toxic pollution emitting from the diesel truck or bus in front of you — and from other nearby sources — sifts under the car carriage, jimmying through crevices about the car body, then enters our lungs, where it lingers and does its damage.

Children are especially vulnerable to the ultra-fine particulate matter from diesel exhaust, since higher breathing rates in smaller bodies lead to higher exposure. Inhaling these pinhead particulates is associated with exacerbating asthma, bronchitis and pneumonia. That's added to the fact that the Environmental Protection Agency, the U.S. National Toxicology Program and the International Agency for Research on Cancer classify diesel exhaust as a probable human carcinogen.

With little political relief in sight, whenever I'm stuck in traffic behind a truck or school bus, I simply try to get away from them as rapidly as possible. All the more so when my family is in tow.

But that's not possible for the 24 million students who ride the nation's approximately 500,000 school buses. They must accept the indoor environments provided for them. And it's often a toxic one, according to two recent public health reports that came about largely because of the watershed following the California Air Resources Board investigation.

Dr. Gina Solomon's *No Breathing in the Aisles* (2001) found that children riding inside a diesel school bus may be exposed to as much as four times the level of diesel exhaust as someone riding in a car immediately in front of that same bus. The study was pro-



## UNEARTHED

A commentary on health and environmental issues

BY BRIAN MCKENNA

duced by the National Resources Defense Council and Coalition for Clean Air.

"I'm more concerned about asthma than cancer," said Solomon, a senior scientist with the NRDC. "When doctors see asthma they should be asking about the environmental triggers."

In February 2002, Solomon and colleagues presented compelling evidence — in the prestigious journal *Environmental Health Perspectives* — that "fine particulates from diesel exhaust may cause asthma, not just irritate it." Solomon postulated that particulates bypass respiratory defenses and stimulate an immune response that cascades into inflammation, airway constriction, mucous production and symptoms of asthma.

Cancer is a significant byproduct, with educated estimates going as high as 125,000 additional cancers in the United States over a lifetime of exposure to diesel particulates, according to a joint study in 2000 by the State and Territorial Air Pollution Administrators and the Association of Local Air Pollution Control Officials.

Convinced by the mounting evidence, California's South Coast Air Quality Management District in June 2001 approved \$17.9 million in grants for 28 school districts to purchase 169 new natural gas school buses (or less-polluting diesel models). The grants covered Los Angeles, Orange and parts of Riverside and San Bernardino counties. New rules now require that they only purchase natural gas buses.

Natural gas school buses emit 90 percent less soot than conventional new diesel buses, according to the Union of Concerned Scientists. The Union produces a "Pollution Report Card" that grades America's school bus fleets. In February 2002 they reported that school districts in at least 19 states currently use natural gas buses, including Texas (Northside Independent School District), Indiana (Evansville-Vanderburgh School Corporation) and Oklahoma (Tulsa Public Schools).

The Union would like to see all diesel school buses equipped with a sign that says, "hazardous to your health."

continued on page 32 ►

## Erie: Continued from page 8

"Phosphorus is more effective in not clogging machines, which is what they found in Europe," he said.

"We represent a company that doesn't use phosphorus in its detergent. But the detergent is more expensive," Griesing said. "That type of company doesn't make up a half-percent of market share. The consumers have shown what they want."

Dave Dolan, a professor of natural and applied sciences at the University of Wisconsin-Green Bay, said he supports any bill that would restrict phosphorus in dishwashing detergent. But he said the biggest part of the problem is the way agricultural land is treated. Dolan worked as a data analyst for the International Joint Commission for 13 years and tracked the amount of phosphorus loadings entering the Great Lakes.

"I think regulating automatic-dishwashing detergent is important," he said. "You don't want to leave any source uncontrolled. I agree with more control, but agriculture is the biggest problem. Right now limiting phosphorus in agriculture is voluntary. It's voluntary such as in manure spreading. There's supposed to be a limited amount farmers put on fields, but no one monitors it."

"There is phosphorus in fertilizer, and it's uncontrolled," he said. "The agricultural influence on the lakes goes up and down. Rain brings phosphorus levels up."

Phosphorus levels in Lake Erie have been rising since 1995. Scientists say if this continues for another three years, Lake Erie could face the same problems it did in the 1970s.

Currently, the EPA is funding a two-year, \$2 million study on Lake Erie.

## Unearthed: Continued from page 9

In February, Congress passed, and President Bush signed, the Omnibus Spending Bill for 2003, which will provide a total of \$5 million in matching funds to school districts to begin retrofitting diesel-powered buses with emissions control equipment.

Though important, that's a drop in the bucket.

In the absence of money for new natural gas buses (which cost an extra \$30,000) or particle traps (an estimated \$5,000 each), clean school bus activists are focusing attention on some relatively cost-free remedies, like no-idling policies. The EPA joined the effort and produced an excellent information Web site, "Clean School Bus USA," which provides an excellent primer on the issues as well as offering information about grants.

The UCS only graded six states and the District of Columbia as "ahead of the curve," 23 states as "middle of the road," 19 states as "behind the curve" and two states — Washington and California — as flunking out altogether.

"It's been patchy," said Solomon. "In some places across the country, school districts jump to attention when local parents and activist groups get involved. In other places nothing much is happening."

Michigan is rated as "middle of the road," but there are several important institutions that are silent on the issue. For example, the Michigan Education Association, which represents many teachers and school bus drivers, has no policy on the issue. Instead, they have a blanket statement: "The Association believes that school personnel, students and their families should be notified of potential hazards and the action plan for corrections. ... The Association further believes that affected local districts have a responsibility to post immediate notice of these hazards through the public media." No one has applied that statement to diesel issues to this point.

The Mid-Michigan Asthma Coalition makes no mention of the issue in their education and outreach. Nor does the Lansing School District, which has 79 diesel buses.

"We aren't set up for natural gas," said Nathan Rowen, director of transportation services for the district. Rowen says that no citizen's group has approached him on the diesel issue. He said he is open to using the best technology, but notes that the district is in a budget crisis.

The nearby St. Johns school district has turned to biodiesel, which releases less harmful emissions, but Rowen said this would be difficult for Lansing because, among other reasons, "there is no electrical outlet for this." However, he said "at this point there is a grant for biodiesel available, but it is only for a year."

In other areas of Michigan, things are improving. *The Detroit News* reported in May

that "the state Department of Management and Budget ... buys about 265,000 gallons of a biodiesel blend for 120 trucks to help meet federal requirements for alternative fuel use." And several other districts are turning to biodiesel.

In what may turn out to be the most significant initiative, four environmental groups have begun a clean school bus campaign focusing on the greater Detroit area. The effort is spearheaded by the Michigan Environmental Council, the Ecology Center and the East Michigan Environmental Action Council.

One of the campaign's leaders is Elizabeth Harris, executive director of EMEAC. "Our goal is to work with school districts and others to do three things: reduce or stop idling near schools, help them apply for EPA money to retrofit buses and to encourage the use of low sulfur," she said.

"The issue will not go away," Solomon says. Indeed, it appears to be on a roll.

Physicians will soon dramatically increase their involvement. In October, the American Academy of Pediatrics released the second installment of "The Green Book," and will for the first time cover this issue.

"Most pediatricians would say this issue is very important," said Dr. Ruth Etzel, editor of the publication. "Diesel worsens asthma and is involved in new onset of asthma."

The ultimate goal is to clean up the trucking and off-road vehicle and construction industries, a far more formidable task.

In 2001, the Bush administration and trucking industry defeated an EPA clean air regulation that would have dramatically cut diesel pollution from new heavy-duty trucks and buses.

In April, then-EPA Director Christine Todd Whitman proposed ordering reductions of more than 90 percent in non-highway diesel engines. The order would have required makers of diesel-powered bulldozers, farm combines and other equipment not used on roadways to install modern emission controls between 2008 and 2014.

"This is perhaps the only good environmental proposal to come out of the Bush administration in two years," said Solomon.

But a month later, after a series of lost skirmishes — staged privately — with the White House, Whitman resigned.

It's a long fight to better protect our children's health.

Still, with all the progress mounted by various clean school bus initiatives, I feel less fatalistic about the future.

Someday the diesel movement will be strong enough to more effectively take on the "rolling smokestacks" of the trucking industry. It will join the hydrogen-car movement in helping to create greener roads across the country. And I'll be able to sit in traffic with a smile on my face — and the vents open.