"USA TODAY hopes to serve as a forum for better understanding and unity to help make the USA truly one nation."
—Allen H. Neuharth, Founder, Sept. 15, 1982

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Latest mistake adds to EPA record of shoddy science

When a blue-ribbon panel warned federal regulators Tuesday that a fuel additive they've pushed poses a health risk, the response was superficially soothing.

EPA administrator Carol Browner accepted the decision. She said her agency would find a better ingredient to limit auto pollution.

But the report is a marker of a wider, more dangerous problem. With little public notice, the EPA time and again has used slipshod science to justify new anti-pollution rules, then defended the rules to the hilt, even if that defense came at the expense of its own scientists.

In the latest case, a special EPA panel said that MTBE, a potentially cancer-causing gasoline additive, was increasingly contaminating water supplies through fuel spills and leaks. But the report didn't contain new research. The panel just collected studies long available to the EPA. The agency either was too busy cheerleading the fuel additive to examine that research seriously or willfully ignored it.

That follows a pattern that has turned up over and again:

▶ In May, the prestigious National Research Council reported that fuel additives didn't cut air pollution nearly as much as the EPA claimed.

▶ Independent audits of car-emissions tests find pollution reductions well below what the EPA promised.

▶ Last spring, reports emerged that the agency withheld studies undermining its own public claims of environmental racism.

Back in 1992, another expert panel appointed by the EPA summed up the agency's shortcomings in a blistering report, saying "the interpretation and use of science is uneven and haphazard . . . (sometimes) leaving EPA initiatives on shaky scientific ground and affecting the credibility of the agency."

But the problem continued. Four years later, in a June 1996 article in the journal *Nature*, then-EPA scientist David Lewis said science at the agency was "reaching a state of crisis."

Rather than address Lewis' concerns, agency officials retaliated against him with trumped-up ethics charges. He filed a whistleblower complaint, which the EPA settled for more than $100,000 and an apology. Others say they've suffered similar fates. A letter signed by several EPA scientists last June complained that "retaliation against whistleblowers occurs at every management level."

That's a far cry from the 1992 report's recommendation that scientists "feel free to express conflicting opinions and judgments without fear of reprisals."

That expert panel knew what the EPA has apparently yet to learn: namely, that sound environmental rules require sound science.

Signs of trouble

Tuesday's report that a government-mandated gasoline additive is dangerous is only the latest of several setbacks for the Environmental Protection Agency. In recent months, the validity of the agency's work has been called into question repeatedly:

▶ **May 26:** The U.S. Court of Appeals temporarily blocked EPA smog rules governing Midwestern states.

▶ **May 14:** A federal appeals panel threw out the EPA's new national smog and soot standards on the grounds that they were arbitrarily set.

▶ **May 11:** A National Research Council report found fuel additives designed to cut smog likely to "have little air-quality impact."

Fuel additive cleans air but pollutes water; regulators doze

OUR VIEW **EPA touted MTBE. Now, it's reluctant to retreat.**

In Glennville, Calif., a small town in the Sierra hills, the air might be a little bit cleaner. But the water, *bleech*. It's undrinkable.

The two events actually share a common source: A gasoline additive that is used to cut air pollution, called MTBE, is showing up in the town's well water. Not only are Glennville residents upset, but so are communities around the country that have seen this potentially toxic chemical seep into their water supplies.

To the Environmental Protection Agency (EPA), this is a surprise and a potential embarrassment. For years the agency has been touting "oxygenates" such as MTBE as a way for communities to meet federal clean air standards. The additives cut pollution by helping engines burn fuel more completely.

Congress first pushed this oxygenated fuel in 1990, when it toughened the Clean Air Act and required cleaner-burning gas in the most polluted areas of the country. The EPA told other areas they could opt into the program to help meet clean air targets. MTBE, made from refinery waste products, quickly became the additive of choice for the oil industry, and today is in nearly 30% of gasoline sold.

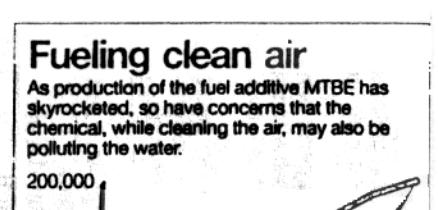
That was fine with the EPA, which was trying to clean the air and hadn't given much thought to the possibility that MTBE itself might pose a risk.

Now some health experts want the additive banned. And Maine recently joined California in an effort to get out of the reformulated-gas program.

They may have reason to be worried.

The chemical has been shown to cause cancer in lab animals, and some people complain that it causes headaches, nausea and skin rashes. One Pennsylvania researcher suspects the additive is behind the recent spike in asthma attacks.

And the additive increasingly is showing up in the environment. In California alone, as much as 43 tons of MTBE are pumped into the air each day from exhaust pipes. Water supplies across the nation show traces of the additive, mainly from spills and leaky storage tanks. Santa Monica, Calif., had to shut down half its water wells after they were found to be contaminated with MTBE.



Despite these trends, and despite the EPA's normal aggressiveness in battling risky chemicals, the agency has been slow to respond with research and regulations. So far, it has issued only an advisory, not a mandatory standard, on acceptable levels of MTBE in drinking water. And it doesn't require water agencies to test for the chemical.

The EPA says there's little to worry about. MTBE is no worse than the toxic chemicals it replaces in gasoline. And the amount of MTBE showing up in most water supplies has been relatively minuscule. Besides, the use of MTBE is providing huge gains in clean air.

It has, in fact, been credited with cutting smog in many areas. But a White House Office of Science and Technology Policy report found that the EPA overstated the decline in wintertime carbon-monoxide pollution by a factor of two, and that the additive boosts some other pollutants, such as formaldehyde.

At the same time, the EPA knows little about the risks of prolonged MTBE exposure — a troubling knowledge gap for an increasingly common chemical.

That gap must be filled in as quickly as possible. Clean air shouldn't come at the expense of clean water.

Balance benefits against risks

OPPOSING VIEW **More study needed to assess MTBE's potential harm.**

By Jason S. Grumet

The reformulated-gasoline (RFG) program has substantially reduced the risk of lung disease, asthma attacks, cancer and premature death for 75 million Americans.

Air pollution monitors indicate that emissions of benzene, a known human carcinogen, diminished by more than 40% in the 17 states using RFG. That's equal to taking nearly 15 million cars off the road. Smog-forming vehicle pollution declined by more than 25% in those areas.

Despite these public health improvements, concern is growing over groundwater contamination by MTBE, a high-octane additive used in some conventional gasolines and most RFG. MTBE is considerably less toxic than other chemicals in gasoline. However, when gasoline leaks or spills, MTBE travels faster and farther than the rest of the toxic plume, potentially jeopardizing more drinking water supplies. The most robust solution is to stop the leaking and spilling of all gasoline. Another option being pursued in California and Maine is to identify cost-effective alternatives that maintain the benefits of RFG without using MTBE. Some petroleum refiners assert they are prepared to meet this challenge.

We know with confidence that RFG containing MTBE reduces toxic air pollution. However, more study is needed to assess the potential health effects of MTBE in drinking water. During this ongoing research, states must balance known benefits against less-understood risks. Rural areas dependent upon private wells are likely to approach this uncertainty differently from urban areas with poor air quality and less-vulnerable water supplies. In addition to comparing total risks, states must evaluate whether these risks and benefits are shared equally across society.

In the complex and highly charged atmosphere surrounding the RFG debate, it is not surprising that some opine for a simpler world unburdened by trade-offs and imperfect choices — a world dominated by non-toxic fuels, electric cars and desirable public transportation. Until then, we must make the best environmental decisions with the choices available today.

Jason S. Grumet is executive director of the Northeast States for Coordinated Air Use Management, which represents the air pollution control programs in eight northeast states.

Leaving science out of acrimonious environmental debate

ALSTON CHASE

The nice thing about the holiday season is that for this brief period, politics take a back seat to the spirit of giving.

But come January, when the new Congress begins to consider seemingly innocuous subjects such as clean air and natural preservation, the acrimony will begin again. For no contest is more destructive of brotherly love than the environment. Each side is driven by a consuming desire to make hamburger out of its opponent's sacred cow.

What then, exactly, is this fuss over the Earth about?

Politicians say it concerns "jobs vs. the environment."

Greens insist it's about good guys (themselves) against bad guys (the rest of us).

Wise Users claim it pits valiant defenders of property rights against the faceless phalanxes of big government.

Economists aver it's free markets against federal regulation.

And everybody claims that science is on their side.

And everybody is wrong. Environmental controversies mirror society. They're complex, not simple, and involve clusters of questions that pertain to three different issues. Two of these issues are purely political and therefore admit of no rational resolution.

Shoving contests

Only the third might be settled by environmental science. So naturally, it is seldom discussed at all, allowing debates to devolve into shoving contests between greens and free market economists.

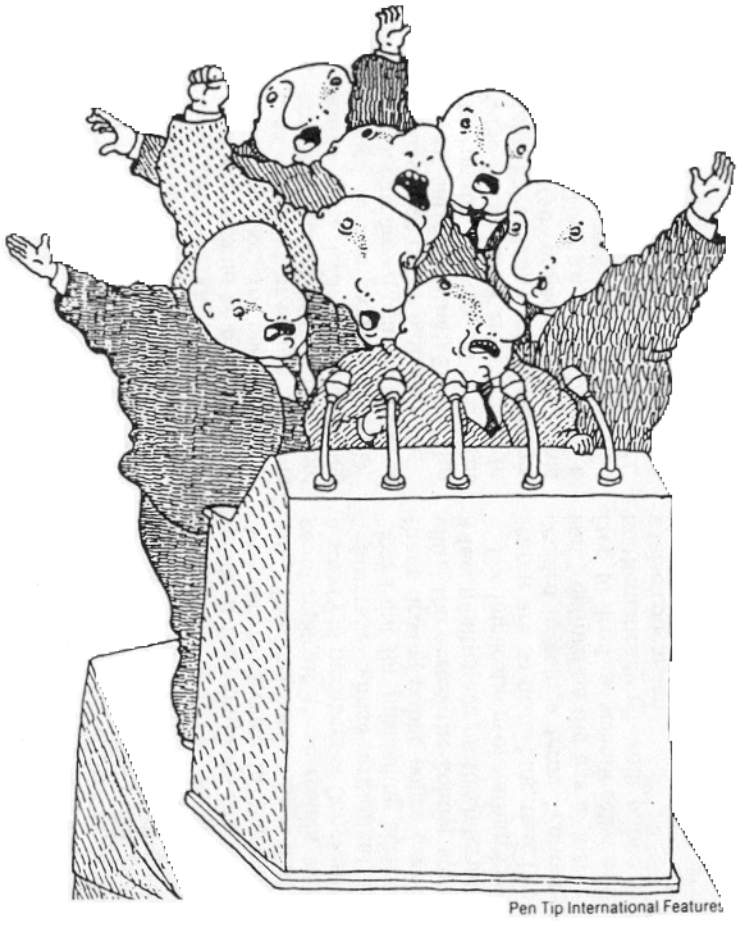
These three issues are:

■ Identifying the "public interest." Greens believe that environmental protection takes precedence over all competing social goals and that their duty is to impose this agenda by every legal means. But many economists argue that the free market is best for determining what people want, since it measures what they will pay for, and that the market reveals the environment is not always top priority among consumers. Hence, fights often break out between these two when it's time to decide national priorities.

Each side is driven by a consuming desire to make hamburger out of its opponent's sacred cow.

■ Implementing protection and preservation strategies. The second great area of conflict between greens and economists concerns deciding how to implement specific prescriptions. For example, if scrubbers are the most effective way to reduce smokestack emissions, how can government best ensure that utility industries install them? Economists argue that incentives are best. Environmentalists favor fines and penalties.

■ Deciding what is the best environmental strategy. The first two questions — setting national priorities and deciding on the relative value of rewards and punishments — require making subjective judgments about what one thinks is most important. They don't have "right" or "wrong" answers.



Pen Tip International Features

The public interest is merely the sum of many competing private interests, no one of which necessarily has a higher value than another. Desiring to drive a snowmobile through wilderness is neither more nor less justified than wishing to restrict trails for hikers and horses.

Likewise, debates over whether incentives or coercion are the most effective tools for implementing policy invite ideological responses — concerning the value of liberty and the "goodness" of government — and will never be fully resolved.

And however important, they don't address the crucial ecological questions. Fashioning rational preservation laws, for example, requires answering such questions as: How is biodiversity best sustained — by letting "nature take its course" or by more active management? What role should government biologists play in this decision-making and how do we insulate these scholars from political pressures?

Most important step

Solving such queries — relating to how government should develop its scientific strategies — is the single most important step in framing successful policy, yet it is almost entirely ignored by all parties.

Environmentalists run from the question because they don't want to insulate scientists from their own lobbying and because they prefer pop ecology to hard science. And their adversaries ignore the question in part because most are economists who have neither knowledge of, nor interest in, the finer points of ecology.

In this way, the content of environmental law and policy is determined by default, and the critical question — how to prevent the politicization of ecological science — goes unaddressed.

Environmental politics ignore the only matter that could conceivably be resolved by science and instead focus almost exclusively on ideological matters that will never be settled. Debates become name-calling contests between interest groups that both falsely claim to speak for "the public interest" and that both erroneously profess to occupy the scientific high ground.

So let's enjoy the Christmas season while it lasts.

Indianapolis Star 12/8/96

A ban on that life-threatening water

JAMES GLASSMAN

WASHINGTON — The chemical compound dihydrogen monoxide (or DHMO) has been implicated in the deaths of thousands of Americans every year, mainly through accidental ingestion. In gaseous form, it can cause severe burns. And according to a new report, "the dangers of this chemical do not end there."

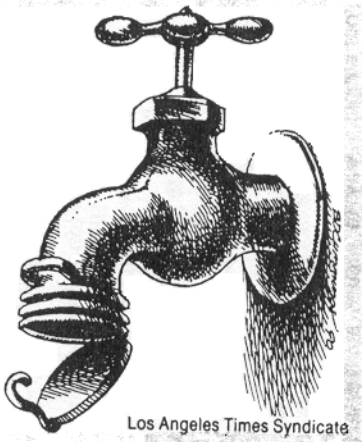
The chemical is so caustic that it "accelerates the corrosion and rusting of many metals, is a major component of acid rain and has been found in excised tumors of terminal cancer patients." For those who have developed a dependency on DHMO, complete withdrawal means certain death.

Yet the presence of the chemical has been confirmed in every river, stream, lake and reservoir in America. Judging from these facts, do you think dihydrogen monoxide should be banned?

Seems like an open-and-shut case — until you realize that this chemical compound is plain old water (two hydrogen molecules bonded to one oxygen, or H2O), which can drown you, scald you or make you go to the bathroom.

Last spring, Nathan Zohner, an enterprising 14-year-old student at Eagle Rock Junior High School in Idaho Falls, Idaho, conducted his science fair project on just this theme. Nathan distributed a tongue-in-cheek report that had been kicking around the Internet, *Dihydrogen Monoxide: The Unrecognized Killer*, to 50 of his classmates.

These are smart kids who had studied chemistry. Nathan simply asked them to read the report (which is completely factual) and decide what, if anything, to do about the chemical.



Los Angeles Times Syndicate

In the end, 43 students, or 86 percent of the sample, "voted to ban dihydrogen monoxide because it has caused too many deaths," wrote Nathan in the conclusion to his project.

Nathan's project, which won the grand prize at the Greater Idaho Falls Science Fair, was titled, *How Gullible Are We?* But ninth-graders aren't the only gullible parties. Says David Murray, research director of the non-profit Statistical Assessment Service in Washington, "The likelihood is high that I could replicate these results with a survey of members of Congress."

Murray, whose organization "looks out for misleading science that's driving public policy over a cliff," ran across the Zohner story a few months ago on the Internet.

The implications of Nathan's research are so disturbing that I've decided to coin a term: "Zohnerism," defined as the use of a true fact to lead a scientifically and mathematically ignorant public to a false conclusion.

Environmental hysterics — Vice President Al Gore springs to mind — and ideologues in such fields as race, women's issues and economics are adept at using Zohnerisms, with help from the media, to advance their agendas. A few examples:

■ The breast-implant mania. Dow Corning was driven into bankruptcy through lawsuits over its silicone implants — even though science doesn't support claims that they're dangerous. Marcia Angell, executive editor of the *New England Journal of Medicine*, says that research has consistently failed to find a link between silicone and disease. Yes, women who have implants get sick, but in a typical study, "the implant group was no more likely to develop connective-tissue disease than the group without implants."

■ White flight. In the headline above an article about population growth in rural areas, the *New York Times* claimed, "Hint of Racial Undercurrents Is Behind Broad Exodus of Whites." Steven A. Holmes, the reporter, wrote that studies by demographer William Frey "show that of the 40 fastest-growing rural counties, virtually all are at least 70 percent white."

Shocking? Well, according to the Bureau of the Census, 83 percent of the U.S. population is white.

Finding Zohnerisms in the press, *Congressional Record* and speeches of administration officials makes a great parlor game. One place to start is the collected speeches of the Environmental Protection Agency's Carol Browner, who has used Zohnerisms masterfully to promote expensive, disruptive new standards for particulate matter and global warming — despite evidence from scientists that is, at best, inconclusive.

That's a shame. In a land where technical ignorance reigns and susceptibility to Zohnerisms is high, it's the duty of politicians, journalists and scientists to present facts responsibly.

Special to the Washington Post

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Today's debate: Punishing whistleblowers

Faced with faulty science, EPA muzzles critics

[illegible] who do not toe line face retaliation, despite public interest.

On Monday, the Department of Labor handed down a decision that no doubt made Rosemarie Russo's day. She's to be given her old job back as director of an Environmental Protection Agency research lab in Athens, Ga., and a 5% bonus.

But the decision, and the events leading up to it, paint a disturbing picture of how the EPA intimidates whistleblowers and how that, in turn, hurts its mission to protect public health.

The Department of Labor's findings showed that Russo was an innocent victim of a fervid bullying campaign by top EPA officials to squelch safety concerns raised by one of the agency's own scientists.

That's troubling behavior from an agency dedicated to protecting public health. Even worse, it's only the latest in a long line of examples showing that the EPA too often would rather muzzle criticism of its policies than deal with the root of the problem.

Russo's problems started after one of her employees, microbiologist David Lewis, embarrassed agency officials by criticizing the EPA's decision to allow millions of tons of [illegible] sewage sludge to be used as crop fertilizer. The worry is that dumping the stuff on fields can be harmful to people ex-

EPA scientist targeted

Here is the timeline of events involving Rosemarie Russo, who for 16 years has been head of an Environmental Protection Agency research lab in Athens, Ga.

February 1993

▶ Sludge rule approved by EPA, allowing treated sewage to be used as fertilizer.

October 28, 1999

▶ EPA microbiologist David Lewis publishes paper in *Nature* that contains criticism of the sludge rule.

▶ EPA assistant administrator Norine Noonan fires off an e-mail complaining that Russo didn't alert her to the article, saying, "I am so mad about this, I could spit nails."

October 29, 1999

▶ Noonan lowers Russo's performance rating from "outstanding" to "exceeds expectations," causing Russo to lose a 5% salary bonus.

March 22, 2000

▶ A deposition of Russo, in which she says the sludge rule is not "scientifically defensible," is presented at a congressional hearing.

June 9, 2000

▶ Russo is told she is being relocated to Washington, D.C.

October 2, 2000

▶ The Department of Labor finds in favor of Russo, calling actions against her "retaliatory in nature."

When Lewis described his concerns in a peer-review article in the journal *Nature* last October, EPA Assistant Administrator Norine Noonan fired off memos that "clearly displayed her anger toward Dr. Russo over the article," according to the Labor Department.

Noonan later downgraded Russo's performance rating, denying her a 5% bonus. Then Russo was forced by the EPA to relocate to Washington, D.C., a move that Labor concluded was "retaliatory in nature."

This is hardly the first time the EPA has tried to shut up internal critics who had concerns about the validity of the science EPA is using. Nor the first time those efforts have backfired:

▶ Lewis himself, who has a pending whistleblower case against EPA over the sludge issue, already won another whistleblower case against the EPA after it retaliated against him for a 1996 article critical of EPA science. The EPA paid him $115,000 in a settlement, along with a written apology.

▶ Brian Rimar, a former Denver-based EPA scientist, questioned an EPA Superfund cleanup plan and claimed that in response, the agency trumped up conflict-of-interest charges against him. The EPA settled the case in 1998 and paid Rimar $100,000.

▶ In June 1998, several EPA scientists complained publicly of the hostile treatment whistleblowers receive, saying the problem was "pervasive" and reaches "the highest levels" of the agency.

▶ At a House hearing Wednesday examining EPA reprisals, Leroy Warren Jr., chairman of the NAACP Federal Sector Task Force, said that "there seems to be a situation at EPA where if you complain ... you are facing a death sentence in terms or upward mobility and promotions."

EPA's attempts to squelch criticism aren't limited to intimidating critical employees, but include making dubious assertions to the public. Last October, Chuck Fox, assistant administrator in the EPA's Office of Water, wrote a response to a USA TODAY editorial saying that the EPA set "tough health standards" for sludge and that it backs them up "with strong enforcement actions."

But the EPA's own inspector general concluded in March that the EPA can't guarantee that the sludge rules protect human health because EPA "does not have an effective program for ensuring compliance" with the rules.

Now the agency has asked the National Academy of Sciences to review its sludge rules. According to one senior EPA official, who testified in a deposition earlier this month, the academy review likely would "raise issues" with the existing program.

Russo's story might have a happier ending if there was reason to believe the EPA had learned from its mistakes.

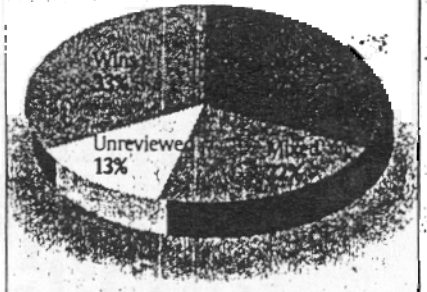
To the contrary, an internal EPA report issued back in 1992 warned the agency that it should improve its treatment of scientists, ensuring they "feel free to express conflicting opinions and judgments, without fear of reprisals."

So far, there's no indication that the EPA has heeded that call. If the EPA hopes to repair its battered reputation and live up to its promise to protect the public's health, it will have to do far more than give Russo the keys to her old office.

EPA takes hits in courts

The Environmental Protection Agency contends that its rules are based on sound science. But those rules are reversed in court more often than the rules of other federal agencies, according to an analysis of cases heard by the D.C. Circuit of the U.S. Court of Appeals during the past seven years.

EPA's record in court:



Source: Reason Public Policy Institute

EPA supports its scientists

Opposing view:

Sound science involves listening to all points of view.

By Norine Noonan

Put simply, the Environmental Protection Agency (EPA) is committed to sound science. This involves listening to all points of view, extracting the strongest consensus among scientific thought, and submitting those conclusions for a public review by the nation's leading experts.

The agency has made a strong commitment to peer review to ensure that only the best science forms the basis for our decisions. While our insistence on a rigorous peer review of science may impose an institutional discipline to which some object, the results are clear: The American public and the scientific community have a greater confidence in the integrity of EPA's scientific decisions.

Our peer-review process has been lauded by the National Research Council. It is designed to consider a wide spectrum of scientific thought.

We are equally committed to encouraging diverse opinions among our scientists. Every scientist is encouraged to make his or her opinions known, of course. EPA scientists, for instance, have testified before Congress on matters strictly reflecting their own opinions, and they have done this with the blessing of management.

To ensure that our scientists are satisfied with the quality of working conditions, we have taken the unprecedented step of conducting internal surveys. Those surveys show overwhelming approval for the treatment provided scientists by EPA's research offices.

While it is true that in an agency with almost 1,000 scientists, we may not be able to please everyone, that doesn't mean we don't try.

And for those very few cases in which scientists may have honest complaints – just as honest grievances exist in all business and group endeavors – we wish to strive to ensure that procedures exist for fair review and adjudication of complaints.

That should not distract from the fact, however, that EPA science is now viewed by the professional community as among the best and most sound environmental science available anywhere today.

And we remain committed to continuing to improve it in every way possible.

Norine Noonan is assistant administrator for research and development at the Environmental Protection Agency.