

A toast best undrunk

A votre santé! Nazdrovya! Skoal! L'chayim! Kompai! Slainte! To your health!

In any language, the words that make up a toast celebrate the wish for a long, healthy, prosperous life. Which is as it should be, since toasts are usually offered in connection with a joyous occasion.

But not always, unfortunately. And no, this isn't going to be an essay on the dangers of overindulgence, or substance abuse, or even driving while intoxicated, serious as these problems are. Instead, we're about to offer a friendly word or two of advice to White House counselor C. Boyden Gray. Please, Mr. Gray, don't do it. Don't follow through on the offer you have made a number of times to engage in a sort of drinking contest. You keep saying you are prepared to drink twice as much methanol as any amount of gasoline an oil company executive chooses to ingest. You apparently feel methanol is an environmentally sounder fuel than gasoline, and that it's safer than gasoline.

Your feelings about the virtues of alcohol fuels are well known. In fact, we've read that you were one of the driving forces behind the President's recent proposal to mandate that a fleet of alternative-fuel vehicles be on the highways by 1997. We happen to differ with such a mandate, for lots of reasons. Even so, we feel the President has every right to select his own counsel, and we therefore have no desire to deprive him of your continued service. In that spirit—no pun intended—we repeat our plea: Just say no to drinking methanol.

Here are some of the reasons why methanol—or wood alcohol—shouldn't be anybody's cup of tea:

- Last March, in the city of Baroda, India, at least 100 people died, and more than twice that number became severely ill. Indian news agencies reported the victims had ingested homemade liquor containing—you guessed it—wood alcohol.

- In 1987, in China, a farmer was executed and another man was sent to prison for life for selling liquor containing methanol, the official Chinese press reported. Their brew killed 24 people, blinded four, and sent 447 to the hospital.

- That same year, in Texas, an elderly man passed around some moonshine in a bar, and two other old-timers who drank it died as a result. The dispenser of the dubious gift and seven others wound up in a hospital with methanol poisoning.

- Many still remember the Italian scandal of three years ago, in which 23 people died after drinking methanol-tainted wine.

The point is, methanol is dangerous stuff, not fit to be swallowed. Sure, drinking gasoline can cause serious injury and even death. But the quantities have to be relatively large. Only an ounce or two of methanol can cause blindness, and even half an ounce has been fatal in some cases.

So we sincerely hope that Mr. Gray backs off on his challenge. But just in case he insists on going through with it, we have one more bit of advice for him.

Among the antidotes for methanol poisoning, we're told, is ethanol—grain alcohol—taken orally every hour on the hour for a prescribed length of time, under medical supervision. But the antidote notwithstanding, Mr. Gray should be discouraged from imbibing his methanol cocktail. Even without an olive, that particular drink happens to be the pits.

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Methanol: Panacea with problems

The quality of the air we breathe has been improving in recent years. Nevertheless, 101 urban areas still fail to meet the Environmental Protection Agency's standard for ozone—the component of smog that can irritate eyes and cause respiratory discomfort—even though the air is cleaner in those areas too. In fact, most of the noncompliance areas exceed the EPA's ozone standards for only short periods of time.

But despite the steady improvement, automobile emissions continue to be cited as a large part of the problem. We recognize the need to take another look at fuels and cars. But like many others, we were surprised by the Administration's recent proposal that over two million cars burning alternative fuels, such as methanol, be placed on the roads by 1997.

Also startling is the fixation of so many on methanol—wood alcohol—as a "clean-burning fuel of the future." While it is in fact the exotic fuel that powers some racing cars—a very special breed of vehicle—methanol's widespread use as a substitute for gasoline is fraught with question marks.

We have cited the problems with methanol before: that it would require major modifications for engines and other equipment now and in the future; that it is odorless and tasteless and highly toxic, and that it burns without a visible flame.

More important, we have said that the general use of methanol as an automotive fuel could create as many new environmental problems as it would solve—that in the end we may have merely substituted one set of problems for another, at a very high cost, even as we are making progress toward solving the original ones. Now, as research and testing of methanol and other fuels continue, evolving data show we raised some cogent arguments.

Consider, for example, the results of several modeling studies based on the use of cars powered by a fuel made of 85 percent methanol and 15 percent gasoline, commonly called M85. M85 would be the preferred methanol fuel because the addition of the gasoline improves starting capability. The gasoline also imparts odor, and results in a visible flame should the mixture explode or catch fire. The studies showed only a very slight reduction in peak ozone levels. This was shown to be true out to the year 2000.

Other studies show that methanol-fueled vehicles emit about three to five times more formaldehyde than gasoline vehicles. Formaldehyde is strongly reactive in producing ozone, the very pollutant that methanol use is supposed to reduce. And no one has demonstrated how to control formaldehyde emissions from methanol vehicles.

These uncertainties about methanol should be compared with the facts about new gasoline-fueled cars. Many show very low emission levels compared to cars produced only a few years ago, and there is every reason to expect progress both on fuels and vehicles.

Unless there are some major technological breakthroughs, consumers in a methanol-fueled world would have to pay high costs, many of them hidden, for slight gains or no gains in air quality. For example, corrosion-resistant materials would have to be used for fuel tanks and fuel lines, since methanol corrodes ordinary steel and some other materials. Other changes would have to be made in the automobile—not to mention the infrastructure that supports the vehicles, including service stations, distribution centers, and the like.

Consumers would pay more than the hidden costs. Methanol is expensive to make and contains only roughly half the energy of gasoline, so motorists would pay more per mile. Fuel tanks would have to be twice as large to give drivers the range they now enjoy—but larger tanks would add weight, and therefore further reduce mileage and increase cost.

We aren't saying research into alternate fuels, including methanol, shouldn't continue. The oil industry is itself researching both methanol and low-emissions gasoline systems. What we do oppose is the mandatory use of any fuel, including methanol, especially without a broad research base developed in actual use. Such a mandate with unproven fuels could extract a severe economic toll, without making the ozone problem better.

Next: More problems with methanol.

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More problems with methanol

Last week, in a discussion of proposals to mandate the use of alternative fuels—including methanol—as a way to lower ozone levels in the air, we stated that the methanol car could prove less than a panacea. We pointed out that because methanol is corrosive, it would require extensive modifications to both cars and their support facilities—service stations, distribution channels, and the like. Furthermore, methanol is expensive to make and contains half the energy of gasoline, so drivers would pay more per mile—and get half the range, unless gas tanks were made much larger.

We also noted that unless gasoline is added—usually in a 15 percent ratio to form a mixture called M85—cars fueled by methanol are hard to start. The addition of gasoline also helps give methanol an identity that warns against its misuse, imparting the color, taste, and odor that neat or pure methanol lacks.

Today, we'd like to offer a few more details, starting with toxicity. Neither methanol nor gasoline, obviously, is intended for ingestion. But methanol is far more toxic of the two, and the swallowing of even small amounts can cause blindness and even death.

Without belaboring the point, methanol's effect on the health of an individual can be a real concern. Another concern is its effect on the energy health of the nation. Proponents argue that methanol can be produced from domestic coal reserves, and thereby lessen the nation's need to import crude oil. In effect, they claim a national security benefit from methanol.

But the reality isn't that simple. By far the cheapest way to make methanol is from natural gas, not coal. And America's natural gas supplies are tightening. Furthermore, the widespread use of methanol as a fuel would require a major increase in production capacity. Logically, such capacity would be built near ample supplies of feedstocks, available at a relatively low cost.

Accordingly, new methanol plants would probably be built in places like the Middle East, with large reserves of natural gas. So instead of importing crude oil, America would be importing methanol—worsening our trade deficit and effectively shipping jobs and our domestic refining industry overseas. The national security argument simply doesn't hold up under economic analysis.

In summary, here are the problems with methanol:

- There is significant uncertainty about whether methanol would produce less ozone than gasoline. Formaldehyde emissions from methanol may result in the substitution of one ozone precursor for another.
- The switch to a methanol-fueled economy would involve massive costs, require major changes in vehicle design, and give motorists fewer miles for their money.
- There would be no gain in either security of supply or jobs for American workers were methanol to become the dominant fuel.
- Methanol is far more toxic than gasoline when ingested.

As we said last week, let research continue on fuels and vehicles, both methanol and gasoline-powered. Over the years, there has been significant improvement in controlling emissions from gasoline-powered cars, and more can be expected. Perhaps continuing research will overcome methanol's problems or a completely new fuel may grow out of somebody's lab. But a methanol mandate makes little sense, especially when one considers the costs involved and the questionable benefits to be gained.

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