

letters

quakes and tsunamis, in addition to human actions such as wars, could eventually release them into oceans, rivers, ground water, and atmosphere. This could make the entire planet uninhabitable.

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Editor's note: The writer is a Fellow of ASME and ASHRAE whose areas of specialty are heat transfer and air conditioning. His experience also includes working for 20 years in the nuclear power industry.

To the Editor: William Billet's letter in the September issue suggested that nuclear power advocates live for three years near Chernobyl, Three Mile Island, and the Washington spent fuel site. I question these references.

The Chernobyl design did not have the redundant safety systems of U.S. or any other Western reactors. It was the product of a flawed and doomed political system. Three Mile Island was a success; the safety systems worked; no one was injured, and no one should hesitate to live near there. At the Washington site, don't the workers go there every day, with their dosimeter badges to confirm that they are safe?

Sloganeering with scary-sounding locations is not a good way to convince engineers of any point of view.

BRUCE METCALF, P.E.
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To the Editor: Regarding the September issue and the Letters to the Editor, I must express my disappointment in the decision to publish a particular anti-nuclear opinion.

Additional waste is a downside to the expansion of our nuclear power generating capacity, but it does not, in my opinion, outweigh the enormous benefits. While I favor a discussion on this issue, I must protest when the exchange turns into unfounded propaganda.

Your decision to publish a letter from Fairmont, Minn., was irresponsible for two reasons: 1) There was no fallout from Three Mile Is-

land because it had a containment—a marvelous example of how safe Western reactors are, even when all else fails, and 2) Chernobyl did not have a containment—one of many design features that made this type of reactor unsafe.

As engineers, we are expected to apply our knowledge for the betterment of mankind and not to misinform because of our irrational fears. I encourage all who wish to express an opinion to do a little research first. Let the facts speak and you will find that clean, safe nuclear energy is the best solution for our growing energy needs.

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Measurable Skills

To the Editor: Your August issue featured a short article, "Engineers Well Prepared," (News & Notes) by Alan S. Brown, which posed the question, "Are engineers emerging from U.S. colleges better prepared than they were 10 years ago?" The question was answered in the affirmative: "measurably so."

The survey-based data suggest universities are devoting more class time to important skills that are difficult to quantify, such as teamwork, communication, and lifelong learn-

ing. That more time in class is devoted to such topics is likely true; that students are "measurably" better in them remains uncertain. The ability to develop true metrics of these skills is imprecise, at best.

What is left unanswered is how students of today compare to those of 1994 in other important, measurable skills—for example, the ability to determine the forces and moments in a truss, calculate the thermal efficiency of a power cycle, or write and debug a computer code. Our limited local evidence suggests that such skills are no better than those of 10 years ago, and perhaps worse.

We encourage ABET [which commissioned the survey] and Mr. Brown to ask other more penetrating and skeptical questions before reaching Panglossian conclusions. Based on our experience with non-U.S. citizens enrolled in our graduate program, we suspect our worldwide competitors may be using different and perhaps more useful metrics to assess their undergraduate engineering education.

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Editor's note: The writers are members of the faculty for aerospace and mechanical engineering at the University of Notre Dame.

Letters to the Editor

Mechanical Engineering welcomes comments from our readers. Letters can be typewritten or e-mailed, and must include the author's full name, address, and telephone number.

Address your submission to:

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The editors reserve the right to edit letters for clarity, style, and length. We regret that unpublished letters cannot be acknowledged or returned.

Exhaust Omission

To the Editor: In a generally well-written article entitled "Easy on the Gas" (July), Harry Hutchinson cites "energy independence" and cost savings as reasons to develop more energy-efficient cars. Why does he fail to include global warming (or climate change) as a motivation to reduce fossil fuel consumption?

This omission is especially puzzling, given that in his concluding sentence, he asks, "How deep a footprint do we want to leave in the world where our kids will have to walk?"

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