LETTERS

Revitalizing EPA

The article by Eliot Marshall (News and Comment, 25 Mar., p. 1402) describing allegations of political manipulation of clean-up funds, sweetheart deals, and scientist "hit lists" has alerted the scientific community to a situation that desperately needs solutions. Since I was identified as a target of the Environmental Protection Agency's (EPA's) hit list, perhaps it is appropriate to complete the record by reporting the notation made beside my name on that list: "out, a competent scientist, but has already made up mind and has solutions." Since even my detractors expect me to offer "solutions," may I suggest the following.

William Ruckelshaus, the new administrator-designate of EPA, should create a high-level independent investigative commission to study how to get EPA back on its feet and to recommend safeguards, corrective actions, and legislation, if necessary. The charge of the commission should be much broader than just looking into the Administration Superfund clean-up funds, as ex-Administrator Burford suggested, and should address revitalization of both long- and short-term R & D in EPA. Nominations of some of the scientist members should be made by the presidents of the National Academy of Sciences and the National Academy of Engineering.

No amount of replacing the political appointees in EPA will automatically right the wrongs. The appointment of Ruckelshaus, with his reputation for integrity and independence, is either a wise choice or a canny political move for cosmetic purposes, depending on whether the Reagan Administration has really changed its environmental policies. There must be a fundamental change in the signals the new appointees get from the White House and from the business community, which many believe was the principal constituency served by the Burford EPA. Industry stands to get a terrible black eye out of this episode unless it moves decisively to demonstrate to the President and the public that it is in *everyone*'s best interest to have apolitical science advisory boards and an effective, well-funded EPA, populated by competent scientists confident of keeping their jobs as long as they do them well.

What some fail to realize is that the cost of having an ineffective EPA, not able to study adequately the environmental issues it must deal with, will be much higher over the long term than if it is given adequate resources to do its job properly. The research budget of EPA has been cut by 50 percent since President Reagan took office. If Ruckelshaus is ready to salvage the EPA, he must demand the R & D funds to develop the knowledge base upon which wise and cost-effective decisions can be based.

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SETI Petition

In his response to the international petition on the Search for Extraterrestrial Intelligence (SETI) (Letters, 29 Oct., p. 426), Frank J. Tipler (Letters, 14 Jan., p. 110) argues that, since we are not intentionally transmitting radio signals to other stars, it follows that other civilizations are not beaming transmissions to Earth. As the Arecibo message of 16 November 1974 to the globular star cluster M13 demonstrates (*1*), our civilization is fully capable of directing messages to distant parts of the Galaxy that could be detected by civilizations at or only a little beyond our level of technological advance. But with this one exception we have chosen not to do so, and for perfectly good reasons. We have had radio astronomy technology adequate for SETI for only a few decades. Even rather optimistic estimates of the number of civilizations in the Galaxy (*2*) imply that the rate of emergence of new civilizations competent in radio astronomy could be less than one a decade. Therefore, it seems likely that few if any civilizations in the Galaxy could be simultaneously capable of interstellar radio communication and more backward than we. Accordingly, as the newest potentially communicative civilization in the Galaxy, we should be listening rather than sending. Other civilizations considerably more advanced than we would have substantially greater energetic resources and more advanced technologies to devote to transmission; our global long-term planning does not yet accommodate dialogues that could take many centuries for a single exchange; some humans are concerned that transmissions even to nearby stars might "give our position away" (although this has effectively been accomplished by commercial television and military radar systems); and, at any rate, it is not yet clear that we have anything particularly interesting to say. For all these reasons the present SETI strategy of listening but not sending seems appropriate for our backward status (*2*). But it hardly places restraints on whether more advanced civilizations might choose to transmit messages to planetary systems not yet known to harbor a technical civilization.

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References

1. Staff of the National Astronomy and Ionosphere Center, *Icarus* **26**, 462 (1975).
2. I. S. Shklovskii and C. Sagan, *Intelligent Life in the Universe* (Holden-Day, San Francisco, 1966); C. Sagan, Ed., *Communication with Extraterrestrial Intelligence* (MIT Press, Cambridge, 1973).

The Metric System

John Walsh (News and Comment, 8 Apr., p. 175) states that the United States is one of the few countries left where the metric system is not used as the official system of measure. I have seen little evidence of its use in the United Kingdom even though that country has strong economic ties with continental Europe as a member of the Common Market. Distances on highways are displayed in miles, and the speed limit is still 70 miles per hour. Most of Britain think of their personal weight in stones (14 pounds). Temperatures are given on the radio in both Fahrenheit and centigrade. Milk, beer, and petrol are sold by the pint or gallon (imperial). The British are unlikely to give up the mile, since one of them was the first to run it in less than 4 minutes. As a scientist I am comfortable with both systems, but I see no need to inflict the metric system on other folk.

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Folk Remedy

The report by M. B. Sporn *et al.* describing the use of polypeptides from bovine salivary glands to accelerate wound healing (18 Mar., p. 1329) is of more than passing interest to us here in northern New Mexico but does not surprise us one bit. For many generations, the Hispanic folk of New Mexico have been improving their complexions by bathing their pimples and acne in saliva taken from their cows. Here is one more instance of the scientific method catching up with folk medicine.

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