at the congressional hearing (*2*) that the MIT "inquiry went forward in conformance with our policy of investigating suspicion of fraud, even though Dr. O'Toole chose not to characterize her concerns as [fraud]." The statements of Eisen and of Deutch cannot both be true.

MARGOT O'TOOLE
44 Clark Road,
Brookline, MA 02146

REFERENCES

1. D. Weaver *et al.*, *Cell* **45**, 247 (1986)
2. J. Deutch, statement before the Subcommittee on Oversight and Investigations Committee on Energy and Commerce, U.S. House of Representatives, 9 May 1989.

Oil Spill Health Effects

Marcia Barinaga's article "Alaskan oil spill: Health risks uncovered" (News & Comment, 4 Aug., p. 463) captured the flavor of the Conference on the Alaskan Crude Oil Spill and Human Health very well.

A matter that could cause some misunderstanding, however, is the misstatement in the middle of the article labeled "the good news," that the highly toxic polycyclic aromatic compounds "evaporated from the spilled oil within several days." The lightest fractions of the oil, the single ring compounds that are of most concern for inhalation exposures, did evaporate rapidly. The polycyclic aromatic hydrocarbons, on the other hand, tend to concentrate in the weathered oil and may be of significant long-term concern for health, since we know that some of these compounds are hazardous and some are associated with cancer.

DAVID P. RALL
Director,
National Institute of Environmental Health Sciences,
Post Office Box 12233,
Research Triangle Park, NC 27709

Management at DOE

Readers of the article by Mark Crawford about Robert O. Hunter (News & Comment, 15 Sept., p. 1182) may obtain the impression that Hunter is a man of vision who is meeting opposition from a stodgy bureaucracy. The article quotes Hunter as saying that his "most ambitious activity" is "to maintain the flow of new ideas and . . . the quality of research." The impression one gains from the article and from the quote, however, is inconsistent with my experience.

Like Hunter, I came to Washington "just over a year ago." Unlike Hunter, I came, not to "head the Department of Energy's [DOE] $1.7-billion" Office of Energy Research, but to work in the "tiny geophysical research program" referred to in the article. The Geosciences Program is part of the Office of Basic Energy Sciences (OBES) within the Office of Energy Research. The program has an annual budget of about $18 million and supports the basic geoscience research of about 90 investigators at eight national labs and 70 investigators at almost 40 universities. Research grants are given on the basis of a peer-review system similar to that used at the National Science Foundation. The Geosciences Program office consists of one DOE employee, a portion of a secretary, a rotator from academia, and a detailee from one of the national labs—the position I have occupied on a half-time basis for the past 15 months. Thanks to Hunter, it has been a most exciting year—exciting, exasperating, but mostly, frustrating.

One particularly frustrating task was to help my colleagues decide how to take back

$3.5 million committed to research tasks already in progress in fiscal year 1989. This was the amount that Hunter required us to commit to his initiative in High Resolution Underground Imaging Using Acoustic Means in fiscal year 1989, and he wanted this initiative to grow to $10 million in fiscal year 1990, with no additional funding available. The Geosciences Program staff responded by pointing out that (i) it was already supporting underground imaging with approximately 20% of its total budget; (ii) the projects supported had been judged most competitive by scientific peer review; and (iii) his last-minute requirement would have an adverse impact on important research already committed to. Hunter's reply, impersonally transmitted down the DOE chain of command, ignored the points above and made the general statement that "orders of magnitude improvement in resolution" could be achieved by adopting advances developed by the antisubmarine warfare (ASW) community. This statement was thoroughly investigated by the Geosciences Program staff in a series of consultations with representatives of the ASW, seismology, and electromagnetic sounding communities and found to have no basis. Hunter would not meet with us or them to discuss the technical merits of his proposed initiative and simply insisted that we do as he asked. That may be "high energy management," but it is not the scientific leadership that the nation and DOE need, in my opinion.

As a result of the Hunter-imposed initiative, we have funded additional imaging work, most of it along lines already supported and none of it claiming to achieve "orders of magnitude improvement in resolution." Underground imaging–related research now makes up about 40% of our total budget and will be much larger in fiscal year 1990 if Hunter's recommendations are followed. The underground imaging program that "received positive review" by the JASONs was already in place before the Hunter-imposed initiative. I do not know whence Hunter's vision of dramatic improvements in resolution in underground imaging. I do know that it is not consistent with the best advice available from experts in the field.

In summary, I feel that Hunter's directive significantly underestimated the contrasting nature of energy transmission in the earth and oceans and, perhaps more important, underestimated the ability of solid-earth scientists to effectively cross discipline boundaries and bring new and relevant technologies to bear on their research. The situation was further confounded by Hunter's treating genuine technical misgivings about the initiative, relayed by his subordinates, as the stalling tactics of a stodgy bureaucracy. In the final analysis, I believe the productive research programs of scores of scientists have been threatened by a technically flawed, poorly defined initiative.

ALFRED G. DUBA
341 Lincoln Avenue,
Livermore, CA 94450

Erratum: In the article by B. F. Chmelka and A. Pines, "Some developments in nuclear magnetic resonance in solids" (6 Oct., p. 71), several references were transposed. Figure 1 was adapted from (*6*) [C. A. Fyfe *et al.*, *J. Am. Chem. Soc.* **110**, 3373 (1988)], not (*10*) and (*14*), as printed. Figure 2 was adapted from (7) [H. B. Cole, S. W. Sparks, D. A. Torchia, in preparation], not (*11*), as printed. The reference, to rotational resonance (p. 74, col. 2, line 22) should have been (*10*) [D. P. Raleigh *et al.*, *J. Am. Chem. Soc.*, in press], not (7), as printed. The authors in reference (*55*) should have been D. R. Nelson and F. Spaepen.

Erratum: In the Briefings section of 22 September (p. 1332), the credit for the x-ray image of the sun should have included Eberhard Spiller of IBM's Watson Research Center.

Erratum: In Eliot Marshall's News & Comment article "Old bones solve new problems" (15 Sept., p. 1185), the term "pubic symphysis" was misspelled in the third sentence of the sixth paragraph.