11). For balance, here are some typical attitudes of conservationists in opposition to a proposed project:

The program, no matter how proposed, must not be enacted.

Progress is no concern of ours, only preservation of the environmental status quo.

No need is so important as to outweigh the least potential ill effect on the environment.

No one supports the program, except the officers and shareholders of the sponsors.

Data used to predict dire effects of the program are the only valid, pertinent data.

It is not necessary to prove nor offer strongly suggestive evidence that the development will damage the environment; the allegation is enough.

It is always possible to base opposition on some possible effect—no matter how improbable—that the sponsor has not considered.

If the program as presented is not susceptible to attack, assume some unstated future development and attack that.

Whether or not applicable alternatives to the program can be found is no concern of ours.

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Polywater: Ideal Research Topic

Joel Hildebrand, a distinguished elder statesman of science, recently dismissed anomalous water research in a disparaging manner (Letters, 19 June), and offered an explanation of the phenomenon which appears to have been disproved even by research workers who vigorously doubt the existence of a new form of water (*1*). Unfortunately that attitude and its presentation outside the framework of usual scientific discussion characterize much of the scientific community's approach to this phenomenon.

A detailed analysis of current research certainly leads one to believe that there is no better than an equal—probably much lower—chance of its existence, but it is notable that even the popular press has displayed a more objective viewpoint (*2*) than that often heard among prominent scientists. There is ample evidence (not involving the present correspondent) that scientists holding opinions similar to Hil-

debrand's have strongly influenced the research proposal evaluation panels of numerous federal agencies.

It is interesting to step back from the specific scientific issue and view anomalous water as an example of research judgment: It is concerned with the possibility of a genuinely new phenomenon of widespread potential importance; the subject has relevance to many currently active research areas; specific research questions can be clearly identified; effective research can be carried out with simple and inexpensive equipment. It almost seems like a model for the ideal research topic that one always tells one's bright young students to be looking for.

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References

1. D. L. Rousseau and S. P. S. Porto, *Science* **167**, 1715 (1970).
2. W. Sullivan, *New York Times* (24 June 1970), p. 24; *ibid.*, (28 June 1970), sec. 4, p. 7.

Radiochemicals: Quality Control

Recent letters from D. M. Prescott (12 June) and I. Goldman (16 Jan.) concerning problems with radiochemicals prompts me to relate our approach to this problem. It originally began when one of our scientists, who was using a commercial ^{14}C labeled sample, questioned the low count rate in the ^{14}C channel of a liquid scintillation spectrometer and the high count rate in the ^{3}H channel. Eventually, the "^{14}C" sample was shown to contain both ^{3}H and ^{14}C.

After this experience, our practice has been to assay, before use, all commercial samples that can reasonably be examined, for: (i) total radioactivity; (ii) chemical and radiochemical purity, usually by a chromatographic separation and detection, followed by a radioscan; and (iii) the radioisotopic purity by examining either the beta-ray spectrum, which results by coupling a liquid scintillation spectrometer to a multichannel analyzer, or the gamma-ray spectrum using a multichannel analyzer. It is possible to detect about 1 percent ^{3}H or ^{14}C in the presence of the other by comparing the sample spectrum to that of known mixtures.

The problems that we encountered generally have been corrected promptly when brought to the supplier's attention. It is important to recognize that these problems are not unique to radiochemicals. As has been stated many times in the past, to avoid surprises, *all* chemicals should be examined prior to use.

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FDA: Maligned "Giant"

There may be many who agree with Muzik (Letters, 19 June) that "the current view of the general populace is that the Food and Drug Administration is an irascible, irresponsible, and dictatorial giant. . . ." But Muzik's statement is based on several misconceptions about the FDA:

1) The decision to ban the sale of foods containing cyclamates was not an FDA action, but was made by the Secretary of Health, Education and Welfare after consultation with a number of authorities both within and outside the FDA.

2) The FDA has no power to ban or even curtail the use of DDT, 2,4,5-T, or any other pesticide. The authority to prohibit the registered use of a pesticide is vested solely in the Department of Agriculture.

3) The "Delaney Amendment" of the Food Additive Amendment to the Food, Drug, and Cosmetic Act *compels* the FDA to proscribe the use of *any food additive* which is carcinogenic to any test animal at any level, including "astronomically high doses."

4) Unfortunately, the FDA can hardly be called a "giant." Its current budget is approximately $80 million and much of this is budgeted for programs not directly related to the enforcement of the FDC Act. Compare this modest sum with the $100 million or more annually allocated for meat inspection, or the $1 billion recommended for the next fiscal year for air and water pollution control activities. The only "giant" is the nearly $100 billion industry which must be regulated by the FDA.

5) The FDA has the enormous responsibility of protecting the American consumer with inadequate funds and with authority which is susceptible to reversal by at least two administrative levels between the office of the Commissioner of the FDA and the office of the Secretary of HEW.

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