letters

chemists have been using it, for instance, for polymers) is perhaps more suitable.

References

1. H. R. Philipp, J. Phys. Chem. Solids **32,** 1935 (1971).
2. A. G. Revesz, Phys. Stat. Sol. **24,** 115 (1967).
3. R. L. Mozzi, B. E. Warren, J. Appl. Cryst. **2,** 164 (1969).
4. I. V. Abarenkov, A. V. Amosov, V. F. Bratser, D. M. Yudin, Phys. Stat. Sol.(a) **2,** 865 (1970).
5. A. G. Revesz, J. Non-Cryst. Solids **7,** 435 (1972).

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7/12/76

Radioactive waste hazards

The critics of the letter about radioactive waste disposal by Bernard Cohen mostly seem to accept the order of magnitude of his calculations, but dismiss their relevance, and are worried by the residual risk. One point the critics all miss: the hazards of radioactive waste disposal may be bad, but other similar existing hazards to our society are worse and are not receiving attention.

These critics correctly concentrate on the long-lived nature of the wastes. Yet after 500 years radioactive wastes alone from coal burning have a hazard only 20 times smaller. Yet we scatter these wastes, which are also probably highly toxic chemically, indiscriminately over the biosphere and there seems no conceivable way of containing them. Arsenic, lead, cadmium, mercury are also widely dispersed.

It appears that with nuclear power mankind has for the first time in its history an opportunity of sequestering the wastes, because the quantity is so small. Simple calculations show that even the much criticized waste procedures at Hanford are better than the procedures for many other industrial wastes. Neither Cohen nor I are content with the Hanford procedures and insist that we can, and must, do better, especially since it is not expensive to do so.

But the declared intention to do better should not be taken as a criticism of those who devised these procedures in the past. On the contrary it should be taken as an indication that the public health hazards of nuclear power, already smaller in many ways than those of other energy technologies, can be made smaller still, whereas these other technologies cannot easily be improved. It would be the height of folly to throttle nuclear-power development and return to the less safe, more expensive, technologies. □

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11/22/76