

more, I have never questioned the fact that the most frequent winds in Denver over the Platte River valley are southerly to southwesterly. I only question the argument that such winds somehow protect Denver from Rocky Flats plutonium contamination.

In justifying the few Rocky Flats employees on the Transuranium Registry (450 of 7700) Michels makes indefensible statements: "Studies of exposures to workers must naturally be

restricted to those persons involved in incidents" and "... few of those [plutonium workers] collect significant exposures during their tenure." Cancer risks applicable to the maximum permissible lung burden (MPLB) for plutonium are very uncertain (4), and chronic effects of low level plutonium exposure are unknown. Cancer from inhaled plutonium may be due to the irradiation of cells within the short range of alpha radiation around each

plutonium particle. If so, the lung cancer risk would depend on the number, size, and persistence of plutonium particles in the lung. On this basis the MPLB is a meaningless concept, and plutonium lung burdens below detectable levels would involve significant risk. Not only plutonium workers, but all others exposed to airborne plutonium at Rocky Flats and its environs, have received plutonium exposures of uncertain consequences.

If the AEC is to be allowed to pursue a plutonium fast breeder program, we must first obtain an adequately comprehensive evaluation of the chronic effects of low levels of plutonium on man. I agree with Shapley that the limited program of medical follow-up of past and present employees of Rocky Flats falls woefully short of the mark.

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References

1. "Report on the Dow Rocky Flats fire: Implications of plutonium releases to the public health and safety" (Colorado Committee for Environmental Information, Boulder, 1970).
2. S. E. Poet and E. A. Martell, *Health Phys.* **23**, 537 (1972).
3. P. W. Krey and E. P. Hardy, "Plutonium in soil around the Rocky Flats plant" (Report No. HASL-235, Health and Safety Laboratory, Atomic Energy Commission, New York, 1970).
4. A. B. Long, *Nucl. News* **14**, 69 (1971).

Understanding Science

The important effort reported in the editorial "Understanding of science" by Amitai Etzioni (4 Aug., p. 391) needs more than the membership of the AAAS to be successful. Those disenchanted with technology may view the explanations of scientists as propaganda, while similar activities by attorneys, educators, bankers, and other nonscientist professionals could be meaningful to them. A start was made in 1966, with the pamphlet "Education and the spirit of science" issued by the National Education Association (1). Why not work with other friendly groups?

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Reference

1. Educational Policies Commission, "Education and the spirit of science" (National Education Association, Washington, D.C., 1966), now out of print.

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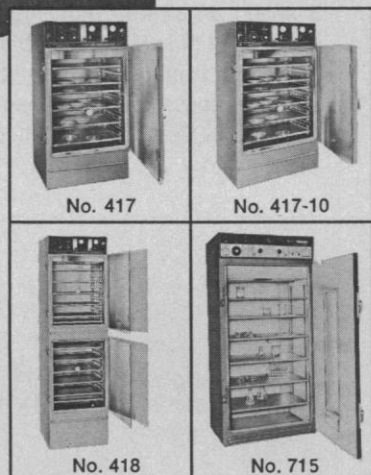
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