

confirmed but negative data were not tested. The death records of the Pennsylvania State Department of Health were also searched, as were the leukemia records from 1954 to 1955. No cases of malignant disease were found in the treated group, although 4 cases of cancer, including one of leukemia would be expected to occur in a group of children of this size and age distribution. The 4 malignant tumors in the sibling group, including one case of leukemia, compared closely with the expected number. -- Nuclear Sci. Abstr.

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795 Information and Effects of Radioactive Particulates in the Lung. C. W. LaBelle, et al. *A. S. Ind. Hyg. Assn. J.* 21, 195-200 (June-1960).

A 5-microgram dose of uranium dioxide particles placed in the lungs of rats is eliminated in 2 stages. During the first stage, about one-third of the material is removed within the first day or two (half-life 17 hours) while the remainder is eliminated much more slowly, with a half-life of 73 days, so that small but measurable amounts can still be recovered during the second year. With a specific activity of 10,000 dpm in 5 micrograms of material, the integrated radiation exposure to the lung during the first year is almost equal to the accepted tolerance dose of 15 rep per year. No signs of radiological damage could be detected in any of the animals exposed to this dose, either during the year in which the exposure occurred or during the following year, when the effective exposure was for all practical purposes negligible. This confirms the accepted view that a dose of 15 rep within one year is without effect, since the observation period, though extending only to a total of 2 years is nearly equal to the life span of the animals. It is worth noting, however, that the amount of radioactive material required to yield this tolerance level is rather greater than is implied by the maximum permissible intake tables of Morgan, Snyder and Ford. In other words, the Morgan tables are conservative. There is evidence to suggest that at least some insoluble particulates are cleared from the lungs slowly, with half-lives up to 6 months. In such cases the figures in the Morgan tables would be too high. This does not imply that the Morgan tables are not valuable, but only that they need to be used with due allowance for known departures from their premises. -- Cond. from author's conclusions.

795 Information and Education for Industrial Use of Radioisotopes. P. J. Blacetia. TID-7571. (pp. 262-266). Office of Isotopes Development. Isotope Technology Branch, AEC. 5 pp.

Significant publications and services are outlined which are available to anyone interested in acquiring an introduction to the literature of nuclear energy as a whole and applications of radioisotopes in industrial research and development in particular.

-- Nuclear Sci. Abstr.

796 Radioisotopes and the Law. S. D. Estep. TID-7571. (pp. 75-91). University of Michigan Law School. Ann Arbor. 17 pp.

The use of radioisotopes can result in great benefits for mankind, both as to health and economics. However, the use of such materials presents significant health and safety risks to the user and perhaps to many others. In most cases the very characteristics which make radioisotopes unique and therefore so useful makes them dangerous. The dangers are sufficient to have caused government agencies to impose regulations upon their use. A survey is presented for the business executive and engineer of the possible legal consequences of making use of radioisotopes. Not all of these consequences arise from the health and safety problems but those of greatest significance do and attention is directed primarily to them. The responsibility of the lawyer is to identify for the user the potential liabilities involved in using such material. -- Nuclear Sci. Abstr.