Radiation risks

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multiple. The committee concluded that "the available data do not suggest an increased risk with low-dose exposure of human populations."

The Committee noted that it is not yet known whether the background dose rate of 0.1 rads per year (or incremental exposures slightly above that background level) is detrimental to humans, because effects at this level would be masked by other factors that produce the same disorders.

In estimating the somatic effects of low-level radiation, the Committee has run into some disagreement among its members. A linear extrapolation had been used to estimate 192 to 756 excess cases of cancer incidence per rad per million males and 344 to 1306 cases per million females based on a single exposure. "Cumulative exposures at one rad per year for a lifetime yield much higher numbers because of the high assumed cumulative dose." But at least eight of the 16 members of the Subcommittee on Somatic Effects have gone on record as disagreeing with the committee's methodology for estimating health risks. Because so many subcommittee members disagreed with the official committee position on the tumor-inducing effects of low levels of ionizing radiation, Philip Handler, NAS president, has asked six members of the Subcommittee to prepare a compromise statement that will be substituted for that section of the main report which is under contention.

Specifically, the dissenters feel that the available evidence does not justify the highest risk estimates presented in the report. They hold that cancer risk estimates derived from high radiation doses should not be extrapolated using a linear hypothesis to low dose rates for which no epidemiological evidence exists. They said that risk estimates for whole-body irradiation that are based on individual organ risk estimation (as are the BEIR estimates) overestimate the incidence at low doses. The whole committee was in agreement, however, that there exists no threshold level below which no effects appear.

The Herring and BEIR reports both contain several qualifiers and disclaimers, but each stands by the conclusion that, while individual risks may not be known with any precision, the range of risk is known, and can be used for policymaking.

—MEJ

John Gibbons is new director of OTA

John H. Gibbons, former director of the Environment Center at the University of Tennessee, recently began a six-year term as the new director of the Congressional Office of Technology Assessment. OTA is an advisory agency set up in 1973 to provide Congress with early evaluation of new developments in science and technology. Gibbons replaced Russell W. Peterson, who resigned 31 March to become president of the National Audubon Society.

GIBBONS

A nuclear physicist with a doctorate from Duke University (1954), Gibbons was employed at Oak Ridge National Laboratory from 1954 to 1975. During his stay at Oak Ridge, he was group leader of the geophysics laboratory, director of an environmental quality project and director of the NSF Environmental Program. Gibbons served a year as director for energy conservation in the Federal Energy Administration and then joined the University of Tennessee in 1974. His previous contact with OTA includes consulting and panel work for studies on residential energy conservation and national energy research plans and budgets.

Theory institute asks for research suggestions

The advisory board of the new Institute for Theoretical Physics at the University of California at Santa Barbara (PHYSICS TODAY, March, page 125) is inviting the physics community to submit recommendations for major research programs, meetings and schools to be held at the Institute during the 1980–81 academic year. Recommendations must reach the advisory board, of which Paul Martin (Harvard University) is chairman, before its meeting in October. Field theory (elementary particle and condensed matter), quantum gravity, and high-temperature nuclear matter and neutrino interactions will be the three major areas of research during the first year.

Recommendations, including suggestions of possible leaders and senior participants, should be addressed to Walter Kohn, Director, Institute for Theoretical Physics, University of California, Santa Barbara, California 93106.

The Institute is inviting applications for three permanent positions (see display ad, this issue).

in brief

Robert San Martin is the new director of the DOE's Division of Distributed Solar Technology in the Office of Energy Technology. His responsibilities include programs to develop photovoltaics, wind energy and biomass technologies. Martin, who received his PhD from the University of Florida in 1969, succeeds Henry Marvin, acting director since the July 1978 formation of the office.

The Office of Technology Assessment has published in two volumes *Application of Solar Technology to Today's Energy Needs*, which reviews a variety of on-site solar energy systems designed to produce thermal and electrical energy directly from sunlight. Copies of the report (stock number 052-003-00539-5) are available from the US Government Printing Office at $7.00 each.

A second edition of the *International Directory of Solid State Materials Production and Research* is now being prepared. Those preparing crystals or other ultrapure inorganic research specimens, or making measurements on such materials, and who wish to be included in the new directory, may obtain questionnaires on request from T.F. Connolly, Research Materials Information Center, Oak Ridge National Laboratory, P.O. Box X, Building 2000, Oak Ridge, Tenn. 37830.

The two largest contracts ever to be awarded by the Lawrence Livermore Laboratory, for components of the $92 million Mirror Fusion Test Facility expected to operate in 1981, were recently announced. A $13.6 million contract was awarded to CVI Corporation of Hilliards, Ohio for construction of a fusion-chamber system. A $24.9 million contract was awarded to the Aydin Energy Division of the Aydin Corporation in Palo Alto to design, manufacture, install and test an electrical power supply system for the neutral-beam fuel injectors.

General Electric Co. of Schenectady, N.Y. has been awarded a sub-contract of more than $7 million for the design and construction of a large superconducting magnet to be used in DOE's Magnetohydrodynamic Power Generator Component Development and Integration Facility at Butte, Montana. Peter G. Marston, leader of the MHD Magnet Group at MIT's Francis Bitter National Magnet Laboratory, will supervise the design and construction of the magnet. □