

*Safety at Work 3rd edn.*, by John Ridley (Ed.) with 25 specialist contributors, Butterworth-Heinemann, 80 Montvale Ave., Stoneham, MA 02180, 1990, ISBN 0-7506-1018-2, 752 pp., \$195.00.

This “real world” discussion by British experts included many previously overlooked aspects of “safety”. As the editor notes, “health and safety situations in the workplace are never clear cut, but are affected by a whole range of influences both from within and without the organisation. This means that the safety adviser and the practising manager must take a much broader perspective when viewing health and safety problems ... to encourage lateral thinking among those with health and safety responsibilities so they look beyond the obvious in seeking solutions to safety problems.”

Noting the first safety welfare act was put on the UK Statute Book in 1802, it is interesting that the Health and Safety at Work etc., Act is dated 1974, and followed almost annually by more specific laws.

The first part of the volume at hand discusses British law and civil liability in detail (139 pages). The concept and management of risk is explored in various aspects with excellent treatments of accident investigation and reporting, records and statistics, the role of behavioural science, organisation for safety, and employer’s obligations (Part II, 176 pages). Part III is more specific, with chapters on occupational diseases, occupational hygiene, radiation, noise and vibration, workplace pollution, heat and ventilation, lighting, ergonomics and human error (154 pages). Part IV, General Science (226 pages) involves studies of strength of materials, testing, fire precautions from basic knowledge to fire control, mechanical hazards, mechanical handling, electricity, and details on the safe use of chemicals. Photos on drawings are of good quality; appendices and an index are well organized.

This is an excellent reference and should be most useful to anyone interested in “real world” safety and accident control.

HOWARD H. FAWCETT

*Radioactive Heaven and Earth – The Health and Environment Effects of Nuclear Weapons Testing In, On and Above the Earth.* A report of the IPPNW International Commission to Investigate the Health and Environmental Effects of Nuclear Weapons Production and the Institute for Energy and Environmental Research, authored and edited by A. Robbins, A. Makhijani, and K. Yih, Apex Press, 777 United Nations Plaza, New York, NY 10017, 1991, ISBN 1-85649-021-1, 193 pp., \$17.95 (paperback).

Recent media coverage of agreements on the reduction of nuclear weapons, and the cleanup costs of contamination estimated in the \$300 billion range,

suggest the importance of this volume. Beginning with the statement that the International Physicians for the Prevention of Nuclear War (IPPNW) is a fact-finding group dedicated to studying the effects of nuclear production and testing by several nations, it notes that approximately 1900 nuclear tests have been conducted, 518 of which were in the atmosphere, under water or in the space. The shroud of security is slowly being lifted, and we now can note releases from tests by the US, UK, the former USSR, France, China and India.

Tests were conducted under water, at remote islands in the Pacific and in Australia, as well as underground and in the atmosphere. While guidelines have existed for decades as an upper limit to human exposures, in the early days of US nuclear weapons testing, the official limit was 3.9 rads per year for the public downwind of atmospheric tests, but action tended not to be taken until doses reached or exceeded the level at which immediate radiation symptoms became manifest, namely about 100 rads. About half the fallout from atmospheric testing returned to earth near the test sites and in the downwind areas within a few hundred kilometers of the test locations, while the rest was deposited around the globe, in a non-uniform manner. With underground tests, fallout from venting is essentially like fallout from an atmospheric test. Radionuclides from underground testing include strontium-90 (generation rate of 0.1 megacurie/megaton with half-life of 28.8 years), cesium-137 (generation rate 0.16 megacurie/megaton, half-life 30.2 years) and plutonium-239 (150 curies per test, half-life 24,400 years). The question arises as to the long-range health effects which includes the induction of cancer. The majority of cancer cases will arise from exposures in the northern hemisphere, and estimates of fatal cancer from nuclear weapon testing are included, based on the best evidence and data available.

This is a very sobering volume and must be read in its entirety to be appreciated. One can only hope that diplomatic, not nuclear weapons, can be used in future disagreements. As the shield of security thins, and nuclear environmental decontamination continues, we recommend this volume to anyone concerned about the long-term welfare and health of the human race.

HOWARD H. FAWCETT

*In Search of Safety: Chemicals and Cancer Risk*, by John D. Graham, Laura C. Green and Marc J. Roberts, Harvard University Press, Cambridge, MA, 1988, ISBN 0-674-44636-4, 260 pp., \$14.90 (paperback).

This book is a thoughtful treatise about the nature of environmental regulatory controversy and the role played by science and scientists in setting environmental regulatory policy. The authors adequately describe the regulatory process and do justice to the often conflicting evidence about hazards, the ex-