

THIS MATERIAL ON SAFETY IS THE MOST HIGHLY DISPUTED ASPECT OF NUCLEAR TECHNOLOGY. WE WOULD LIKE TO THANK JEANNINE HONICKER AND THE MANY CONCERNED INDIVIDUALS WHO HELPED PREPARE THE LAWSUIT HONICKER VS. HENDRIE, A LAWSUIT TO END ATOMIC POWER AND THE BOOK PUBLISHING COMPANY OF SUMMERTOWN TN. IN PUBLISHING THE LAWSUIT.

Summary of the Physical Evidence

In summarizing the foregoing principles, the petitioner emphasizes the following points:

- (1) All stages of the fuel cycle emit radioactive poisons to the biosphere which can and do affect the health of citizens.
- (2) There is no practical method presently identifiable that will prevent the release of radiation once uranium is mined.
- (3) Recently disclosed evidence from NRC internal memorandums indicates that *on the order of 100 deaths* will occur at the milling stage of the nuclear fuel cycle *to future peoples for each day that fuel is produced*.
- (4) *Hundreds to thousands of additional cancers* are occurring among citizens now living in the vicinity of fuel cycle facilities due to the designed routine releases and common accidental releases of radiotoxins.
- (5) Physical and epidemiological studies indicate cancer deaths may result from enrichment process releases to populations residing near the facilities. Radon gas escaping from enrichment tailings may cause millions of deaths in future generations.
- (6) Fuel fabrication facilities are causing long term health effects by direct release of poisons to the biosphere, by serious irradiation of workers and thereby the human gene pool, and by removing from the reach of humanity forever rare alloys which are essential to the medical sciences.
- (7) Reactors can and do release enormous amounts of poisons to the environment—many thousand curies of radioactive liquids, many hundred-million curies of radioactive gases, and many billions of curies of stored solids—at the present annual level. Release of just 24 curies of a single isotope, Carbon-14, is said by the Environmental Protection Agency to have caused 1,000 health effects already. The immediate effect of these releases is now observable in populations living and working near reactors.
- (8) Reprocessing plants release as much poison to the biosphere in a single day as reactors release annually.
- (9) Transportation and handling of nuclear fuel cycle materials and wastes result in direct exposure to populations and releases of poisons to the biosphere. Congress recently learned of 118 highway incidents between 1971 and 1976, involving some radioactive spillage. A large accidental release of nuclear material has the potential for enormous destruction. The likelihood of such an accident occurring increases each year the fuel cycle continues, as new records continue to be set involving accidental releases of persistent poisons for which no repair mechanism exists.
- (10) NRC admits that the nuclear fuel cycle emits large quantities of radiation to the biosphere—on the order of 10^6 person-rem to be eventually absorbed by citizens of the United States and foreign countries—and that additional control measures are either unavailable or uneconomical for practical application to the present industry.
- (11) NRC admits that any release of radiation to the public results in health effects, including cancer and genetic defects. NRC has estimated these health effects for the entire industry to be on the order of 10^3 deaths from cancer and 10^3 genetic defects over the next twenty-two years. NRC bases this estimate on the 1972 NAS—BEIR report.
- (12) Edward Radford, Chairman of the BEIR Committee, testified to Congress on February 8, 1978 that the 1972 BEIR report had underestimated the damage caused by ionizing radiation at low levels. Recent discoveries in the radiation sciences and among the human population indicate new estimates of the effect of radiation on man are required.
- (13) The range of revised estimates for cancer and leukemia from routine fuel cycle releases is now from 100 to 1,000,000 annually.
- (14) The 80 daily death commitments from mining and milling, and the other deaths from other stages, from accidents, and from variant releases, represent deaths to both private citizens and occupational workers, neither of whom have knowingly consented.
- (15) Because a number of factors have not yet been figured into these calculations, such as non-cancer deaths, long term genetic damage, the superlinear curve of dose response, and improved data and analysis which may make the actual damage thousands of times greater, these early estimated health effects mentioned by the petitioner may be orders of magnitude too low.
- (16) It is uncontested that each and every stage of the fuel cycle emits poisons to the biosphere. In earlier times it had been thought that the volume of these poisons would be so insignificant as to not injure public health. The best available current evidence now indicates that release to the biosphere of these poisons at any level attainable by present design of the fuel cycle constitutes a serious public health burden and a loss of life to millions of people over long periods of time.
- (17) This loss is avoidable.