

IONIZING RADIATION

the other hand, if only small amounts of radioactivity exist, a catastrophe probably would not be much more costly.

Each industrial process should be carefully studied in the light of what might possibly occur so that suitable measures for prevention and control of fire and explosion can be set up.

Warning systems for early discovery and control of fire are even more important when fires can involve radioactive materials. To cause large dollar-losses, it is not, of course, necessary that the radioactive materials themselves burn. Losses may also be serious if the materials are spread around as the result of damage to their containment vessel (or system) or scattered by high-pressure hoses and run-off water during fire extinguishing activities.

Fires in dry boxes containing radioactive materials must be anticipated. The spread of a fire to contaminated filters in ventila-

tion systems must also be considered. In some cases, fires of pyrophoric radioactive metals must be fought with special extinguishment methods.

A plant volunteer company or a municipal fire department should receive advance training in fighting these type fires. This will pay off in the long run by reducing the damage that can occur in fighting a fire that involves a large amount of radioactive material.*

*See *Radiation Hazards of Radioactive Isotopes in Fire Emergencies*, an Introductory Report, June 1950, and *Radiation and Monitoring Fundamentals for the Fire Service*, 1955 (International Association of Fire Chiefs), *Radiation Hazards in Fire-fighting, Safety & Fire Protection Technical Bulletin No. 4*, 1955 (AEC).

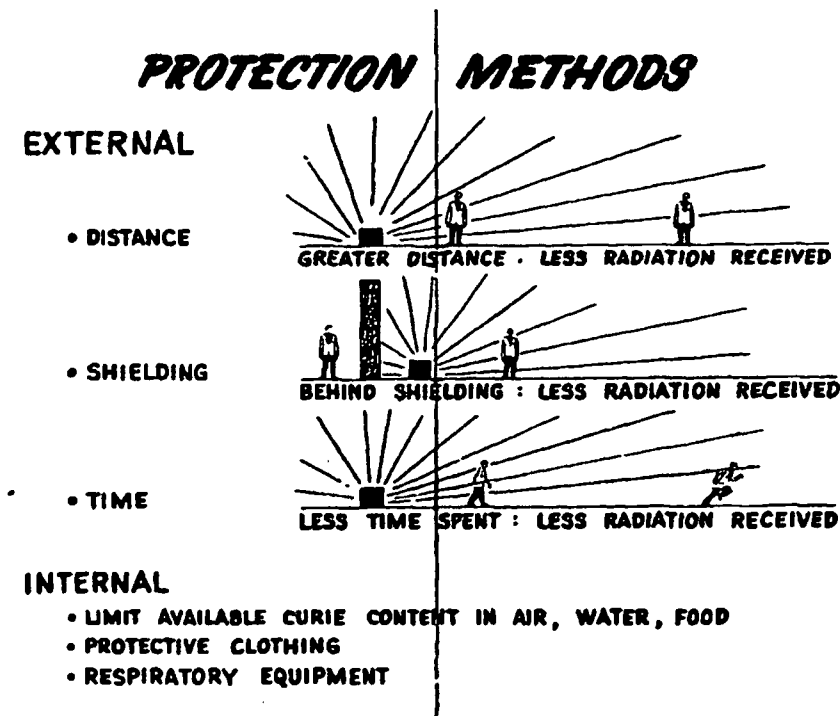


Fig 42-16. Humans can be protected from radioactivity by these methods

Courtesy Hanford Atomic Products Operation, General Electric Company