isn't very funny to those who will have the waste sitting near to them. Piling up more of the waste before a permanent solution to the problem is available is the highest form of irresponsibility imaginable.

DISEASE FROM RADIATION

Nuclear power plants routinely release invisible poisonous radiation into the air and water.[15] The amount of radiation we get from a normally operating nuclear plant is moderate compared to natural "background" radiation which is already around us in the soil, water, and from the sun. (Another substantial source of radiation in addition to background is medical x-rays.) However, the frequent abnormal operations and accidents at nuclear plants release much larger amounts of radiation than are normally released. Also, there is an entire nuclear "fuel cycle" which starts with uranium mining and ends, when a method is developed, with nuclear waste disposal. Each step of this fuel cycle releases more man-made radiation into the environment.[16] For example, Uranium miners are exposed to toxic amounts of radioactive radon gas when they work in the mines.[17] Hundreds have already died of lung cancer from inhaling radon gas, and 1,185 of 6,000 miners who are currently under study are expected to die from radiation-caused lung cancers by 1985.[18] In the average American population, only 2½ people per 6,000 would be expected to get lung cancer each year.[19]

Radiation from nuclear plants reaches us primarily when we inhale radioactive air and eat food and water which has been contaminated with radiation. Fish pick up radiation, as do cattle which eat contaminated grass and then provide meat and milk for us. Because humans are on top of the food chain, we get the largest concentrations of radioactive substances which were first concentrated in other plants and animals.

Most scientists agree that any dose of radiation is potentially harmful. Natural background radiation is responsible, conservatively, for about 20,000 cancers and major birth defects in the U.S. per year.[20 21 22] Radiation causes damage because it penetrates into our bodies. Some forms of radiation are very penetrating, capable even of passing through steel. Other forms cannot penetrate paper. This latter form of radiation couldn't harm us if the cells inside our body were lined with paper. Needless to say, they are not. So even when lesser penetrating types of radiation hit our cells, great damage can be done.

Radiation works like this: most body cells and sex cells are constantly dividing, the new replacing the old. Radiation hits the "information system" (DNA and RNA) of these dividing cells and changes it so that "bad or inadequate" information is passed on to the new cells. They eventually may become diseased. Children, because of their rapid tissue growth and cell division, are most susceptible to the ill-effects of radiation. Cancer, leukemia, cataracts, degenerative disorders like arthritis, and premature aging can and do result. Also, when the sexual reproductive cells (egg and sperm) receive radiation, mutations which can cause birth defects occur. Harrison's Principles of Internal Medicine, a reference book for physicians, has this to say about radiation-caused mutations: "The concern is not only with an increase in the number of obvious freaks and cripples, but with changes that will lead to such undesirable characteristics as lowered life expectancy, decreased fertility, a general increase in physical and mental disease, and an increase in (infant) death rates."[23] These less obvious genetic changes are the most important. They cause a slow deterioration in the ability of the human animal and other organisms to be normal, healthy, and to survive and reproduce. These harmful changes are passed along generation after generation until a great many people are affected.

The only way to avoid this increasing hazard is to keep man-made radiation out of the environment.

DIABLO'S EFFECT ON THE OCEAN[24]

Much of the damage to the oceanic ecosystem by the Diablo plant is already known. Much is yet to be discovered if the plant goes into operation.

The benthic (sea bottom) ecosystem of Inlet Cove at Diablo Canyon was essentially destroyed by siltation during construction of the cooling water intake structure for the plant. Efforts have been made to remove the silt, but they have failed.

Excessive amounts of copper were discharged into Diablo Cove in 1975 during the testing of the cooling system of Unit 1. Great damage to the ecosystem was done including the killing of thousands of abalone. Heat from the plant's operation is expected to kill up to 110,000 abalone, and will keep the number of sea urchins and abalone in the cove very low. The Environmental Protection Agency issued a "Finding of Violation" because of the copper discharge.

Excessive amounts of foam were formed on the ocean in Diablo Cove when the cooling system of Unit 1 was tested. PG&E is now "studying the formation and control of foam". This matter must be resolved if the plant operates or PG&E will be in violation of the State of California Water Control Act.

The loss of as much as 10-20 acres of bull kelp in Diablo Cove is expected from the warm water discharge. The loss of fish due to the cooling system of the plant is also of great concern. While the Addendum Final Environmental Statement for Diablo Canyon (Addendum FES) states that "the effect of the plant of loss of pelagic (ocean) larval fishes through entrainment (being sucked into the plant) will be negligible" and "loss of fin fish will be low during winter months", it also states: "uncertainty of the 'state-of-the-art' for impingement prediction (number of fish sucked in and killed) necessitates routine impingement monitoring during operation". In other words they know, but they don't know!

Chronic low-level radiation released from the plant will affect the plants and animals in the sea and on the land. The Addendum FES states, "doses of radioactivity will be released to the environment but levels will be insignificant", and "the risk of accidental radiation exposure will be acceptably low". But the FES states "very few studies have been conducted on the effects of chronic low-level radiation on natural aquatic or terrestrial populations". Translation: "we don't know, but don't worry". In fact, the FES contains a chart of the ability of plants and animals which live around the plant to concentrate radioactive discharges. Radioactive elements like cesium and iodine will be concentrated by factors of 11,000 in waterfowl and shorebirds, 20-50 by fish, 50-100 by molluscs like the Pismo clam and abalone, and 10-10,000 by algae such as the bladder kelp and bull kelp which are commonly found just off shore. PG&E plans to monitor these