

THE ENERGY ADVOCATE

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New York Times Readers Dying Like Flies

"The Nuclear Regulatory Commission's regulations acknowledge that **ONE out of every 286 people** exposed to the **ALLOWABLE** amounts of radioactive emissions **WILL DEVELOP CANCER**" bleats a paid advertisement in *The New York Times Long Island Section* (July 4, 1999). The ad calls for a "Millstone Sail for Your Life," hoping to get an armada of people's boats to converge on the Millstone nuclear power complex in Waterford, Connecticut.

For that matter, the American Medical Association acknowledges that **ONE out of every 6 daily readers of *The New York Times* will DIE of cancer.**

But before anybody concludes that reading the *NYT* is only 48 times as dangerous as letting Millstone keep producing electricity, let's have a closer look. The NRC's estimate of one cancer for "every 286 people ..." is based on the linear, no-threshold model. It is based on the cancer rate of severely exposed persons, but extrapolated down to minuscule exposures. If a large (but sub-lethal) dose of radiation will cause somebody to get cancer, then the same total amount of radiation spread out over 10 people will give one of them cancer, and so on. The linear no-threshold model is a rule of thumb designed to minimize public exposure to radiation, but is not a scientific tool of prediction.

Of course, nobody in the public is exposed to the allowable amount of radiation, save those who undergo radiation treatments to kill cancers. The maximum allowable amount of exposure for radiation workers has long been 1.25 rems (0.0125 Sieverts) per quarter, and 5 rems (0.05 Sieverts) per year. Of the thousands of radiation workers, only a small handful — fewer than 10 — receive that amount of radiation.

But the allowable limits for radiation for the public are much lower than for the radiation workers. Does this mean that a greater number of the public citizens are exposed to the allowable limit? No, because they are remote from the source. Virtually none of the 260 million persons in the US has ever

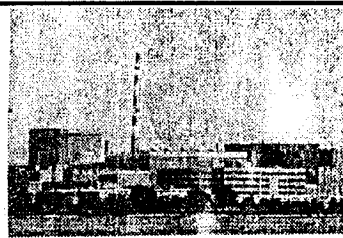
been exposed to the allowable limit, *even including the Grand Disaster at Three Mile Island*. We note that the TMI accident was a transient event, but the NRC's one-in-286 figure applies (if at all) to *continuous*, life-long exposure to the maximum allowable limit of radiation.

But nuclear delusions are not limited to the Sunday supplements and *The New York Times*. Jay Shelton and his students at the Santa Fe Preparatory School found this out when they presented 2½ years'

worth of radiation measurement data to the Santa Fe City Council [Robin Beck, Kevin Schwanfelder, Thaddeus Sze, and Jay Shelton, *Nuclear News*, July 1999, pp. 41-48]. The city was concerned about a laundry that washes clothes from workers at the Los Alamos National Laboratory. In short, there was no detectable radiation. Predictably, the Citizens for Nuclear Safety kvetched that Shelton "came to the project with preconceived ideas," and said that "He was supposed to be testing for radioactivity." (It's amazing how a man's thoughts can affect his Geiger counters.) Just as predictably, the City Council members refused to meet with the group, save one who embarrassed himself by saying that he'd meet with them *after* the meeting to decide on resolutions. (Suffice it to say that the ordinance passed by the town's fathers would not allow anybody to urinate within the city limits.)



THREE MILE ISLAND
CLOSED
(PARTIAL MELTDOWN)



MILLSTONE
OPEN
(LOCATED ON THE L.I. SOUND)

Millstone Nuclear Reactor has released more radioactivity into the air and water than any US commercial nuclear reactor, except for Three Mile Island.

The Nuclear Regulatory Commission's regulations acknowledge that **ONE out of every 286 people** exposed to the **ALLOWABLE** amounts of radioactive emissions **WILL DEVELOP CANCER**.

From an ad in the *NYT*, 7/4/99, calling for an armada of boats to converge on the Millstone nuclear power station on the north shore of Long Island Sound.

Fusion, Hot and Cold (?)

Becquerel discovered radioactivity coming from minerals containing atoms on the high end of the periodic table. In short, they disintegrate into atoms of less mass, releasing energy in the process. An example is radium-226, which decays by emitting an alpha particle (two protons plus two neutrons

in a single blob), and shedding two external electrons to become a radon atom. The alpha particle picks up two electrons and becomes a helium atom. Of course, we describe this process in terms of a rather advanced state of knowledge; neither Becquerel nor anybody else fully understood the process until Anderson's 1932 discovery of the neutron, and very thorough physical and chemical work had been done to identify the elements and the process precisely.