

ARIZONA NEWSLETTER

Doctors for Disaster Preparedness

May 1986 (vol. 2, #4) 1601 N. Tucson Blvd. Suite 9, Tucson, AZ 85716 c 1986 J Orient

C H E R N O B Y L

Opponents of American nuclear power plants are often concerned about a connection between the commercial and military uses of this technology. "The difference between a bomb and a nuclear power plant is purely psychological," as Helen Caldicott once said. Though this extreme view is grounded in scientific ignorance, Chernobyl does illustrate the potential overlap in peaceful and military applications. More importantly, it highlights the profound difference between the American and Soviet nuclear programs.

The pressurized water reactor, the kind most commonly used in the United States and the rest of the world, is designed to make as little plutonium as possible. In addition, the plutonium remains in the reactor for an average of 3 years, during which time about 30% of the Pu-239 is converted into Pu-240. The steady shower of neutrons from the Pu-240 in this "reactor grade plutonium" could cause a bomb to fizzle. "Weapons grade plutonium" is much better bomb material. It can be made by leaving fuel in the reactor for only 30 days. Since refueling an American reactor requires a 30 day shutdown, it would be highly impractical to use a power reactor for this purpose. In fact, all plutonium for American bombs is produced in special facilities such as the one at Hanford -- the only American reactor in the weapons industry to use graphite as a moderator. Although more dangerous, graphite reactors have a neutron spectrum that yields weapons quality plutonium.

The 20 Soviet reactors like the one at Chernobyl are apparently designed to produce as much weapons grade plutonium as rapidly as possible. They are built for continuous refueling, making concrete containment vessels impractical. Furthermore, they are run at such a high power density (18 times higher than Hanford) that only continuous cooling prevents the temperature from rising to the ignition point of graphite.

While the West worries about the fallout from the Chernobyl fire (measurable, but insignificant in the United States), the ultimate Chernobyl product -- Soviet thermonuclear weapons -- is the real threat. The Soviets demonstrated their attitude toward human life by delaying implementation of their civil defense plans for 36 hours. The United States, of course, doesn't even have credible plans.

So far, I have seen no announcements for marches against Soviet graphite reactors. However, Helen Caldicott did express regret that the accident didn't happen here instead. A few thousand American victims might help to raise our consciousness, she believes.

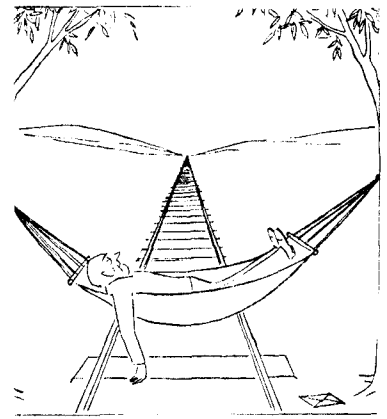
References: Cohen BL, Before It's Too Late: A Scientist's Case FOR Nuclear Energy, Plenum Press, 1983; Wall Street Journal May 14, 1986, p. 28; Access to Energy, June 86.

NUCLEAR WINTER UPDATE

Among the key assumptions underlying the nuclear winter hypothesis is the uniform distribution of the smoke cloud. An experiment in Britain studied the local atmospheric effects of smoke. The smoke was generated on a dry, clear day, when washout was expected to be minimal. The smoke injection caused temperature gradients, resulting in local air circulations. Clouds developed that would not otherwise have occurred. Such clouds would tend to scavenge the smoke before it could diffuse into the continental-scale smoke pall that is the starting point of nuclear winter calculations. (Note that the black rain at Hiroshima was an example of this effect.) The experiment was reported by BW Golding, et al, "Importance of Local Mesoscale Factors in Any Assessment of Nuclear Winter," Nature 319:301, Jan. 23, 1986.

G A P S

CIVIL DEFENSE gap: Soviets \$20 per person/yr, US \$0.09
AIR DEFENSE gap: Surface-to-air missiles Soviets 10,000, US 0
ABMs: Reloadable launchers around Moscow 64, in US 0
SPACE LAUNCHES in 1985: Soviets about 100, US about 15
PROPAGANDA: Soviets \$2 per person/yr, US \$0.02



THE PEACE PRIZE AND HUMAN RIGHTS

"The Nobel Peace Prize has, especially in latter years, often been awarded to campaigners for human rights," said Egil Aarvik, chairman of the Nobel Committee, in awarding the prize to International Physicians for the Prevention of Nuclear War (IPPNW). He also remarked that the Committee hoped for "universal recognition of the freedom which is every human being's birthright."

This year's prize was, in his opinion, also concerned with human rights -- the right to life. Survival, in IPPNW's view, apparently takes precedence over all other values, including human freedom. One of the prizewinners, Dr. Yevgeny Chazov, was the signatory to a 1973 letter denouncing previous Nobel Laureate Andrei Sakharov, in typically Stalinist terms. The letter, quoted in full by Irving Louis Horowitz in Chronicles of Culture, March, 1986, p. 32, stated that the signers "resolutely condemn [Sakharov's] activity aimed against Soviet peaceful policy." Furthermore, "we wholly and completely approve and support the Soviet Union's foreign policy course. . ."

Chazov has claimed that Sakharov once called for the US to expand its nuclear arsenal (N Engl J Med 314:791). However, according to Horowitz (ibid.), the statement by Sakharov which provoked the ire of the authorities called for recognizing the importance of "concern for human values of a moral, ethical, and personal character."

At a press conference held before the Nobel awards ceremony, hostile journalists questioned Chazov about the letter, but Chazov declined to answer because the question concerned his activities as an individual rather than as an IPPNW officer. Bernard Lown asked to address the issue, but before he could speak, someone at the conference suffered a cardiac arrest. Two pages of the New England Journal of Medicine (314:791-3) are dedicated to describing the details of the resuscitation. Apparently, this was considered sufficient answer to the critics of Dr. Chazov.

IPPNW is a "single issue" organization, and Chazov's activities related to that single purpose can be summarized quite briefly. He appeared on Soviet television in June, 1982, once, in the middle of a working day, without advance notice, to warn of the consequences of atomic warfare. His book The Danger of Nuclear War was widely distributed in the West. A total of 7,000 copies were printed in Russian and exported, so that the book cannot be found in Soviet libraries and bookstores. His group has not held a single public lecture or organized a single seminar for ordinary Soviet citizens.

As reported in the Bulletin of the Atomic Scientists, May, 1986, IPPNW has not made contact with the Moscow Group for the Establishment of Trust, a group of Soviet citizens committed to the avoidance of nuclear war. They are not in official favor; one of its founding members, Sergei Batovrin, was incarcerated in a Soviet psychiatric "hospital."

The Soviet branch of IPPNW appears to be fully supportive of the policies of the Soviet government. The American branch eschews any attempt to influence those policies, not even when they result in psychiatric abuse of antinuclear war activists. Apparently, IPPNW exempts itself from the principle that "physicians have the obligation to speak out against the misuse of the skills and knowledge of their profession, whenever and wherever it occurs" (JAMA 255:2797). Physicians speak out fearlessly against the governments of Uruguay, Chile, Argentina, and South Africa (JAMA, ibid.) But if the thugs are armed with nuclear weapons, IPPNW remains silent. Presumably in the interest of the greatest human right.