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AUTHOR:	Walston Chubb
AFFILIATION:	PA
ADDRESSEE:	Dale Klein
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March 29, 2007

Dale Klein, chairman
U. S. Nuclear Regulatory Commission
Washington, DC 20555 - 0001

To whom it may concern,

On August 6 and 9, 1945, atomic bombs were exploded over Hiroshima and Nagasaki, Japan. About 200,000 persons were mangled to death by the force of the explosions. However, about a score of bodies were found without a mark of violence on them. The mysterious cause of the latter deaths has plagued the imaginations of billions of humans for over sixty years. Japanese Emperor Hirohito imagined that there were seeds of death in the nuclear radiations from those atomic bombs. Physicians at our National Academy of Science adopted that feudal, Shinto belief. They expressed that belief in the form of a mathematical equation. That equation has become known world-wide as the linear-no-threshold (-no-recovery) theory of radiation damage. See BEIR-VII, June 2005. The U.S. Nuclear Regulatory Commission has accepted that theory as the basis of nuclear regulation.

Evidently, it will be many more decades before those responsible for our welfare re-examine the data to discover that those few Japanese were cooked to death. There is nothing mysterious about the physical process of cooking. It is very unusual to cook people to death in a fraction of a second. That result requires the enormous power of an atomic bomb.

Physicists understand that an energy release which makes a sound can be defined as an explosion. The periods of the sounds made by explosions range from about 0.001 to 0.003 second. We hear them as a sharp crack or boom. Japanese investigators found that the minimum heat required to kill those people was 500 Rem or 5 watt-seconds. To find the heat rate or power required to kill those people, we must divide the heat used by the time of use. It follows that those people were killed, cooked to death, by more than 170,000 to 500,000 Rem per second or 1700 to 5000 watts.

More constructive use of the energy of fission can be achieved by slowing the process down. Then, we can capture the heat and use it to make nuclear electric power. All it takes to slow the process down is a "moderator", such as water.

Sincerely,

Walston Chubb

Walston Chubb, retired consultant
nuclear materials & radiochemistry
4953 Cline Hollow Road, #244
Murrysville, PA 15668 - 1591

724-327-8592