

# CIVIL DEFENSE PERSPECTIVES

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## RADIATION MONITORS FOR ALL

Bringing expedient civil defense to Americans has been like the old story of making stone soup. Stephen Jones, Special Projects Director for Physicians for Civil Defense, started a fire under a big pot of water containing nothing but stones. Thanks to its individual small donors, PCD threw in some salt. Key ingredients were provided by gifted and generous Americans: the ingenious NukAlert, factory-made Kearny Fallout Meters, and the indispensable manual *Nuclear War Survival Skills*.

And now we have beef: a dosimeter so cheap that less than \$1 million could equip all of America's first responders. They can be made at a retail cost of \$2.00. One is enclosed; please stick it to a plastic card and carry it in your wallet, where it should last 5 to 10 years.

The sticker, printed with radiosensitive ink, is a spin-off from the SIRAD dosimeter card, developed by Gordhan Patel.

### The SIRAD Dosimeter

The Self-indicating Instant Radiation Alert Dosimeter, developed with government funding and approved by the Dept. of Homeland Security, gives an instant, permanent, cumulative reading of radiation dose, ranging from 1–1,000 rads. It has a "FIT" monitor to check for rare false positives and negatives, and a red filter to protect it from sunlight. (Consult [www.jplabs.com](http://www.jplabs.com) for technical details and photographs.)

The \$10 SIRAD RADTriage card is sensitive enough to detect the burst of gamma rays (up to 10 rem) that airline passengers might occasionally experience in the vicinity of lightning flashes. Since planes don't carry detectors, it is not known how often this occurs (*LiveScience* 12/9/09).

In the event of a nuclear detonation or other radiologic event, SIRAD cards could prevent panic and runs on emergency facilities—and save people from lifelong worry.

### The Radiation Threat

The Doomsday Clock of the *Bulletin of the Atomic Scientists* has been moved back one minute from its 2007 reading; it's now "six minutes to midnight." The *BAS* is slightly encouraged by [U.S.] disarmament efforts—and by politicians' pledges to "limit climate-changing greenhouse gas emissions that could render our planet nearly uninhabitable."

Both missiles and nuclear warheads continue to proliferate, however (see p. 2). Los Angeles has noticed, and is doing a shelter inventory. Angelo Bellomo, its county director of environmental health, speaks of contacting 88 cities "so they can begin to amend their emergency plans to include planning for a nuclear device." (*LA Daily News* 12/14/09).

In congressional testimony on Sept 29, 2003, Dr. Patel said a successful terrorist attack with a crude "dirty bomb" was likely. In 1995, the first radiological dispersion device (RDD)—15 pounds of explosives and cesium-137—was found in a Moscow park. In 2001, American forces in Afghanistan found detailed information on making and using an RDD. Hundreds of illegal sales of radioactive material have been confirmed.

American medical journals publish worries about radiation—from potentially life-saving medical imaging (see p. 2).

### Educating Congress

Long ago, the late Conrad Chester and Cresson Kearny counseled that advocacy of proper civil defense for Americans was pointless because of entrenched federal doctrine. They dedicated their lives to *expedient* civil defense—simple measures that could be taken by ordinary Americans to save lives in a crisis, with minimal advance preparation.

The *Nuclear War Survival Skills* plan is the official U.S. federal government-endorsed [default] plan for the *survival* of Americans in the event of a nuclear detonation. It has the support of state and local officials, including Arizona Director of Emergency Management Lou Trammel (*J Am Phys Surg*, spring 2009). Rep. Charles Dent (R-PA) was the first federal official to show support by having his photograph taken with the NWSS manual. Rep. Rob Bishop (R-UT) has done likewise.

The most important component of the NWSS plan is knowledge. Jones and associates have completed a mission to deliver basic information to all congressional offices.

The basic presentation is: "Hi, I'm Steve Jones, a volunteer with Physicians for Civil Defense. We are giving these radiation monitors to all the senators and congressmen."

He hands the staffer the SIRAD radiation monitor taped to a flyer and a yellow 60-second training card. The monitors are so cheap that rules against accepting gifts should not apply.

Pulling out the big yellow civil defense Geiger counter, Jones says, "This is the old technology." Pointing to the SIRAD monitor, he says, "This is approximately the new."

"This center strip will turn a darker shade instantly if there is radiation present. The shades on the right represent high levels of radiation, but they are not health-threatening. The shades on the left are health-threatening. It works almost like a thermometer. The entire center strip turns a shade; the shades on the sides are the levels."

Staff interest was so high that volunteers were able to maintain their enthusiasm for the grueling task of giving 535 presentations. Often Jones was kept for 10 or 20 minutes answering questions. He also showed and explained the NukAlert to staffs expressing exceptional interest.

About 1,500 staffers have learned of the need for first responders to have expedient monitors for radiation events.

### What Next?

SIRAD cards do not constitute national civil defense, but they are a critical catalyst. At present, our nation could be destroyed by a few nuclear detonations or RDDs—and the ensuing panic. Many thousands of lives would inevitably be lost, but millions could be saved from radiation sickness, and from the paralysis of ordinary life-sustaining activities by radiation phobia. Our audacious goal is to provide local authorities and first responders with rudimentary knowledge and preparedness. Our stone soup could nourish the seeds of self reliance in the desert of defeatism.

The inexpensive rad sticker makes it possible for us to envision the actual accomplishment of the task of overseeing distribution to all 2 million first responders. Please help!

## Blood Test for Radiation Exposure

Duke University has received an initial federal grant of \$3.7 million to develop a technique to identify the gene-activation “signature” produced by radiation exposure. Continued research funding could come to \$43.6 million. A 30-minute assay could be done on a few droplets of blood. Leading researcher John Chute said, “Imagine a blast zone with a ring of triage stations at the perimeter.” And then what?....

## Typical Radiation Doses

chest film	0.03 rad
natural background	0.25 rad/y
radiation workers	5.0 rad/y (limit)
spiral CT (full body), up to	10.0 rad
Hiroshima survivors (average)	20.0 rad
radiation workers	25.0 rad/lifetime (limit)
acute radiation sickness	~ 100.0 rad
50% chance of death	> 450.0 rad (acutely)

T.D. Luckey states that because of the hormetic effect of low-dose radiation, the *optimal* annual exposure is about 6 rem. He believes the annual legal exposure limit should be 1,000 times higher than it is now [*Int J Nuclear Law* 2008;2(1)].

“Rad” stands for “radiation absorbed dose.” One rad is the radiation necessary to deposit the energy of 100 ergs in a gram of tissue. The rem measures biological effectiveness; for diagnostic energy levels, 1 rad = 1 rem = 0.01 Gray.

## Medical Over-exposures

More than 600 errors in the delivery of radiation therapy were identified in New York between 2001 and 2008—a few resulting in devastating injuries and death. Facilities rely on increasingly complex computer software to program equipment to deliver precisely targeted doses. There is no fail-safe mechanism to fix errors such as a wide-open collimator, or a metal wedge that is “out” instead of “in” (*NY Times* 1/24/10).

Apparently, dosimetry to measure the radiation that actually hits the target—and nontargets—is not in the protocol.

## Threat Update

In Pakistan, 20,000 people work in the nuclear weapons industry. The huge tunnel system for transport and storage of the weapons is so deep that a nuclear attack would not touch them—and “Big Uncle” is not able to monitor movements by satellite. The regime is unstable; the influence of radical Islam is growing; suicide bombings have occurred at air force bases that apparently serve as nuclear weapons storage sites. Pakistanis do not trust the U.S., in part because of U.S. cooperation with India, the only nation that has been allowed to purchase U.S. nuclear technology without signing the Non-Proliferation Treaty (*New Yorker* 11/16/09).

Iran is apparently experimenting with an advanced nuclear warhead design, the “two-point explosion” device, which would allow production of smaller and simpler devices more easily mounted on a ballistic missile. The development was called “breathtaking” by a European official (*Guardian* 11/5/09).

The new Russian RS-24 rocket, capable of carrying multiple warheads, was tested in 2007. It is said to be capable of penetrating all existing anti-missile defenses. The timetable seemed to be designed to avoid a conflict with the START

treaty that expired in December 2009 ([www.spacewar.com](http://www.spacewar.com) 5/29/07; [www.globalsecurity.org](http://www.globalsecurity.org) 6/11/07, 10/28/08; [www.missilethreat.com](http://www.missilethreat.com) 12/2/09).

An October 2009 agreement formalized the departure of U.S. inspectors from the Votkinsk Portal Monitory Facility, at the site where Russian ICBMs are built. To monitor the START agreement, Americans counted and inspected missiles leaving the plant. The U.S. does not produce long-range missiles (*Washington Times* 12/1/09).

## Defense Update

A huge explosion at a Russian military arsenal killed two firefighters. The 43 military personnel who took refuge in the bomb shelter were safe (AP 11/14/09).

An exoatmospheric collision between two missiles launched from separate sites was a surprise; China had not notified the U.S. of the intended test of an antiballistic missile. Beijing is expected to have a robust nationwide missile defense network by the mid 2020s (*Global Security Newswire* 1/12/10).

Defending against ballistic missiles has not been a technical mystery since 1958, writes Angelo Codevilla. All U.S. systems, however, have been systematically crippled, despite loud political support by some Republicans, so that they could only provide strictly marginal protection. With “pretend missile defense,” we have spent a lot of money while avoiding the defense of the U.S. (*American Spectator*, November 2009).

Military strength depends on economic strength. As former assistant Treasury secretary Paul Craig Roberts said, “The U.S. is not a superpower. The U.S. is an economically dependent country that foreign lenders can close down at will” (Powell’s *Global Changes & Opportunities Report*, Nov/Dec 2009).

## GPS System at Risk?

The DHS has decided to pull the plug on the decades-old LORAN-C navigation system, which uses radio signals from 24 land-based towers. Global positioning satellites are largely used now; however, GPS signals are weak and subject to disruption or jamming. Sen. Lieberman objected to decommissioning LORAN—for a savings of only \$36 million—without another back-up to GPS ([www.oceannavigator.com](http://www.oceannavigator.com)).

## Newspaper Prints KFM Instructions

A part of Cold War civil defense planning was for newspapers to print millions of copies of instructions for building a KFM during a crisis. *Southwest Free Press*, PO Box 22923, Pagosa Springs, CO 81147, inserted the instructions in the Jan 8, 2010, issue, including photographs from the Arizona and Utah NWSS tours. A PDF file is available on request, or can be downloaded from [www.southwestfreepress.com](http://www.southwestfreepress.com).

## Do You Have Food Insurance?

Food stamps are now being used by one in eight Americans (one in four children). Catholic Charities USA reports that the number of seniors requesting assistance from local food banks is up 54% in 12 months. World food inventories are at record-low levels, and prices could soar rapidly (*WND* 12/11/09).

At [www.quakekare.com](http://www.quakekare.com), 3600-cal. ER bars can be bought for less than \$3. Consider stocking up on popcorn, which can be either ground or popped; split peas, which make good soup when ground even when very old; and other grains and beans.