

NUCLEAR DANGERS & A SAFE. SUSTAINABLE FUTURE

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# **HOW MANY WAKE-UP CALLS DOES IT TAKE?**

### by CBG President Dan Hirsch

#### THREE MILE ISLAND. CHERNOBYL. FUKUSHIMA

After TMI, nuclear industry advocates told us not to worry, they had brought the accident under control a half-hour before a complete meltdown and breach of the reactor vessel would have occurred.

After Chernobyl had a complete meltdown (and fire) they told us not to worry, it was a Soviet-design reactor, different than ours.

But what can they say in the wake of the Fukushima disaster, which, as I write, is still going on? These were General Electric-designed plants, in a technologically advanced society, with a regulatory structure similar to our own.

They still say: not to worry. It can't happen here. But it can. How many warnings must occur before we come to our senses?

What happened at Fukushima is called "station blackout"—a reactor loses offsite power to run the pumps to cool the fuel to prevent it melting, and the backup diesel generators fail as well. When nuclear fuel melts, it releases vast quantities of radioactivity. What happened at Fukushima can occur here. There are numerous ways one can lose cooling at any American reactor. In the months after the earthquake and tsunami hit Fukushima, we had a series of remarkable close calls here. Yet American authorities continue to repeat their Alfred E. Neuman refrain: What, me worry?

Less than two weeks after the quake took down Fukushima's offsite power and the tsunami damaged its backup diesels, powerful tornados tore across the American Southeast. The tornados destroyed transmission lines taking electricity to three reactors at TVA's Browns Ferry plant in Alabama-site of a famous near-catastrophe in the 1970s-causing the reactors to lose offsite power. Not to worry: the backup diesel generators kicked in. Then one developed a leak of hydraulic oil and had to be shut down, resulting in loss of cooling to two reactors for a time. A few days later, a second diesel generator failed. Eventually, offsite power was restored. A close call. A warning.

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The work to bridge the gap between nuclear dangers and a safe sustainable future has never been more crucial. But we cannot do this vital work without your support. Donations are tax deductible - and there is more than one way to donate.

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#### Winter 2011 Newsletter

- 2 Failure of US Radiation Monitors
- 2 Meet CBG Board Chair
- **3** Coalition For Renewables

Fort Calhoun nuclear plant surrounded by flood water.

Photo: Larry Geiger

A couple of months later, a fire damaged electrical equipment needed to cool the irradiated reactor fuel storage pool at the Ft. Calhoun nuclear plant in Nebraska, causing the highly radioactive fuel to lose the pumps needed to cool the fuel for about an hour and a half. Eventually the pumps were restored.

But a few weeks thereafter we were faced with stunning footage of the Ft. Calhoun plant, and the Cooper Nuclear Station, also in Nebraska, surrounded by rising flood waters, as though sinking in the center of a huge lake. At the Ft. Calhoun atomic reactor, the waters were being held back from the plant by what was for all intents and purposes a huge black rubber inflatable inner tube surrounding the facility—that is, until someone operating a Bobcat accidentally punctured it, causing it to deflate.

The chairman of the Nuclear Regulatory Commission, Greg Jaczko, visited in an effort to reassure the public. When he arrived at the plant, completely surrounded by flood water, continued on page 3



## FAILURE OF EPA FUKUSHIMA U.S. RADIATION MONITORING

### Efforts to Relax U.S. Radiation Standards

WITH A PLUME OF RADIOACTIVITY HEADED TO THE U.S. FROM the three melting reactors in Japan, Environmental Protection Agency personnel scurried to send out sensitive deployable radiation monitors to fill in large gaps along the American West Coast where no stationary air monitors existed. Then, inexplicably, officials at EPA headquarters in Washington ordered the radiation monitors not be deployed. Most sat in offices and warehouses throughout the accident, taking no measurements.

Bridge the Gap revealed to the news media that half of EPA's stationary air monitors across the country were broken at the time of the accident; many had been not working for months. Even had they been working, they couldn't measure most radioactive iodine, one of the primary radionuclides of concern.

EPA kept quiet about any radioactivity showing up in precipitation until the States of Massachusetts and Pennsylvania announced their own measurements showing significantly elevated levels of radioactive iodine. EPA then started reluctantly releasing other measurements of rain and snow, yet tried hard to bury the findings. Precipitation across the country was found to contain radioactive iodine (I-131) at levels greatly in excess of the EPA's Safe Drinking Water Levels (see graph at right). EPA, instead of making this clear, tried to walk away from its own standards.

We also revealed that milk samples are generally held for six months to a year before being monitored for strontium-90, so that if contamination is found, it will be far too late to take steps to protect anyone, since the milk will have long since been consumed. And EPA, when elevated iodine-131 was found in milk, compared the levels not to its own Safe Drinking Water standards but to other levels thousands of times less protective.

This was troubling because for years, Bridge the Gap has been pushing against EPA efforts to dramatically weaken radiation guidelines that are to be used in dealing with a release of radioactivity. In the last hours of the George W. Bush Administration, EPA officials tried to publish in the Federal Register revised Protective Action Guides (PAGs) that would have increased allowable radioactivity levels in drinking water by factors of a thousand or more. The proposed PAGs would have also allowed long-term contamination so high that EPA's own estimates were that as many as one in four people exposed would get a cancer from the contamination.

Working with a coalition including NRDC, Sierra Club, Physicians for Social Responsibility, Nuclear Information & Resource Service, and others, we got the new Administration to withdraw the proposed PAGs and undertake a review. Nearly three years later, no new PAGs have been issued, the problems remain unresolved, and press reports indicate that the Obama Administration is considering almost the same weakening of protections that its predecessor did, albeit using different words.

This November, CBG's Dan Hirsch, with a coalition of other groups, presented findings to EPA senior management of a 6-month study of the extraordinary failures of the EPA Fukushima radiation monitoring program in the U.S. and concerns about continued efforts at EPA to weaken radiation standards. The briefing included the EPA Deputy Administrator and the Assistant Administrators for Air and Radiation, for Water, and for Emergency Response.

If the EPA U.S. radiation monitoring system is incapable of seeing elevated radiation when it occurs, or downplays it even when it can see



**Radioactive Iodine-131 Detected** 

it, EPA will be incapable of taking actions to protect the public. And if the Protective Action Guides are based not on radiation levels that are in fact protective, but that are weakened thousands of time from generally accepted standards, people won't be protected at all.

In Japan, a furor arose when authorities attempted to relax radiation standards, including those for children, from 0.1 rem per year to 2 rem, in part because of high radiation levels in children's schoolyards. These levels would cause a cancer in one out of every two hundred children, according to official risk estimates. The Japanese authorities were forced to back off, at least in part. What was not revealed, however, is that EPA's Protective Action Guides in this country permit precisely the same outrageously high exposure levels.

Bridge the Gap will keep fighting for radiation monitoring systems that work and protective action guides that are protective. You can review our presentation to the EPA and related materi-

als on our website, http://www.committeetobridgethegap.org



#### Meet CBG Board **Chair SUSAN CLARK**

Peace Award and by CAR

#### FORT CALHOUN - CONTINUED

The New York Times reported, he was offered a life jacket! He had to climb over piles of sandbags to get from one part of a building to another. As nuclear engineer Ernie Gunderson quipped, the words "sandbag" and "nuclear reactor" should never be in the same sentence.

Again, another major warning. You'd think Someone was trying to tell us something, but we still weren't getting the message.

And yet, there was one more opportunity given us to see the light: In late August, a major earthquake rocked the East Coast. Thirteen reac- an earthquake greater than they tors felt it, but the greatest impact was to the North Anna plant in Virginia. Huge irradiated fuel casks shifted due to the quake. Offsite power was lost. One of the backup diesel generators failed an hour later.

The plant operators said, not to worry, that the ground motion at North Anna was less than the plant was designed for. Eventually it was revealed that the seismic shaking was, in fact, twice as high as the utility and the NRC had deemed credible when the plant was licensed Swiss and Italians all, in the wake of



and the reactor was designed. It was had claimed could ever occur-just as the Fukushima quake was larger than what those authorities had said the plant needed to be designed for. Again, we lucked out, but only a fool would keep spinning the chamber of a gun in Russian roulette and pulling the trigger another time.

Were there a Jerry Falwell of environmental theology perhaps she or he would be thundering about a people who were deaf to repeated divine warnings. The Japanese, Germans,

### **COALITION FOR A TRANSITION** FROM DANGEROUS NUCLEAR **POWER TO SAFE, CLEAN RENEWABLES**

NO GENERATION OF PEOPLE HAS BEEN GIVEN THE

responsibility we now face. The dual risks of nuclear weapons proliferation and of global warming provide a small window of time remaining in which to turn the human world from a course of self-destruction to one of long-term survival.

If the world continues to possess tens of thousands of nuclear warwaves-can be tapped for more power. Relying on sun, wind and water heads and we keep spreading atom bomb capability to other countries instead of carbon and uranium is the only way forward. via more civilian nuclear plants whose technology and materials can be Bridge the Gap is a central player in a new coalition to move in that new direction that we have been helping assemble with Friends of diverted for weapons purposes, the chances over time of preventing the use of those weapons of mass destruction are slim. If we continue to the Earth, Environment California, CALPIRG, and colleagues from the burn immense quantities of fossil fuels, spewing carbon dioxide into the former Americans for a Safe Future. We are focusing initially on workatmosphere where, via the greenhouse effect, it will heat up the planet, ing for an early phase-out of the seismically-challenged reactors at San Onofre and Diablo Canyon and the replacement of their power with safe, life as we know it will also be deeply in jeopardy. More nuclear power means more risk of spreading atom bombs, clean renewables.

Fukushima, decided to move away from nuclear power and transition to safe, clean renewables. But as in so many other things, reality seems to stop at the American shore.

The American public has taken heed of the warnings. Support for more nuclear power is very low. But decision-makers, people in power-the recipients of large contributions from the nuclear industry-seem to be blind to reality and continue to press for ever more taxpayer subsidies for more atomic plants, no matter what the public wishes or the evidence

mandates. With all the focus on the failed Solyndra solar company that received a bit more than \$500 million in federal loan guarantees, not a word has been said about the loan guarantees being doled out in amounts over \$5 billion - ten times higher - for new nuclear plants.

And yet, what kind of fools are we if we do not alter course, while there is still time, in the wake of these repeated indicators of pending danger? There is still time. The next accident will not be

identical to Fukushima. As the saying goes, history doesn't repeat itself, but it does rhyme. The accident that may hit San Onofre and contaminate hundreds of thousands of people in Southern California, or destroy Diablo Canyon and whose radioactive plume could potentially wipe out California's agricultural heartland in the Central Valley, or melt Indian Point and put at risk millions of people in New York, won't be precisely like the disaster that so devastated Fukushima. But Fukushima-and Browns Ferry, Ft. Calhoun, and North Anna thereafter-were warnings only fools would ignore.

plus increased risk of nuclear meltdown, whether by accident or terrorism, and pushing onto future generations the problem of leaking high level radioactive waste, dangerous for hundreds of thousands of years. Burning more fossil fuels means melting the polar ice sheets, rising ocean levels inundating coasts around the world, more extreme weather, and untold other disruptions to the delicate balance of nature upon which all species now depend.

There is only one rational choice, and we must work for it with great commitment NOW: move away both from nuclear and carbon-based energy, replacing them with the power of "sun, wind and water." Solar energy can be tapped with photovoltaics and solar thermal systems (huge mirror arrays that focus the sun's heat to boil water or other liquids and run turbines to produce electricity), and passive solar designs can help heat and cool homes and other buildings. The wind can run windmills to produce electricity. And moving water - e.g., tides and

3