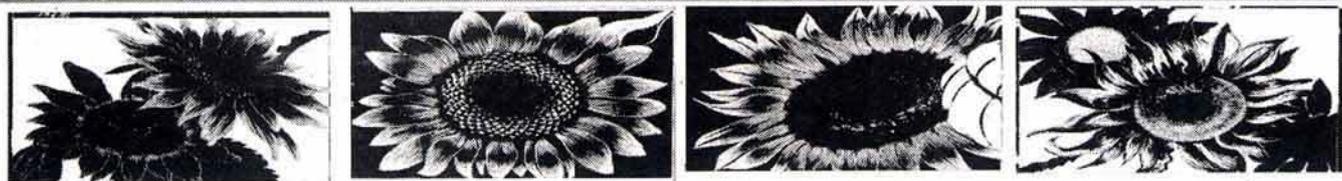


NUKEWATCH

QUARTERLY



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News & Information on Nuclear Weapons, Power, Waste & Nonviolent Resistance

Earthquake & Tsunami Stagger 6 Japanese Reactors Broad Evacuations Ordered, Radiation Released, Fuel Melting

As we go to press March 14, news is changing minute by minute of an earthquake and tsunami-caused radiation disaster involving at least six nuclear reactors in Japan. For the first time since the 1986 Chernobyl catastrophe, scrolls at the bottom of TV screens declared, "Fuel melting at nuclear reactors," and chances of multiple core meltdowns and massive radiation releases were being warned of by the government and by independent observers alike.

The enormous risks forced the government in Tokyo, 140 miles away, to declare its first ever "nuclear emergency" at three complexes that have a combined total of 13 reactors. Authorities ordered the evacuation of over 310,000 people, warned the public not to drink from surface water sources for fear of contamination, and began the testing of people for contamination.

The danger in uncovering fuel rods is their extreme overheating and melting, which can result in a massive release of radiation. Without any power to operate cooling systems, the government (using military helicopters and soldiers trained for chemical, biological and nuclear warfare) rushed to deliver heavy batteries to the site in order to pump coolant.

The 8.9 magnitude Miyagiken-Oki earthquake of March 11 — the worst in Japanese history — struck on a busy Friday afternoon. The epicenter was 80 miles off the Northeast coast of Japan's biggest island, Honshu, but the quake's enormous power and the impact of the resulting tsunami crashed the electrical grid, cut power to over 4 million buildings, and forced the shutdown of 11 of Japan's 54 power reactors.

The tsunami reached the terrifying height of 30 feet in some places, and smashed with full force directly into the coastal face of two sprawling nuclear power complexes: Fukushima Daiichi I, with six reactors, and Fukushima II, seven miles to the south, with four.

The earthquake, the staggering tsunami, and electrical blackout that resulted meant that emergency reactor cooling systems



A reactor containment building was destroyed by an explosion March 12 at Japan's Fukushima I reactor complex.

needed to kick in. But five of ten reactors (two at Fukushima I and three at Fukushima II) completely lost cooling ability after the tsunami knocked out all 13 of their emergency backup generators. These back-up generators are essential during emergencies to circulate cooling water to the extremely hot reactor core (3,400 degrees) and to hot waste fuel which is kept in nearby pools.

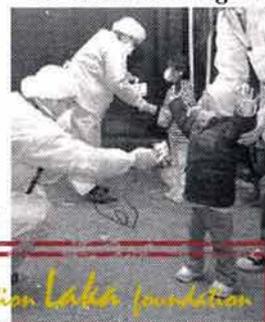
All six of the failed reactors, owned by Tokyo Electric Power Co. (Tepco) were in some danger of melting down because of the loss of coolant. The government, in an eerie parallel to the 1979 Three Mile Island disaster, issued ever-widening evacuation

orders over the course of the emergency, first set at 3 kilometers, then 10, and then — after a massive explosion in Daiichi reactor 1 at 4:30 p.m. local time, March 12 — to 20 kilometers. That explosion tore apart the containment building around Daiichi reactor 1, leaving only skeletal wreckage around the reactor core.

A second hydrogen explosion occurred on Monday destroying the containment structure housing Daiichi Unit 3, and in a sign of utter loss of control, the AP reported that fuel at Daiichi Unit 2 was completely uncovered. The government on Saturday began discussions of distributing potassium iodide pills which can clog the thyroid and inhibit the

Continued on Page 5

After explosions and radiation releases at the Fukushima Daiichi containment building housing reactor 1, children were scanned for signs of radiation (right). Testing for internal contamination was not being conducted. The aircraft carrier USS Ronald Reagan, situated 100 miles off the coast, moved away after finding crew members radioactively contaminated by plumes from Fukushima.



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At Point Beach, Wisconsin, & Elsewhere, Plans to Rev-up Rickety Reactors

By John LaForge

The primary sources of offsite dose to members of the public from the PBNP [Point Beach nuclear power reactor] are radioactive gaseous and liquid effluents. ... offsite radiation dose to members of the public would continue to be within regulatory limits...

— Federal Register notice by Point Beach reactor owner NextEra Energy, Dec. 10, 2010

NextEra Energy Resources, owner of the two 40-year-old nuclear reactors at Point Beach, Wisconsin, wants to increase the power output for each unit by over 17 percent — rev-up the old engines you might say — from 1,540 thermal megawatts to 1,800.

The company's "extended power uprate" (EPU) proposal was published December 10 in the Federal Register, and the public was given less than a month to comment on the environmental assessment (EA) and its official finding of "no significant impact."

Among others, Nukewatch, the Citizens Utility Board and Clean Wisconsin all filed formal comments in opposition with the Nuclear Regulatory Commission (NRC).

In the fine print, the planned "uprate" is hair-raising.

Regarding the reactors' ongoing cancer-causing pollution, the Federal Register notice says revving the old machines will cause a 17.6 percent increase in "radioactivity in the reactor coolant, which in turn increases the radioactivity in the waste disposal systems and radioactive gases released from the plant." [emphasis added]

The Federal Register notes further that the "licensee [NextEra] stated that the in-plant radiation sources are expected to increase approximately linearly with the proposed increase in core power level." Translation: 17.6 percent more radiation inside the reactor too.

The only good news in this frightening prospect is that NextEra, a subsidiary of Florida Power & Light Group, based in Juno Beach, Florida, was forced to publicly announce that it spews radioactive gases and liquids on a daily basis. For obvious reasons, the industry is loath to make these admissions in print.

In spite of increased radiation in discharge water and inside the reactor buildings, the company asserts that "no physical changes would be needed to the radioactive gaseous, liquid, or solid waste systems." Does your 1971 Caprice still run pretty well with the original air filter, oil filter, fuel system and engine block?

The EA even claims that Point Beach's 40-year-old "shielding design ... is adequate to offset the increased radiation levels that are expected to occur from the proposed EPU." This is because the change "is not expected to significantly affect radiation levels within the plant and therefore there would not be a significant radiological impact to the workers." The key words here are "not expected" and "significant." Because there is no safe level of radiation exposure, none can honestly be considered "insignificant" — except by some in the radiation industry.

Under a section called "Offsite Doses," the gun-the-engines proposal also admits that "primary sources of offsite dose to members of the public from Point Beach are radioactive gaseous and liquid effluents." This offsite radioactive contamination has been linked to increased cancer, infant mortality and childhood leukemia near operating reactors.*

In spite of the "increased radiation levels that are expected," the EA claims that the reactor's 40-year-old systems can handle the pressure and "perform their intended functions." The company asserts as well that there is no need to improve "the radiation monitoring system and procedures used to control the release of radioactive effluents. ..."

As if there is no evidence of increased cancer and childhood leukemia near operating reactors, the EA blandly claims that "... the offsite radiation dose to members of the public would continue to be within regulatory limits and therefore, would not be significant."

Are CT Scans, Rad Imaging & Nuclear Medicine Doing More Harm than Good?

"The parents of these children," said Dr. Nicholas Dello Russo, who teaches at Harvard Dental School, "have no idea about the amount of radiation used in these CT scans, and even more frightening, neither do the dentists."

One expert in dental radiation, Dr. Joel E. Gray, said "There is a lack of understanding of the radiation in dental offices."

Last November, the [American Academy of Oral and Maxillofacial Radiology] and the American Association of Endodontists issued a joint statement saying that cone-beam CT "must not" be used "for screening purposes in the absence of clinical signs and symptoms."

— Walt Bogdanich and Jo Craven McGinty, *New York Times*, Nov. 22, 2010

The increasingly common practice of zapping children with high-powered 3-D dental X-rays known as "cone-beam" CT (computed tomography) is exposing this vulnerable population to potentially dangerous doses.

The *British Journal of Radiology* reported last year that cone-beam scans exposed patients to "significantly higher" amounts of radiation than conventional dental X-rays. And University of North Carolina professor John Ludlow told

Point Beach's loss of control over "control" rods forces surprise shutdown

Point Beach reactor workers were withdrawing control rods from Unit 2 last December during a start-up when "multiple groups of control rods fell into the core resulting in a manual trip," that is, a forced shutdown. That's how Cvent, Inc. described the accident in its agenda for a June 2011 conference on "Rod Control System Reliability." The control rods fell into the reactor core after an earlier test failed to identify a problem with their lift mechanism.

Control rods absorb neutrons and slow the smashing apart or "fissioning" of uranium fuel in nuclear reactors. The rods are withdrawn to "power-up" the fission process when re-starting a reactor. Unit 2 was "tripped" December 15, during such a re-start, when a section of control rods dropped back into the reactor around 2:00 a.m. Neither the owner/operator (NextEra Energy) nor the NRC called the eye-popping fall of the rods a crash, but merely an "unplanned drop."

Because of their size and extreme weight, dropping whole bundles of control rods into a reactor core can damage both the rods and the reactor. The accident kept Unit 2 offline until December 21, while the NRC and NextEra tried to determine its cause and to repair the heavy control rod lifting machinery.

In recent years, Point Beach has been fined for lying to federal inspectors, for discriminating against a whistleblower and for a hydrogen explosion that occurred during the welding of a cask filled with high-level radioactive waste. Point Beach's failure to correct auxiliary cooling water problems moved the NRC to issue three "Red" findings against it for unsafe operations. The NRC has only levied four such findings in its history.

Other Retirement-age Reactors Being Revved

This revving of old reactors is getting a green light elsewhere too, raising risks of more accidents.

The Monticello reactor, 30 miles northwest of Minneapolis, will soon boost its output to 120 percent of its original licensed limit — from 613 megawatts to 684.

Monticello's machinery has been rattling along poorly of late. In 2007 a 35,000-pound turbine control box the size of a tow truck broke from its welds and fell onto a large steam pipe that was slashed open. The break caused the loss of so much pressure it tripped an automatic reactor shut-down. Four decades of intense vibrations and historically poor welding were blamed for the crash and the resulting steam burst.

Wisconsin's Kewaunee Reactor Wins License Extension

This past February, the operating license of the 40-year-old Kewaunee reactor was extended for another 20 years by the NRC. The license will now expire in December 2033, when it will be 62. Kewaunee is the 62nd "game over"-aged reactor to have its operation extended by the NRC.

The commission said that Kewaunee's owner, Dominion Power, "had effectively demonstrated the capability to manage the effects of [reactor] aging."

And aging is the Achilles Heel of the nuclear biz, as Monticello's broken welds and Point Beach's fumbled control rods illustrate. (See sample shut-down list, p.5) Yet the NRC continues to approve the running of retirement-age reactors, even allowing them to step on the accelerator.

*See: 1) "Leukemia in young children living in the vicinity of German nuclear power reactors," *International Journal of Cancer*, Vol. 122, No. 4, Feb. 15, 2008; 2) "Case-control study on childhood cancer in the vicinity of nuclear power reactors in Germany 1980-2003," *European Journal of Cancer*, Jan. 2008, Vol. 44, No. 2; 3) "Meta-analysis of Standardized Incidence and Mortality Rates of Childhood Leukemia in Proximity to Nuclear Facilities," *European Journal of Cancer Care*, Vol. 16, No. 4, July 2007; and 4) "Infant Death and Childhood Cancer Reductions After Nuclear Plant Closing in the U.S.," *Archives of Environmental Health*, Vol. 57, No. 1, Jan.-Feb. 20, 2002"

the *New York Times* that cone-beams produce four to 67 times as much radiation as the older dental X-rays.

According to recent news accounts, including a 3,700-word report in the *Times* (above), the use of cone-beams is spreading wildly among dentists and orthodontists, even though there is scant evidence that their higher radiation doses produce pictures better than those from old-fashioned X-rays. The practice has raised concerns among experts and health professionals worldwide.

Diagnostic X-rays of all kinds were added to the federal government's list of carcinogens in 2003. At the time, the National Institute of Environmental Health Sciences was becoming critical of the increasingly higher levels of radiation exposure the public was getting from CT scans, fluoroscopy, mammography in younger women and medical X-rays. Adding dental cone-beams to the mix helps explain why the Nuclear Regulatory Commission in 2009 nearly doubled its estimate of the radiation dose the average person gets per year in the U.S. (from 360 millirem to 620). The NRC says that half of this annual exposure is from radiation imaging like CT scans and radioactive isotopes used internally. Each CT scan can expose a patient to the equivalent of 400 ordinary X-rays.



The "Disarm Now" Plowshares from left: Fr. Bill Bischel, Susan Crane, Fr. Steve Kelly, Sr. Anne Montgomery and Lynne Greenwald. Sentencing is set for March 28 in Tacoma, Washington.

"Disarm Now" Disarmament Group Convicted

By Bonnie Urfer

TACOMA, Washington — The federal criminal trial of five veteran peace activists who on Nov. 2, 2009 entered, poured blood on and cut fences at the Bangor Trident submarine base outside Bremerton, Washington, ended Dec. 13 with guilty verdicts on all counts. Four charges were filed against each of the nuclear weapons opponents, including conspiracy, damage to property and trespass. The five called their action "Disarm Now Plowshares" and challenged the legal and ethical status of the storage and planned use of thermonuclear missiles at the Navy base. Sister Anne Montgomery (83), Father Bill Bischel (81), Susan Crane (67), Lynne Greenwald (60) and Father Steve Kelly (60), argued three points in their defense: 1) the nuclear missiles at Bangor are weapons of mass destruction; 2) those weapons are both illegal and immoral; and 3) all citizens have the right and even the duty to try to stop international crimes from being committed with hydrogen bombs.

Once inside the base, the anti-war campaigners walked for miles before arriving at a high security area containing the warhead bunkers known as Strategic Weapons Facility, Pacific. There they hung banners, scattered sunflower seeds, prayed and poured their own blood before being arrested, hooded and held on the ground for hours.

Each Trident sub at the base can carry 24 nuclear-armed missiles, each missile holds up to eight warheads, and each warhead has 475 kilotons of thermonuclear explosive power, or 38 Hiroshima-size bombs. One Trident sub could cause another 7,296 Hiroshimas. The National Resources Defense Council estimates that over 2,000 such warheads are kept at Bangor.

Prosecutors said the government would neither confirm nor deny the presence of nuclear weapons at the base, and argued that "whether or not there are nuclear weapons there is irrelevant." Prosecutors successfully objected to and excluded most of the defense evidence about the horrific effects of nuclear weapons, the illegality of WMDs under U.S. treaty agreements and humanitarian law, and the right of citizens to try to stop or prevent ongoing government crimes.

Sentencing is scheduled for March 28, 2011, with the accused facing up to 10 years in prison.



"I'm not technically a quote-unquote lawyer, but I do own a paper shredder and have visited several prisons."

The warnings about the risks of nuclear medicine are coming at the same time that the unnecessary use of whole-body X-rays and powerful CT scanners, as well as accidental overdoses, are being broadly criticized.

Last April, the Food and Drug Administration adopted new regulations for radiotherapy equipment, after a nation-wide review found over 1,000 reports of overdoses and other problems.

The use of CT scans on children during routine medical examinations is also raising alarms. The first large study of medical radiation in children was just published this January in *The Archives of Pediatrics and Adolescent Medicine*. In it, lead author, Dr. Adam Dorfman of the University of Michigan Medical School, reports that U.S. children on average will be given seven radiation scans by age 18. Dorfman also found that more than three percent of the children got two or more CT scans. Last October's *Wellness Letter*, from the University of California Berkeley,

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Pakistan's Growing Nuclear Arsenal

By Paul Vos Benkowski

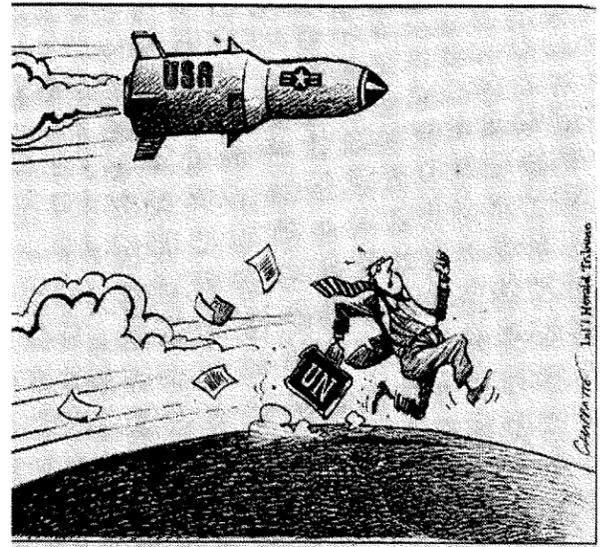
While the U.S. occupies neighboring Afghanistan with 97,000 soldiers (plus over 88,000 contract mercenaries) and maintains friendly relations with its arch-rival India, Pakistan has been steadily enlarging its nuclear arsenal to the point where it may now rank fifth among the world's nuclear weapons states. More troubling than the number of its deployable weapons is Pakistan's production of nuclear materials. The International Panel on Fissile Materials, an independent group that estimates worldwide uranium production for weapons and fuel, says that Pakistan has produced enough for between 95 and 110 H-bombs, putting them on par with long-established nuclear powers.

Pakistan's nuclear industry was started by the U.S., ironically, under "Atoms for Peace" in the mid-'60s. Little thought was given to weapons development as the Pakistanis were thought to be too poor, but time has proven the policy wrong. Now U.S. leaders are in the unenviable position of working with Pakistan to ensure the safe keeping of its growing arsenal. That translates to the U.S. treasury spending over \$100 million helping Pakistan build fences, install sensors and train personnel to handle the weapons. What is most worrisome is that these safeguards only protect and monitor nuclear weapons; they do nothing about

the nuclear materials kept in laboratories and storage centers that could be diverted by insiders in Pakistan's vast nuclear complex.

In secret cables released by WikiLeaks late last year, Anne Patterson, then U.S. ambassador to Pakistan, wrote of her concerns about safety inside the labs and storage areas. She said all but one theft of nuclear material (out of dozens conducted in the 1990s by the notorious former weapons chief A. Q. Khan) were inside jobs. Also of concern is a stockpile of weapons grade uranium that has been sitting for years near an aging reactor, that Patterson feared could be used to build several dirty bombs or, in skilled hands, an actual H-bomb. Thus, in spite of a two-year-old agreement with the U.S. to remove the material, Pakistan's leaders fear that the media attention brought to such a removal would lead the local press to announce that the hated Americans were taking their nuclear weapons.

At the root of U.S.-Pakistani troubles is the military occupation of Afghanistan. Deep-seated hostilities among Pakistan, Afghanistan and India have fueled fighting for almost six decades. Pakistan appears to be keeping close company with various extremist groups as a hedge against the day when the U.S. departs Afghanistan, leaving a vacuum that both Pakistan and India would like to fill. The close ties to groups like the Taliban and Lashkar-e-Taiba



should send up red flags regarding the security of bomb-grade materials, but the "victory at all costs" mentality in the region leaves little room for rational diplomacy. So yet again, another U.S.-supplied nuclear-armed state is flexing its muscles in an unstable region by enlarging its supply of bomb-making materials. — London *Daily Mail*, Feb. 1; & *New York Times*, Feb. 1 & 21, 2011

New Start Treaty: Fraud Hiding a Sham Inside a Hoax

By John LaForge

There is an arms race and a squandering of public money in the backstory to the New Start Treaty, lauded as a warhead reduction agreement between the United States and Russia. The recently ratified treaty obligates each side to reduce the number of its city-busting or "strategic" nuclear warheads from 2,200 to 1,550.

However, the Senate extorted some so-called "modernization" funding from President Obama in exchange for the treaty's ratification. Last May, the White House promised \$80 billion to the nuclear weapons establishment for replacing much of the U.S. arsenal. Three large H-bomb laboratories will share about \$10 billion annually to "upgrade" U.S. warheads, and they are set to receive equal sums for the next 10 years.

The funds are for a new \$4.5 billion "Chemistry and Metallurgy Research Replacement" complex at Los Alamos, New Mexico; a new \$3.5 billion "Uranium Processing Facility" at the Y12 lab in Tennessee; and a couple billion more for a replacement "Kansas City Plant" in Missouri that will make nonnuclear parts for the warheads.

Bomb Threats Not Terror if They're Ours

Editorial

Rather than causing alarm or public outrage, it is becoming nearly routine to read of "thinly veiled" U.S. and Israeli government bomb threats against the state of Iran. Most news reports on the subject never mention that such an attack would be a criminal act in violation of the UN Charter. The Charter's first sentence obligates signers like Israel and the United States to remove and prevent "threats to peace."

Unprovoked military assaults have been illegal for a long time. Only responses to direct attacks are allowed by the agreed-upon laws of war, and even then the counter-attack must be approved by the UN Security Council to be considered free of the taint of aggression or criminality.

Mainstream news accounts about Iran's nuclear reactor fuel program also regularly overlook the fact that threats against it are coming from governments with large numbers of nuclear weapons — while Iran has none. This January, the Israeli cabinet minister Moshe Yaalon said it would take Iran at least three years to build even one.

Last summer's front-pages noted that the White House reportedly fended-off Israeli Prime Minister Benjamin Netanyahu's Air Force. The *New York Times* said that the U.S. had convinced the Israelis that a "Nuclear Threat From Iran Isn't Imminent."

No, imminent threats of military assault come from the United States, which has 2,500 nuclear weapons on hair trigger, and from Israel which could have up to 600.* As the *Times* put it, a White House analysis had "dimmed the prospect that Israel would pre-emptively strike against [Iran's] nuclear facilities within the next year, as Israeli officials have suggested in thinly veiled threats."

When asked in August on "Meet the Press" if the Pentagon has a plan to assault Iran, Admiral Michael Mullen, Chairman of the Joint Chiefs of Staff, replied, "We do."

"Military actions have been on the table and remain on the table," he said.

The drumbeat for war on Iran has been sounding for many years. In 2009, Jonah Goldberg of the *Atlantic* interviewed Netanyahu just before his swearing-in as Prime Minister. Goldberg wrote, "The American president, [Netanyahu] said, must stop Iran from acquiring nuclear weapons — and quickly — or an imperiled Israel may be forced to attack Iran's nuclear facilities itself."

In June 2008, then Israeli Prime Minister Ehud Olmert said, "The international community has a duty and responsibility to clarify to Iran, through drastic measures, that the repercussions of their continued pursuit of nuclear weapons will be devastating."

With the buildup, the U.S. will be able to quadruple its current warhead production capacity from 20 to 80 per year, according to Nuclear Watch New Mexico.

New Start does pledge the elimination of 30 land-based missiles, 34 heavy bombers and 56 submarine-based missile tubes. On the Navy's 14 giant *Trident* submarines (each is two football fields long) there will be 20 intercontinental ballistic missiles — down from 24 — but each missile can still carry eight warheads. This amounts to 2,240 weapons, well over the New Start Treaty's publicized limit.

Warheads Hidden in the Fine Print

This numbers fudging is possible because the new treaty's counting system nullifies a lot of supposed reductions. According to the *Wall St. Journal's* Jonathan Weisman, "Quirks in the treaty's counting rules mean that under one scenario, the U.S. could meet its new obligations by mothballing just 100 warheads." Russia need remove only 190.

The treaty will count the actual number of warheads on land-based rockets (Minuteman III missiles) and on sea-based missiles, but "it will count each heavy bomber as a single warhead, even though they can carry far more" [B-

Such coldblooded public discussion of what amounts to bomber and missile attacks is all the more chilling since U.S. and Israeli government war talk isn't just bluster. Both have — on their own and without UN authority — regularly bombed and invaded other countries.

Libya, Panama, Iraq, Grenada, Somalia, Afghanistan, Pakistan and Yemen have all been bombed by the United States. Lebanon, Syria, Iraq and Occupied Palestine have all been attacked by Israeli jets. For its part, modern Iran has never attacked its neighbors or anywhere else.

Israel has bombed putative nuclear sites — exactly the sort of assault being bandied about today — in Syria (2007) and in Iraq (1981). When its jets destroyed Iraq's Osirak reactor, Israel became the first state to ever bomb a reactor, violating a Geneva Convention protocol that explicitly forbids such acts.

When bomb threats are made by official enemies they are legitimately called terrorism. Yet "on the ground" as they say, Obama's secretly-launched, unaccountable and remote-controlled drone attacks on villages in Afghanistan, Pakistan, Yemen and Somalia are no different than strikes made by non-uniformed irregular forces labeled terrorists — the victims in both cases are mostly civilians.

Since there has never been a U.S. or Israeli declaration of war against the states or territories they now target, the Law of Nations appears still to be considered by them "quaint" or "obsolete," as former U.S. Attorney General Roberto Gonzales has said of the Geneva Conventions.

Last summer, Obama's people reportedly convinced Israel *not* that bombing Iran would be illegal, but that Iran's ability to produce even a single nuclear weapon is years away. In spite of the reassurance, the *Times* warned, "that does not mean that Israel has abandoned the idea of a possible military strike."

It seems that making common-place these state bomb threats — against nuclear sites, suspects, cities or villages, and all without UN Security Council approval or constitutional authority — is the 20th Century's gift to the 21st.

*During a 2006 interview on Democracy Now!, author Seymour Hersh said, "I wrote a book about Israel's bomb 15 years ago, and at that time it was 300-400. So we're talking about a country that could have 600." Hersh referred to *The Sampson Option: Israel's Nuclear Arsenal and American Foreign Policy*. If Israel possesses 600-bombs, it is the third largest nuclear power in the world behind the U.S. and Russia, ahead of France, China, Britain, Pakistan, India and North Korea. — *JL*

52s carry up to 16], according to the *New York Times*. This bizarre sleight-of-hand means that the new treaty counts 1,650 warheads, when there are actually 2,100.

According to Hans Kristensen of the Federation of American Scientists, "A U.S. air base with 22 nuclear-armed B-52 bombers will only count as 22 weapons even though there may be hundreds of weapons on the base." The "counting" rule will hide about 450 U.S. and 860 Russian warheads — 1,310 all together. The fraud means that the U.S. and Russia can and probably will deploy more large-yield "city-buster" H-bombs under New Start than would have been allowed by the 2002 Moscow Treaty.

As if increased H-bomb production and hidden warheads weren't cynical enough, the U.S. has about 3,000 nuclear weapons in "storage" — Russia about 1,000 — and they can be brought to the firing line any time.

"Stuxnet" Targets Iran

By Bonnie Urfer

BUSHEHR, Iran — It's no secret that the U.S. and Israel have been working to undermine Iran's nuclear power efforts. According to news reports, either the U.S. or Israel, or both, were responsible for the Stuxnet computer virus that attacked Iran's nuclear fuel program. Israel is suspected of using its nuclear bomb building complex at Dimona to test and implement the Stuxnet "worm" — a program designed to destroy Iran's nuclear centrifuges, interfere with the Bushehr nuclear power facility and delay Iran's ability to make weapons-grade material using its uranium enrichment center, Natanz, in central Iran. As reported in the *New York Times*, the German firm Siemens, in cooperation with the U.S. Department of Energy's Idaho National Laboratory, may have worked together to identify vulnerabilities inside key equipment in Iran's uranium processing facilities. The project may have been sanctioned by President George W. Bush during his last months in office. Siemens claims it was researching vulnerabilities in its own products.

Iran admitted its reactor fuel program was delayed by Stuxnet last year, the *Guardian* reported, and the "worm" may have damaged one reactor that was set to produce electricity in February. The *Times* found that Iran's newly completed Bushehr reactor, located on the Persian Gulf, experienced startup problems possibly stemming from sabotage, and that all 163 uranium fuel rods (supplied by Russia) had to be removed. The reactor has been under construction for three decades having experienced bombings, the assassinations of two high-level scientists and daunting technical glitches.

The Stuxnet worm has forced uranium processing centrifuges to spin out of control, and can force crucial reactor safety systems to fail. Dmitry Rogozin, special envoy to NATO from Russia — a government closely tied to Iran and deeply involved in its nuclear programs — told reporters in January, "The virus which is very toxic, very dangerous, could have had very serious implications," adding "it could have led to a new Chernobyl."

Some experts who have examined the Stuxnet code believe it contains programming for several more versions and for future assaults. The United Nations has imposed sanctions on Iran that have hurt the country's ability to obtain necessary components and materials. A shipment of Siemens materials that was headed to Iran was confiscated in Dubai in April of 2009. Stuxnet appeared on the scene a month later causing Iran to take 984 of the centrifuge machines out of action. The virus mainly targeted Iran but also showed up in India, Indonesia, the U.S. and elsewhere.

— *The Guardian*, Feb. 14, *New York Times*, Jan. 15; Xinhua, Jan. 18; *Boston Globe*, Jan. 24; UPI, Jan. 25; Global Security Newswire & Reuters, Jan. 26; ABC News, Jan. 28; & AP, Jan. 31, 2011

NUCLEAR SHORTS

Ultimate Irony: "Toxic Waste" Candy Really Toxic

Nukewatch reported years ago on a not-so-popular candy absurdly called "Nuclear Sludge." The stuff is back in the news, this time because it actually is toxic. A recall of all flavors of the "Toxic Waste" brand of chewy bars, brought to you by Candy Dynamics, was issued Jan. 27, after a partial recall went public Jan. 13, because they contain lead. The California Department of Public Health measured some of the candy's lead contamination at .24 and .311 parts-per-million, two to three times the Food and Drug Administration's limit of 0.1 ppm.

Lead poisoning can lead to nervous system injury, brain damage, seizures or convulsions, mental retardation, coma, kidney damage, depression, panic disorders and even death for young children. Pregnant women are particularly at risk from the toxicity of lead. Symptoms of lead poisoning include stomach aches, colic, nausea, vomiting and insomnia.

The candy was sold individually, in 30, 80 and 120 piece bags and the big "party bag" size. Flavors of the Toxic Waste Nuclear Sludge include cherry, green apple and blue raspberry.

The Toxic Waste brand candies have been imported from Pakistan since 2007. The California DPH says it is not uncommon to find elevated lead levels in imported candy. — *Huffington Post*, Jan 14; *Daily News Writer*, Jan. 21; AP, Jan. 28; *Daily Health Report.org*, Jan. 30; *Indiana Health Department*, Jan. 31, 2011

Survey: Women Don't Like Nuclear Power

AUSTRALIA — Women in Australia would rather use candles than nuclear power, according to an Auspoll survey of 1,500 citizens Down Under. Fifty-nine percent of women were found to oppose nuclear power, while a majority of men, 53 percent, were in favor of it. Renewable energy like wind and solar have upwards of 90 percent support among both genders. A position paper, issued by the Berlin-based Gender and Climate Change Network in 2007, reported that women around the world strongly oppose nuclear power. The paper documents the nuclear industry's myriad injustices, focusing especially on its disproportionate impact on indigenous peoples of the world who are affected by uranium mining, mine waste emissions and the risks of radioactive waste storage. The position paper highlights recent reports of health problems among people living near reactors, in particular the increased incidence of breast cancer and childhood leukemia. The paper noted as well that while women and children are more vulnerable than men to the affects of radiation, decisions about nuclear production are made almost exclusively by men — making nuclear power a problem of world-wide gender discrimination.

— *the Australian*, Jan. 25, 2011; *Daily Telegraph*, Dec. 22, 2010; "Women and Nuclear Power" (<http://nuclear-news.net/information/women>), May 2010; "Position paper," Women for Climate Justice, Dec. 2007

New Headquarters for Nuclear War Staff

OMAHA, Nebraska — U.S. taxpayers are set to be bilked of \$564 million for a new Air Force Strategic Command headquarters at Offut Air Force Base near Omaha. The control center manages the entire U.S. nuclear weapons arsenal and carries out missions in space and cyberspace as well. Planning and design of the new complex started in 2009 with a \$10 million earmark, and construction is expected to be completed in 2016. Nearly 4,000 military personnel work at the nuclear war complex in support of the Joint Strategic Target Planning Staff, which oversees the country's land-based missiles, nuclear-armed jet bombers and ballistic missile submarines. — *Global Security News*, Jan. 7; U.S. Sen. Ben Nelson news release, & *Omaha World-Herald*, Feb. 14; *Nebraska City News Press*, Feb. 16, 2011

Suspect Metal Confiscated at the Border

DETROIT, Michigan — The U.S. border patrol seized 23,891 kilograms of the metal alloy "Inconel 738LC" — worth \$662,188 — at the Canadian border in 2009, and the Dubai company Al-Noor Alaili Trading wants it back. The alloy is a high-grade, heat-resistant, super-metal made of nickel, chromium and boron and has been used in the production of steam generators for pressurized water reactors. The cargo was manufactured in Muskegon, Michigan and the U.S. government claims the shipment was bound for Iran — via Canada — to be used in nuclear weapons production. A lawsuit is pending between the U.S. and the owners of the material. According to court records, the trading company claims it paid for the material, and should be allowed to reclaim the two shipments it says were illegally seized last year. The U.S. suspects that many goods that cross the border are headed to Iran via front companies. In one case, a shipment went from Toronto, to Vancouver, to Hong Kong, to China and then to Tehran. Microchips, centrifuges, pressure transducers and high-pressure pipes have all been confiscated at the border for fear they were headed to Iran. — *Detroit News*, Jan. 1, 2011; the *London Telegraph*, Feb. 24, 2011 & July 7, 2010; and *Ontario National Post*, Oct. 1, 2009

Gender-Inclusive Nuclear War Readiness

KINGS BAY, Georgia — U.S. nuclear-armed submarines will soon, and for the first time ever, include women among their officers and crew, the Navy says. Each of four subs, the *Wyoming*, *Georgia*, *Maine* and *Ohio*, will have three women officers onboard after the newly-minted submariners complete training in nuclear power and an officer course. They're expected to report for duty in December 2011. A new *Virginia*-class submarine, being promoted as a replacement for the Navy's giant *Trident* subs, is being designed to accommodate women crew members. Today's *Tridents* have three person bunk rooms and can already house women without any retrofitting. The Navy says that eight *Tridents* could have women onboard beginning Jan. 12. Fraternizing between these officers and the crew will still be forbidden, and violators can get a two year prison sentence, a fine and a discharge.

— FOX News, April 29; Commander, Submarine Group 10 Public Affairs, Oct. 21, 2010; *New London Day*, Feb. 12, 2011

45 Years Late: U.S. Studies Plutonium it Spewed in Spain

PALOMARES, Spain — On Jan. 17, 1966, a U.S. B-52 bomber carrying four nuclear weapons collided with a refueling plane over Cuevas del Almanzora, Spain. Two of the H-bombs were torn apart when their non-nuclear explosives detonated, spreading plutonium over 100 acres. Spain wants the area cleared of plutonium contamination which will otherwise threaten water resources and the food chain for 240,000 years (10 times its radioactive half-life). The U.S. removed 45,000 cubic feet of contaminated soil shortly after the crash and shipped it to the Savannah River Site in South Carolina, but 200,000 cubic feet is still scattered broadly. U.S. delegations and members of Spain's Center for Energy, Environmental and Technological Investigations have conferred repeatedly to study the disaster and negotiate a clean-up agreement. Costs are expected to exceed \$43 million. The contaminated acreage was fenced and placarded as "radioactive" for the first time in 2008. Nearby villagers have tested positive for radiation poisoning but the rural health consequences of this accidental nuclear war have largely been ignored in the U.S.

— *Guardian*, Jan. 16; *El Pais*, Jan. 17; *Independent*, Jan. 30; and *TypicallySpanish.com*, Feb. 23, 2011

Russia To Control U.S. Uranium Firms

CHEYENNE, Wyoming — ARMZ, the uranium holding company of Russia's state-owned nuclear energy group Rosatom Corp, has taken control of Uranium One America, a Vancouver, Canada firm and with it both a uranium mine and a uranium processing facility in Wyoming. The Nuclear Regulatory Commission was quick to assert that its oversight of the mines should negate any military concerns over foreign control of U.S. uranium. About 4.4 million pounds of uranium are extracted every year in the U.S. ARMZ's production likely won't exceed a third of this U.S. total because other mines are set to open or to boost production this summer. Julian Steyn, at the Washington, DC consulting firm Energy Resources International, Inc., told the press, "They [Russia] didn't buy it because of the U.S.," he said. "It wasn't a cunning, scheming Russian thing." No, just a selling off of U.S. resources sort of thing. — *Bloomberg News*, Dec. 6; & UPI, Dec. 12, 2010

Hustlers Caught in Reactor Investment Scam

BOISE, Idaho — The promise of a new nuclear reactor and guaranteed profits was enough for investors to hand over millions of dollars to a phantom company called Alternate Energy Holding, Inc., run by Don Gillispie and Jennifer Ransom. According to the Securities and Exchange Commission, "the company had no realistic possibility of building a multibillion-dollar nuclear reactor." As president and vice-president of the ersatz company, the two drove up the price of stocks by repeatedly issuing bogus press releases — 87 in 2010 alone. By entering sale orders at the end of certain trading periods to artificially increase the stock's price and volume, the two were able to persuade investors to buy stock. When the stock prices soared, the SEC says, officers profited by selling their own shares. The Snake River Alliance, the long-standing nuclear watch dog group, was one of the first groups to alert Idaho officials to the scam. Gillispie sued the group but the action was quickly dismissed. Ken Miller, the Snake River Alliance's energy policy director said, "We've been providing information to state and federal securities investigators for at least three years." Gillispie and Ransom are presently fighting charges in U.S. District Court. — *Idaho Statesman & Courthouse News Service*, Dec. 17, 2010

U.S. Hushed-up Qaddafi's Nuclear Waste Snit

TAJOURA, Libya — Colonel Qaddafi, the much-maligned leader of Libya, apparently took out his frustration with the United Nations (for not allowing his delegation to pitch tents in New Jersey during his 2009 UN General Assembly visit) by leaving seven casks of weapons-grade uranium nearly unguarded on a tarmac at the government's Tajoura nuclear facility 30 miles southeast of Tripoli. The uranium was to be picked up by a Russian transport plane for disposal, but Qaddafi refused to let the plane land. So the containers sat — not ready for storage but only transport — threatening to crack in the hot desert sun and potentially causing a radioactive environmental disaster. Upon learning about the accident liability, U.S. and Russian officials (while keeping the story secret) began strenuously lobbying Libyan officials, demanding that they have the casks removed. It took an entire month, several threats and a personal plea from U.S. Secretary of State Hillary Clinton before a Russian cargo plane was allowed to land, and on December 21, it successfully took off with the uranium.

Libya's agreement to discard the uranium and abandon weapons of mass destruction temporarily ended Qaddafi's international pariah status. By autumn 2009, he was to have gotten rid of all the weapons-grade uranium and begun destroying his stock of Scud missiles. By the end of 2010, he was supposed to have converted the Rabta chemical weapons factory to a pharmaceutical plant and completely destroyed nerve gas ingredients. The agreement's final step, next year, is for Libya to destroy stocks of mustard gas.

— *Guardian*, Dec. 3, 2010 & *Daily Telegraph*, Dec. 4, 2010

Glory of NASA Crashes Into the Sea

VANDENBERG, Calif. — On March 3, NASA tried to launch its "Glory" spacecraft from Vandenberg Air Force Base using a Taurus-XL rocket. The Taurus has been used nine times in the past 17 years and has crashed three times. Three minutes after lift-off, a "fairing" that covers the spacecraft failed to separate and caused the rocket to crash into the Pacific. "Glory," which cost \$424 million, was intended to study the atmospheric grit from volcanoes, fires, smokestacks and machines for three years. Several previous space-shot launch crashes have contaminated the sea and other areas with the radioactive materials that were onboard to generate electricity. Instead of these plutonium batteries, "Glory" was equipped with solar panels that could generate 766 watts for powering the ship's instruments. This latest crash is proof positive, if more was needed, that NASA's plutonium-packed "radioactive thermal generators" can and should be abandoned. NASA claims that RTGs are needed for deep space trips where sunlight is weak, but the European Space Agency has produced panels for distant travel.

The March 3 wreck mirrors a February 24, 2009 Taurus lift-off failure. Now the Taurus XL has a failure rate — 1 in 3 — even worse than NASA's Titan IV which has crashed in 1-out-of-20 launch attempts. — *Huffington Post*, March 4; *New York Times*, Feb. 22; & NASA, March 3 & Feb. 8, 2011

RESOURCES

*Citizens Utility Board, 16 N Carroll St., Madison, WI, 53703; (608) 251-3322; Web: wiscub.org; Email: staff@wiscub.org
*Citizens' Nuclear Information Center, Japan, phone: (011) 8-133-357-3800; Email: cnic@nifty.com; Web: cnic.jp/english
*Clean Wisconsin, 122 State St. #200, Madison, WI 53703; (608) 251-7020; Web: cleanwisconsin.org/index
*Federation of American Scientists, 1725 DeSales St., NW, 6th Floor, Washington, DC 20036; (202) 546-3300, Web: fas.org; Email: fas@fas.org
*Gender & Climate Change Network, Anklamer Str., D-10115 Berlin, Germany, Web: gendercc.net; Email: info@gendercc.net
*Ground Zero Center for Nonviolent Action, 16159 Clear Creek Rd. NW, Poulsbo, WA 98370; Web: gzcenter.org; Email: info@gzcenter.org
*Healthy Environment Alliance, Utah, 68 S. Main St., #400, Salt Lake City, UT 84101, (801) 355-5055, Web: healutah.org; Email: info@healutah.org
*NYH2O, nyh2o.org
*Nuclear Watch New Mexico, 551 W Cordova Rd., # 808, Santa Fe, NM 87505, (505) 989-7342; Web: nukewatch.org; Email: jay@nukewatch.org
*Public Citizen, 1600 20th St. NW, Washington, DC 20009, (202) 588-1000; Web: citizen.org; Email: member@citizen.org
*Restoration Project, Casa Mariposa, 340 S. Third Ave. Tucson, AZ 85701; (520) 269-6597
*Snake River Alliance, 350 N 9th St., Suite B610, Boise, ID 83702-5473; (208) 344-9161; Web: snakeriveralliance.org
*South Texas Civil Rights Project, P.O. Box 188, San Juan, TX 78589; (956) 787-8171; Email: southtexascivilrightsproject@gmail.com
*Texas Civil Rights Project, 1405 Montopolis Dr., Austin, TX 78741; (512) 474-5073; Email: pdn@texascivilrightsproject.org

Nukewatch has a new website. Find it at nukewatchinfo.org.

EnergySolutions, Inc. Creating Problems in Utah

CLIVE, Utah — Since July of 2008, when a decades-old radioactive waste dump closed in South Carolina, rad waste generators have had no place to send their hot trash. But there's money to be made, so EnergySolutions, Inc. (ES) which buries the waste in its Tooele County Utah site is cashing in. ES has sealed a deal with the Swedish firm Sudsvik, to send radioactive waste from its processing facility in Erwin, Tennessee to the ES dump in Clive, Utah, west of Salt Lake City. The new joint venture is called "Semprasaft." The partnership uses a process called THOR — for Thermal Organic Reduction — designed to dilute the radioactivity in wastes that are too "hot" to legally bury under Utah state law. To produce a "solid" that stays within state low-level radiation limits, the process blends radioactively hotter trash with wastes that give off lower doses.

Utah state lawmakers banned hotter "Class B and C" wastes in 2005, and the state's Radiation Control Board opposes blending "when the intent is to alter the waste classification for the purposes of disposal-site access." ES claims the blended waste is already covered under past engineering reviews and is not subject to new regulations. But the board disagrees and is requiring ES to do an in-depth engineering study of any "unusual" waste headed to Utah. The Nuclear Regulatory Commission considers the mixed waste to be a "unique waste stream" and therefore subject to new regulations since its properties have not been studied and its chemical "stability" not well understood.

Prior to the Sudsvik/ES deal, the Swedish company intended to take over the processing contracts in Tennessee and ship waste to a new radioactive waste site in Texas.

Fined for Illegal Dumping

In January, ES was fined \$80,000 by the state for having accepted and buried 23 drums of radioactive waste that exceeded the site's low-dose limits. In spite of the lapse in quality control, the drums will not be retrieved or inspected. The "hotter" Class B and Class C waste came from Department of Energy "clean up" operations at Oak Ridge, Tennessee, Los Alamos, New Mexico and Hanford, Washington. Large corporate contractors are involved in the dumping scandal but the Utah state fines they face are a puny \$4,875. The state does not inspect all imports of radioactive trash, but leaves ES in charge of halting illegally hot shipments. Lucrative contracts create an obvious conflict of interest. Chris Thomas, of Healthy Environment Alliance of Utah, said the allegations indicate a troubling pattern. "For a company the size of EnergySolutions to make such serious and repeated errors over the last two years with something as dangerous as nuclear waste breeds deep distrust of anything else the company says."

— ABC News 4, Utah, Jan. 27; AP, Jan. 28; *Provo Daily Herald*, Jan. 29; KSTU-TV Fox news; *Desert News*, Feb. 8; *Salt Lake City Tribune*, Jan. 27 & Feb. 8; UPI, Feb. 9, 2011

Texas Dump Set to Replace S. Carolina as Nation's Low-level Rad Waste Bin

ANDREWS COUNTY, Texas — The Texas Low-Level Radioactive Waste Disposal Compact Commission (TLLR-WDCC) voted January 4 to allow the import of radwaste from 36 states — in addition to the deadly trash from compact "partner" Vermont. The compact is under the control of Dallas-based Waste Control Specialists, a company whose majority owner is billionaire Harold Simmons. Simmons and the compact worked together to defeat environmentalists opposed to the dump. The 1,300-acre waste site, located in Andrews County near the Texas-New Mexico border, is the only place in the nation that can now take all three classes of low-level radioactive waste, a burden that for decades was carried by the Barnwell site in South Carolina.

The TLLRWDC, which is made up of six members appointed by Governor Rick Perry and two others from Vermont, received over 5,000 comments from citizens in spite of issuing an erroneous email address for submissions. The commission later planned to vote on increasing the compact from two to 36 states without allowing adequate time to address the public comments. Public Citizen and the Texas Civil Rights Project filed suit claiming that the Commission would violate Texas law by meeting in early January before properly dealing with public concern. On December 30, Travis County Judge Jon Wisser ordered a 14-day stay of the Commission's vote.

The Vermont-Texas compact has been in place for 16 years, with Texas agreeing to take Vermont's low-level radwaste. With the vote to allow additional states to dump in Texas, each state must petition the commission to send waste to Texas. Peter Shumlin, Vermont's new governor,



Artwork by Mark Fredrickson depicts billionaire Harold Simmons sitting atop a pile of radioactive waste.

is not in favor of opening the Texas site to other states, fearing the Texas ditch will run out of space. Vermont is on the road to closing its only reactor, Vermont Yankee, and intends to ship its radtrash to Texas. The compact guarantees that 30 percent of the dump's space will be reserved for Vermont's waste.

The commission claims it needs to import waste from other states to make the dump profitable and, according to news reports, profits will run into the billions. The Texas site could begin receiving waste — consisting of rags, syringes, glassware and clothing from hospitals, labs and nuclear reactors — in October. Texas environmental officials claim the waste sealed in drums will lose its radioactivity within a century. Critics claim the radioactive waste puts aquifers at risk of contamination and that the radiation will remain dangerous for 10,000 years.

Since 2001, Harold Simmons has donated \$1.12 million to Governor Perry's campaign coffers and has spent \$430,000 on lobbyists. Andrews County taxpayers will be supporting the private dump with a \$75 million bond approved in May 2009.

Drinking water contamination and public corruption aren't the only risks raised by the compact. Moving deadly cargo cross-country will inevitably lead to crashes. According to a PRN Newswire report, about 10 percent of radioactive waste transport drums involved in accidents have failed. "Of those, 90 percent released their contents, according to the NRC."

— *St. Louis Today*, Jan. 6, *Houston Press*, Jan. 4, and *Austin American-Statesman*, Jan. 5, 2011. PRN Newswire, Dec. 23, Vermont Public Radio, Dec. 24, *Midland Reporter-Telegram*, Dec. 25, *Texas Observer & New York Times*, Dec. 30, and UPI, Dec. 31, 2010

Wyoming Returns To Uranium Mining

CAMPBELL COUNTY, Wyoming — The Canadian-based company Uranium One has opened the Christensen Ranch in-situ uranium extraction mine in southwest Campbell County, Wyoming, the first of its kind to open in the area in 10 years. Uranium One paid \$35 million for and has opened the Irgaray processing factory in nearby Johnson County which will turn the ore into "yellowcake" — a concentrated form of uranium — to be shipped to an enrichment site

and eventually be made into reactor fuel. The yellowcake factory came with permits and licenses. The company has received from the NRC or purchased licenses to open several other mines in Wyoming, including Moore Ranch, Ludeman, Peterson, Nine Mile, Antelope, Jab, Allemand-Ross and Barge in the state's Powder River and Great Divide Basins.

Idaho Gov. Okays Waste Imports

BOISE, Idaho — The state of Idaho agreed January 6 to resume the import of waste reactor fuel at the 890-square-mile Idaho National Engineering Laboratory (INEL), 50 miles west of Idaho Falls in the Arco desert. Governor "Butch" Otter told the press the arrangement with the Department of Energy is designed to improve INEL's research programs.

The DOE and the Navy at INEL must meet certain obligations under the new agreement. They must move waste fuel out of old cooling ponds called "water basins" (that don't meet earthquake safety standards, don't have the stainless steel lining newer basins have, and have no leak detection system), transfer waste fuel into dry storage by 2023, and ship all of the radioactive trash out of Idaho by 2035. If the DOE or the Navy misses the deadlines, Idaho can close its borders to further shipments.

Imported waste is not to exceed 880 pounds of heavy metal per year, and the volume of trash is still to be limited and governed by a 1995 agreement between the DOE and then Governor Philip Batt. By 2035, the DOE must remove all 300 tons of extremely hot used reactor fuel, or pay the state \$60,000 per day for breach of contract. Idaho retained the right to back out of the import agreement anytime. INEL has an annual budget of over \$1 billion, much of it for cleanup of decades of contamination. The DOE has spent \$700 million since 2005 to upgrade the INEL facility which currently employs over 4,000 people.

Since the 1950s, INEL has been the dumping ground for radioactive waste sent from Rocky Flats, where some 26,000 plutonium bomb "pits" were machined near Denver, from Navy propulsion reactors, Three Mile Island's dismantled wreck, and other DOE sites. Plutonium contamination has migrated more than 200 feet toward the freshwater aquifer under the Snake River plain — water used to irrigate the Idaho potato crop. — *The Energy Collective*, Jan. 30; *Idaho Statesman*, Jan. 6 & 27; *Seattle Times*, Jan. 19; Idaho Dept. of Environmental Quality, 2011

Elsewhere in the state, Cameco Resources, Inc. operates the Smith Ranch-Highland mine near Glenrock that annually produces 1.2 million pounds of uranium. Cameco — which calls itself America's largest uranium producer — runs an in-situ uranium mine in Crow Butte, Nebraska, and has just moved its headquarters to Casper.

Titan Uranium USA will open a mine in Fremont County, previously owned by U.S. Energy, and the company plans on building a yellowcake production facility at the Sheep Mountain Mine site, also in Fremont County.

Wyoming may soon produce about 6,000 tons of uranium in a year, the amount it supplied before the Three Mile Island disaster in 1979 halted reactor projects nationwide.

— *Gillette News Record*, Jan. 7, *Bloomberg*, Dec. 6, *Wyoming Business Report*, Oct. 21, & AP, Dec. 1, 2010; & *World Nuclear News*, Aug. 11, 2009

Some in New Mexico Invite More Rad Waste to WIPP

CARLSBAD, New Mexico — A number of citizens at a public meeting held by the "Blue Ribbon Commission on America's Nuclear Future" in Carlsbad said they would welcome expanding the 2,200-foot-deep Waste Isolation Pilot Plant (WIPP) to hold more and even hotter radioactive waste. Some Southern New Mexicans are so happy to have the jobs that come with the military wastes that the counties of Eddy and Lea have even purchased 1,000 acres of land adjacent to WIPP in hopes of becoming the nation's first civilian high-level waste dump — replacing the failed Yucca Mountain plan. Since 1999, WIPP has taken in over 9,200 shipments of low-level waste consisting of plutonium-contaminated clothing, tools, soil, chemicals and other items — waste that will remain radioactive and dangerous for 250,000 years. The \$2.5 billion project has taken radioactive imports from 17 sites across the country. The Blue Ribbon Commission operates under the authority of the DOE and will issue a final report on WIPP in early 2012. — *KRQE.com & Albuquerque Journal*, Jan. 28; *Santa Fe New Mexican*, Feb. 5; NPR, May 13 & 14; *KOB.com*, Oct. 8, 2010

Waste Threat to Great Lakes

TIVERTON, Ontario — The Canadian Nuclear Safety Commission (CNSC) has granted two permits allowing Bruce Power Corp. to transport and export 16 contaminated steam generators on a single ship through the Great Lakes-St. Lawrence Seaway and across the Atlantic Ocean to a private commercial facility in Sweden for "recycling." Before proceeding, the shipment must still get approval from the U.S. Department of Transportation, Britain, Denmark, Norway and Swedish regulators.

The transport is tentatively set for April, but critics, environmental groups, Canadian First Nations, elected officials and others have vowed to prevent the extraordinary transport, pointing to the obvious threat of contamination it poses to the Great Lakes and the seaway and the danger of setting such a reckless precedent. The intended shipping route includes the international waters of Lake Ontario, Lake Erie, Lake Huron and the St. Lawrence Seaway.

The Great Lakes and St. Lawrence Cities Initiative — a coalition of 73 towns along both sides of the route that passes by Quebec, Ontario and eight U.S. states — has formally condemned the plan, pointing out that 40 million people use the water for drinking.

A December 10 news report says radioactive emissions from the used, 100-ton generators would exceed the maximum amount allowed on a single ship by at least six times, as identified by the CNSC. Nevertheless, the commission claims the transport poses no threat even in the event of an accident. The mayors argue that an accident could cause contamination that exceeds federal standards for radioactivity in drinking water.

The U.S.-based watchdog group Beyond Nuclear reports that Bruce Power has no emergency response plan in the event of the ship's sinking. The school-bus-size generators are contaminated with ferociously radioactive plutonium-241 and dozens of other deadly isotopes, and the company says welds on the huge cylinders are able to prevent radiation leaks only to a depth of 800 feet — the depth of Lake Ontario.

The Anishinabek, Mohawk First Nations and the Ontario women's group Anishinabe Kweag have condemned CNSC's permit, since federal law requires that First Nations be consulted about any shipments capable of impacting their territorial environment, including the Great Lakes' shoreline and a large part of its watershed. In Toronto March 8, the Canadian Environmental Law Association and Sierra Club Canada announced that they had filed legal action in the Federal Court of Canada seeking judicial review of the permits. In addition, seven past and present U.S. Senators, led by Russ Feingold, D-WI, fired off a letter to the CNSC and the U.S. Pipelines and Hazardous Materials Safety Administration demanding that the highest level environmental reviews be conducted before the waste is allowed on U.S. territorial waters.

— *Sierra Club Canada*, Mar. 8; *Windsor Star & Erie Times-News*, Feb. 7; *Canadian Press*, Feb. 8; *The Sarnia Observer*, Feb. 11; *Intercontinental Cry*, Feb. 14, 2011; *Beyond Nuclear in the Madison Capital Times*, Nov. 27; & *Cottage Country Now*, Dec. 10, 2010



Are GE's Faulty Control Rods in a Reactor Near You?

GE Hitachi in Wilmington, North Carolina, announced February 15 that its "Marathon Control Rod Blades" (CRB) that it manufactured in 1997 may fail from

cracking and fragmenting inside reactor cores. The CRBs are long metal tubes positioned adjacent to uranium fuel assemblies inside the core. The CRBs slow down or halt the fission process by capturing neutrons. Control rod function is crucial to managing the fission reaction, preventing the core from overheating in a meltdown disaster like what happened at Three Mile Island in 1979. Failure could cause the 12-foot long control rods to get stuck and render them

Vermont Yankee Again Leaks Radioactive Steam & Tritium

VERNON, Vermont — Tritium has again been detected in two separate wells at Entergy Corp's leak-plagued Vermont Yankee reactor. An investigation is underway to determine if the leak is from a new source, or if the tritium is spreading from others that have already been identified. Preliminary evidence points to a new leak in the well that was installed in November 2010 and is close to the radioactive waste building increasing concerns that other, more dangerous radioactive materials may have leaked. Then on February 10, the reactor experienced a radioactive steam leak coming from a backup system that controls the water level in the reactor in the event of an emergency. Non-essential employees were evacuated. Entergy spokesperson Laurence Smith said given its location in the reactor building, the steam was radioactive but "there is no way that the radioactive steam could ever get into the environment." He said clearing the building was a precaution often taken in such circumstances to limit worker exposure to radiation. The NRC put the reactor on a "14-day limited condition of operation period." Repair to the high pressure coolant injection safety system must be completed within two weeks or the reactor must shut down.

Eleven of 31 groundwater monitoring wells now test positive for excessive tritium. Entergy has been pumping

inoperable during power reductions or shutdowns. Cracked tubes could also result in loss of neutron-absorbing boron. Proximity to the core and continuous neutron bombardment, age of the CRB and heat affect the rods.

GE Hitachi sent out its February 15 notice warning that the CRBs create a potential substantial safety hazard and that reactor operators at more than 24 sites need to replace them more frequently than they were previously led to believe. The company claims it discovered the problem in October of 2010 when they found cracking in an unidentified overseas reactor. Xcel Energy has said that its Monticello reactor in Minnesota has four potentially defective rods out of the 121 CRBs now in use there, and that they will replace a total of eight during a planned shutdown in March. Constellation Nuclear Energy Groups spokesperson, Jill Lyon, said the company was aware of the control blade problem long before the Nuclear Regulatory Com-

contaminated water from the ground in an attempt at remediation, and, as of February 10, 325,000 gallons have been removed from the ground. A drinking water well was shut down in February 2010 when its tritium contamination was discovered.

Last year, the Vermont legislature, in a 26-4 vote, refused to grant a 20-year license extension for the reactor — online since 1972 — principally because of soil and groundwater contamination and a string of cooling system accidents. The facility must now be shut down when its license expires in March, 2012, but Entergy is still working to undue the legislative reversal. — *Boston Globe*, Dec. 17, 2010 & Jan. 28; Reuters, Jan. 21; *Brattleboro Reformer*, Feb. 18; *Burlington Free Press*, Jan. 29; AP & Vermont Public Radio, Feb. 16; Dow Jones Newswire, Feb. 17; Vermont Health Dept., Feb. 28, 2011



mission and GE Hitachi issued its warning. Employees at the Fitzpatrick reactor, near Oswego, New York, are keeping a special watch on 72 of 137 rods there.

The faulty rods increase levels of boron and tritium in cooling water, a sign that they need replacing.

The corporation has designed a replacement model of CRB that it says will alleviate design flaws in the old version, but meanwhile, operating reactors face the chronic danger posed by a loss of control rod function.

Boiling water reactors that are at risk include: Nine Mile Point Unit 1 and Fitzpatrick near Oswego, New York; Millstone Unit 1 in Waterford, Connecticut; Pilgrim in Plymouth, Massachusetts; Vermont Yankee near Vernon; Grand Gulf in Port Gibson, Mississippi; River Bend in Louisiana; Oyster Creek in New Jersey; Peach Bottom Units 2 & 3 in Pennsylvania; Perry Unit 1 in Ohio; Duane Arnold near Palo, Iowa; Cooper in Brownville, Nebraska; Monticello in Minnesota; Brunswick Units 1 & 2 in North Carolina; Hatch Units 1 & 2 in Georgia; Browns Ferry Units 1, 2 & 3 near Athens, Alabama; and in Illinois: Quad Cities Units 1 & 2 near Cordova, Clinton near Bloomington & Dresden Units 2 & 3 near Morris. — *Boston Globe & AP*, Feb. 16; *NUCBIZ*, Feb. 17; *St. Paul Pioneer Press & Nuclear Street News Team*, Feb. 18; *Syracuse Post-Standard*, Feb. 25, 2011; & GE Press Release, April 23, 2010

Emergency Shutdowns Plague Retirement-age, Rattle Trap Reactors

Nuclear power proponents often say reactors produce electricity "24/7, 365 days a year" which is of course untrue. They all require regular shutdowns for re-fueling and repairs. Moreover, unplanned emergency "trips" happen year-round, especially among the older reactors. Some recent emergency power outages include:

- Susquehanna's 39-year-old Unit 1 in Pennsylvania shut down January 25 after an accidental steam leak.

- The 38-year-old Surry Unit 2 in Virginia automatically "tripped" a shutdown February 8 because of a cooling system leak.

- While running at full power, Palo Verde's 24-year-old Unit 3 in Arizona "tripped" an auto-shutdown January 20 when a main cooling feedwater pump lost pressure.

- At Brown's Ferry, in Alabama, "abnormal vibrations" in a generator forced the 34-year-old Unit 3 to shut down December 28.

- Comanche Peak's 21-year-old Unit 1 in Texas was forced to shut down January 14 because a transformer that powers a cooling water pump was making "abnormal noise."

- During a reactor start-up operation December 14, Point Beach's 38-year-old Unit 2 in Wisconsin was tripped and shutdown because of an accidental drop of control rods into the core.

- Indian Point Unit 3 near New York City shut down September 10, and again February 22 because of leaks in its 36-year-old air cooling system.

— For a longer sampling, see the Winter 2007/08 Nukewatch Quarterly

Fermi Spill Entered Sewer System

MONROE, Michigan — Last December 1, the Fermi 2 reactor 40 miles south of Detroit — owned by Detroit Edison, now "DTE Energy" — caused the spill of an estimated 100,000 gallons of radioactive water that covered the floor of a turbine and waste storage "canyon" and spread from there. The reactor had been shut down since October 24 for refueling and repair when — just before restart — a giant valve for a "condenser overflow tank" stuck open. The system filters water condensed from radioactive steam. Workers reported that the contaminated water seeped through walls and ceiling and accumulated to a depth of two inches in some areas. At least six employees had their shoes and pants contaminated. About 100 gallons of the waste water ran down a restroom floor drain into the site's sewage system, and then into Monroe's municipal wastewater treatment plant. Company spokesperson Guy Cerullo says sewer system contamination registered below federal limits and the incident was considered so minor that it did not violate any federal safety laws or policies.

During its planned shutdown, DTE Energy replaced a water pump with one that did not meet Fermi 2's specifications. The inappropriate pump vibrated preventing more than a two percent power up on December 2 and needed replacing.

Discovery of leaking condenser tubes caused a second shutdown February 11, two days after the second reactor restart. Thousands of tubes run through the reactor and need inspecting. Fermi 1 was permanently shutdown in 1975 after failed attempts at repair of its partial core meltdown in 1966.

— *Monroe News*, Dec. 11 & Feb. 11; Michigan Public Radio & Bellona, Dec. 2; *The News Herald & Toledo Blade*, Dec. 4, 2010; *Monroe Evening News*, Jan. 26, 2011

Continued from Cover

Earthquake & Tsunami Stagger 6 Japanese Reactors

uptake of radioactive iodine-131. I-131 is dispersed in massive volumes by reactor fuel accidents and causes thyroid cancer.

Prof. Michio Kaku, a theoretical physicist at the City University of New York, told ABC News, "Thank god the vessel itself, which contains the super-hot uranium, was intact. If it had ruptured you're talking about an accident that is beyond comprehension," to which the ABC replied: "That could still happen." Because no new cooling water was being added, the coolant that remained inside the cores at Daiichi's units 1, 2 and 3, was boiling away from the hot fuel. According to news reports, fuel in Unit 1 was uncovered to as much as 6 feet. Confirmation of melted fuel there came March 13 when radioactive cesium-137 was detected outside the reactor, according to Yuji Kakizaki, a spokesman for Japan's Nuclear and Industrial Safety Agency. The government was grudgingly forced to allow the safety agency to inject seawater and boron into the stricken core in an effort to cover the fuel. The use of seawater also means the units will be ruined and permanently closed.

As Dr. Kaku told ABC News: "Japan's reactors are the safest in the world, but they were never designed to handle this big a quake. The seawater dump is a last-ditch effort. The alternative is to expose the core, let it melt and create a steam explosion that will blow the reactor apart."

Radiation inside buildings at the failed Daiichi Unit 1, including the control room, had earlier reached 1,000 times normal operational levels, according to Tepco. This radioactivity doubtlessly was dispersed to the environment by the explosion. Indeed, after the Onogawa complex to the north with three reactors declared its own "nuclear emergency" — because outside radiation had risen to "higher-than-permitted" levels — it was announced that wind-borne radiation blown from the explosion at Daiichi 1 had caused the increased contamination.

Reuters reported March 11 that pressure inside the failed Unit 1 reactor core had increased to 2.5 times the designed capacity, according to the Japanese Nuclear Safety Agency. At the same time, Japan's Chief Cabinet Secretary Yukio Edano told the press that Unit 2 "remains at a high temperature," because it "cannot cool down." The venting of gas to relieve this pressure filled Unit 1's containment structure with volatile hydrogen, according to the Safety Agency, and led to the explosion.

Local industry watchdogs who translated a government report on the unfolding events found a dire prediction from the safety agency which warned that if new cooling water couldn't be pumped into Daiichi Units 1 and 2 by 10 p.m. local time March 12, the fuel would be uncovered. This is what occurred in Unit 1 where fuel began melting. Because of failed systems at four other reactors, melting of fuel was likely at all of them.

The watchdog group, Citizens' Nuclear Information Center in Tokyo, reported that Tepco's official website as-

ures the public that radiation monitoring outside its reactors "goes on around the clock year round." However, CNIC reported March 11 that the company noted at the bottom of the same webpage, "This system is currently shutdown."

Independent monitoring of radiation levels was not possible because of government evacuation orders. This has left the Japanese public and the world with only government and company officials to rely on regarding radiation levels. The CNIC activists were skeptical about the shutdown of monitors and suggested an attempt to down-play potential radioactive releases.

Throughout the emergency, Japanese Prime Minister Kan repeatedly declared on television that none of the reactors were in any danger, even after Tepco announced it had begun venting contaminated steam and gas from the failed reactors' containment structures. With the venting underway at up to five reactors, safety agency spokesman Ryohei Shiomi had the nerve to declare, "Radiation spread by the venting won't be at a level dangerous to health."

Although the quake's epicenter was eight miles below sea level and 231 miles northeast of Tokyo, its power shook and destroyed buildings there and knocked out electricity for millions.

After a September 30, 1999 radiation accident killed two workers and contaminated over 400 residents, the Japanese were jolted. The *New York Times* reported, "many here are wondering if a wariness over nuclear hazards borne of this accident will not, indeed should not, lead to an eventual phasing out of the industry altogether." — *JL*

Tritium Leaks, Investor Bails

RICHMOND, Virginia — The North Anna station, with two 32-year-old reactors, has contaminated groundwater with tritium that was detected in a monitoring well — the second such leak in a year. The first was discovered last April. Principle owner Dominion Virginia Power said the leaks pose no danger to the public or to its workers. The Nuclear Regulatory Commission limit for "allowable" tritium poisoning in drinking water is 20,000 picocuries per liter, and the North Anna well had 16,500 pCi/L, according to Dominion, which in November hadn't yet found the leak.

Old Dominion Electric Cooperative (ODEC), which owns 11.6 percent of North Anna, announced February 28 that it is pulling out of plans to build a third reactor at the site, northwest of Richmond. ODEC president Jackson Raesor said, "participating in this proposed nuclear reactor project does not fit with our long-term plans." Thomas Farrell, President of Dominion, which owns 88.4 percent of the complex, said his company was unsure about a schedule to build the [third] unit. — *Ventura County Star*, Nov. 1; & *Richmond Times-Dispatch*, *Free Lance-Star & Fredericksburg.com*, Nov. 2, 2010

Tucson Shooting in Perspective

By John Heid

Our bathroom mirror is gone. It left with community members last month. A casualty of transition. Now an opaque mustard colored wall fills the space my face used to occupy each morning and night. No reflection. No eye contact. No five o'clock shadow. No smile. Or smirk. I see less of myself these days. Sometimes I feel we have all lost sight of ourselves.

Webster defines vitriol as "something highly caustic or severe in effect, as criticism." That word, "vitriol," crashed into the national headlines and public lexicon of Tucsonans on January 8, 2011. Rhetoric, bullets and flesh collided in a shopping plaza parking lot on the north side of town. Hot words.

Cold blood

Verbal battle lines were sharply drawn long before any bullets flew. Ideologies, rhetoric and labels littered national discourse over the past year. Cross words and cross hairs. No one was crossing lines. Language builds a more formidable wall than rebar and concrete.

Tucson grieved, quick and hard. Within hours of the shootings people began to gather. Stores closed early. Theater marquees replaced movie titles with condolences. By dusk candles flickered across the city.

Impromptu vigils and shrines were widespread. Churches offered special services. We, Tucsonans, were drawn into a weighty terrain of suspended animation.

The blood was still fresh when the spin doctors went to the air. Ideologues and political analysts blaming one another for the violence. Hand-gun sales soared alongside the metastatic vitriolic language. More labels: martyrs and maniacs. Heroes and victims. Grief and blame were adeptly choreographed by the media.

Analysis atop analysis

Soon national figures were appearing here. And wristbands and grief counselors, even Acupuncturists Without Borders. Eventually the President came to Tucson. "What matters is not wealth, or status, or power or fame, but how well we have loved," he said. Amen to that!

"We have to fashion for ourselves an art of living in times of catastrophe in order to be reborn before fighting openly against the death instinct at work in our history."

— Albert Camus

"If it were up to me, I'd take away the guns."

— Cheryl Wheeler

Four springs ago I initiated this column with the same Camus insight. His words echo ominously across time and fall squarely onto my lap here in Tucson. How do we "fashion for ourselves an art of living in times of catastrophe?"

While the nation scrambles for explanations, for remedies to wanton violence, we overlook "the death instinct at work in our history." A deep-seated culture of violence. Yes, "maybe it's the guns," as Cheryl Wheeler sings. Guns large and small. And so much more. Maybe it's the mindset that idolizes, justifies, mass produces and profits from arms. Glocks (also known as "safe action pistols") to nukes. Recently a Mayan elder reflected: "We have enslaved the sacred element of fire in weaponry." And we are paying the price. Perhaps we each need mirrors to see what we really look like. Armed to the teeth. Full metal jacket.

Context is essential to understanding any event. There are few, if any isolated incidents. In order to understand,

Is Rad Medicine Doing More Harm than Good?

continued from page 1

said that abdominal CT scans average "about 500 times more radiation than a simple chest X-ray and 1,000 times more than a dental X-ray."

A September 2009 study in the British medical journal *Lancet* concluded that CT scans were being needlessly used in cases of children who hit their heads. When used to try to rule out the chance of serious brain injury, CT scans actually helped only five percent of the time. Of the 14,969 children who were given scans, 25 percent of those under two years old, and 21 percent of older children showed no sign at all of serious brain trauma before the CT. They clearly didn't need one. Dr. Nathan Kupperman, the study's chief investigator told the *Times*, "What we're saying is, for goodness' sakes, at a minimum, don't CT these children that don't have any" signs of brain injury.

As long ago as 1985, the routine ordering of chest X-rays for newly admitted hospital patients was condemned after a study found that 96 percent of the time they weren't helpful or useful. The National Cancer Institute got around to issuing an alert in 2002, urging radiologists to reduce CT doses to children. At the same time, the NCI declared that most scientists "agree there probably is no low-dose radiation 'threshold' for inducing cancer, i.e., no amount of radiation should be considered absolutely safe."

This is a significant reminder, especially since by 2010, about 70 million CT scans were being done in the U.S. every year — up from 62 million in 2006, and 23 times the number done in the early '80s (3 million). Surprisingly, the

that is to say, stand somewhere with credibility upholding us, we must survey the landscape and our place in it. Eyes-wide-open.

From where I stand in Tucson I see our largest employer, Raytheon, the major weapons contractor, proud, patriotic and profitable. I look into a sky which is assaulted daily by the aftershocks of F-16s and A-10 warplanes in training. I live just a few miles from Predator drone control booths which routinely fly lethal missions 7,000 miles away.

Less than two hours east, the military's interrogation training manuals used in detention camps and prisons were designed. Only 65 miles away stretches a heavily guarded wall as far as the eye can see. Here in southern Arizona, we have more military personnel per square mile than anywhere in the U.S. Yes, context is everything. Down here, guns are a way of life. And death.

We, the people, are up to our eyebrows in a culture of violence. We believe in it. We sanction it, profit from it and sooner or later are victimized by it.

This culture has bipartisan support and no end game. A system, "a filthy, rotten one," as Dorothy Day observed, from which "all our problems stem" because of our acceptance of it. No lone gunman at the trigger here. Instead there's an entire apparatus packing heat.

How can we perpetrate and condone violence thousands of miles away, let alone at the nearby border, and still be surprised by reverberation? Already for sale are buttons with the infamous dates 9/11/01 and 1/8/11 side-by-side. Like the laws of gravity, random and calculated acts of aggression are not only inevitable but predictable within the culture of death. Call it the physics of violence.

While there has been magnanimous communal support from within and without Tucson following the January 8th shootings, there has yet to be any significant analysis, let alone critique, of our national ethos of violence.

Radioactive Wastewater from "Hydrofracking" Dumped in Rivers, Streams

From Democracy Now, March 2, 2011

Newly disclosed figures show wastewater produced from the natural gas drilling practice of hydrofracking has contained radioactivity and other contaminants at levels far exceeding federal limits. According to the *New York Times*, internal government documents show at least 15 wells produced wastewater with more than 1,000 times the amount of radioactive elements considered acceptable. The wastewater is sometimes brought to sewage plants ill-equipped to properly treat it and then disposed into rivers supplying drinking water. At least 12 sewage plants in three states discharged partly treated wastewater and waste into rivers and streams. The documents also show that government regulators and industry officials knew of the problems with the wastewater disposal and treatment but took no action. On [March 1], protesters rallied following a New York City Council hearing on plans to open parts of the New York state watershed to drilling.

This is Joe Levine of the group NYH2o: "They know it's contaminating, and they're doing it anyway. The '18,000 wells' is a projection. There could likely be many more than 18,000 wells. They haven't been approved. They would be allowed to proceed if these regulations are completed and put out. [Then] gas drilling will be able to commence in the Delaware River Basin."

Times reported March 29, 2010 that "as many as 14,000 people may die every year of radiation-induced cancers as a result, researchers estimate." The NCI said in 2002 that the use of CT scans on adults and children had increased seven-fold in the previous 10 years — from '92 to '02. Last year, the Food and Drug Administration said the average lifetime dose of diagnostic radiation had increased sevenfold since 1980, driven partly by the increased use of CT scans.

Today many states, hospitals and clinics using the dangerous procedures still lack any licensing requirements or regulatory oversight, and of those that do, many have weak enforcement.

Christine Lung, vice president of the American Society of Radiologic Technologists told the February 28 *Times*, "It's amazing to us, knowing the complexity of medical imaging, that there are states that require massage therapists and hairdressers to be licensed, but they have no standards in place for exposing patients to ionizing radiation." The association says that "Radiation therapists are unregulated in 15 states, imaging technologists in 11 states and medical physicists in 18 states." The group has lobbied Congress unsuccessfully for 12 years urging passage of a law setting standards in education and certification for a dozen medical imaging and radiation treatment professions.

Of course cone-beam sales are very big business for manufacturers, hospitals, doctors and dentists. One industry estimate found over 3,000 scanners have been sold at prices up to \$250,000 apiece. — *JL*

TUCSON



On the Martin Luther King Jr. holiday several folks with their minds "stayed on freedom" extended the annual peace walk to the front gates of Davis-Monthan Air Force Base. There they requested a meeting with the commanders of the jet fighter-bomber wing to address systemic violence. Instead of a meeting, three individuals — a Vietnam veteran, a college educator and a house painter — were carted off to the Pima County jail in handcuffs.

A footnote: There is a mirror, albeit metal, in the men's bathroom of the Pima County jail.

— John Heid is a member of the Restoration Project at Casa Mariposa in Tucson, Arizona.

Hanford "An underground Chernobyl waiting to happen"

On January 22 and 23, the *Seattle Times* reported extensively on the vast and complex radioactive waste problems — and the stop-gap programs that have often made things worse — at the 560-square-mile Hanford nuclear weapons complex in eastern Washington state.

One of the most vexing and dangerous threats at Hanford comes from millions of gallons of waste liquids and sludges kept in 177 large underground tanks.

The *Seattle Times'* Craig Welch put the terrifying reality this way: "Dangerous gases build up in a giant drum of nuclear waste. It explodes and spews contamination, threatening workers or the public. Or it cripples a facility that cost taxpayers \$12.2 billion. It could happen at Hanford's nuclear-waste-disposal plant if radioactive material isn't kept stirred."

The plutonium-contaminated waste, "scattered among 53 million gallons of other poisons," is left from 40 years of nuclear warhead production — an enormous industrial process called "reprocessing" that involves remote-controlled "chemical baths" in giant canyon-like factories. The 35-to-65 year old tanks are corroded and at least a million gallons of their highly radioactive liquids have leaked into the ground just above the Columbia River.

The dilemma is that the sludge in the giant tanks needs to be blended continuously to avoid the accumulation of an explosive mass of plutonium. If enough plutonium accumulates into a "critical mass," it could explode and spread lethal, long-lived radioactive contamination, further threatening the Columbia, a source of drinking water for Portland, Oregon and other cities.

The danger has been around for a very long time. In October 1998, Reuters News Service reported that Washington's Governor Gary Locke called Hanford's aging tanks "an underground Chernobyl waiting to happen."

Just such a "criticality excursion" occurred in Japan in 1999. It killed two workers by radiation poisoning after weeks of transfusions and bone marrow transplants. An even worse radioactive waste explosion happened at Cheliabinsk in Russia in 1957, the "Kyshtym accident," when reprocessing waste in tanks like Hanford's blew up causing widespread contamination, the permanent evacuation of 386 square miles and the abandonment of 30 towns that were later removed from Soviet maps.

The Department of Energy promised in 1989 that it would stabilize the plutonium waste in the 30 most dangerous tanks by 1995. That promise has been rewritten 13 times and today project managers tell the press it may be done by 2019.

The current stabilization plan, a system for what's called "vitrification," involves moving liquids from the tanks to halt further leaks, then processing the material into glass cylinders. Although the factory is half built, the design, engineering and testing of the system is in trouble.

Government tests have shown that the waste transferring machinery, vitrification systems and stirring equipment may fail, pipes may clog. The stew of hundreds of toxic chemicals and isotopes is so thermally and radioactively hot that some areas of the system couldn't be repaired or even approached by people or robots.

When a lead engineer raised unanswered questions about plans to allow for repeated "mini" explosions and "manageable" radiation leaks — designers gave up trying to concoct a system that could prevent them — he was transferred. He has since filed a whistle-blower law suit against contractors and the Department of Energy.

There are at least 1,700 pounds of plutonium-239 in the million-gallon tanks, Welch reported. Last July a new study found that, overall, about 4 tons of plutonium wastes have been left at Hanford in various states — some in the tanks, some dumped into trenches, some injected deep into wells — three times what the government earlier estimated.

Pro-nuclear advocates who promote reprocessing of used reactor fuel — they call it "recycling" and some actually say that it reduces the volume of radioactive waste — ignore the size, cost and potential health effects illustrated by the Hanford experience. The environmental remediation program there is expected to take 100 years and cost at least \$273 billion. — *Nukewatch Staff*

Fight Against Fission Fueled with Fashion

PARIS — Geoffrey B. Small is no ordinary fashion designer. After being appalled at the prospect of a resurgent reactor and weapons industry, he hit the runways with a line of anti-nuclear men's clothes. Each piece features a patch or button with the radiation symbol slashed or dissed, and the shop's website says it's "the first international designer fashion collection to openly come out against the dangers of nuclear energy and arms proliferation." Small's socially conscious threads rely on the recycling of cloth and leather into clothes and shoes, using hand-sewn, chemical-free fabrics, and locally produced goods. Small not only pays attention to the origins of his materials, his creations confront the fashion industry's psychology of elitism and machismo. Small says his mission is "to elevate the art, science and technology of making clothes by hand." The "no nuclear" line comes with an on-line documentary titled "Logomania."

After visiting Hiroshima and studying the U.S. atomic bombings, Small was led to Sortir du Nucléaire, the French coalition working to abolish nuclear power and weapons, where he was inspired to start the controversial new line. The Paris debut of the "stop nuclear madness" collection concluded with a theatrical "die-in" featuring a child carrying a Geiger counter and walking among the "dead." The audience responded with thunderous applause. Last September, Small even organized an anti-nuclear demo at the Venice International Film Festival.

Apparently more interested in getting the word out than he is in sales, Small says, "... we are in the urgency of a situation that may soon be the apocalyptic end of human history. Let us act promptly with all our talents." — See <http://www.geoffreybsmall.net>, & <http://vimeo.com/13512708>



Cookie-Cutter Reactor Concept a Magnet For Budget Cutters

WASHINGTON — President Obama is promoting an experimental "modular" and "mass-produced" nuclear reactor concept by highlighting it as part of his \$853 million earmark for nuclear power research in the Energy Department 2012 budget. If Congress agrees, four giant companies could make millions before the program is declared a failure and cancelled. The so-called "small modular reactors" — built theoretically on assembly lines and delivered to customers like a new furnace — would be owned by private utilities and sell electricity under guaranteed contracts. Secretary of Energy Stephen Chu claims that if the government provides half the R & D funds and promises to buy power from the reactor — for big corporate beneficiaries are currently smacking their lips — some utility will eventually order one. Fiscal conservatives could soon attack this socialized medicine for the nuclear industry and demand that the market decide whether to invest in untested reactor schemes. Military bases and nuclear weapons production sites — in particular the Y12 complex in Oak Ridge, Tennessee — are likely spots for a test run, according to Secretary Chu. The heavily-controlled access and top secret status enjoyed by federal sites would make radiation accidents or system failures easy to hide. Overall costs estimates run to \$2 billion per reactor, but the actual

price tag for experimental units is completely uncertain. The Nuclear Regulatory Commission has said that safety and inspection problems will put off NRC approval of the program for years. Dr. Arjun Makhijani, of the Institute for Energy and Environmental Research, has raised formal questions about "product recall" issues in the event of mass-produced defects — like poor welding for example — and other safety concerns like shoddy over-seas production. — Agency France-Press; *The Hill*, Feb. 14; & *New York Times*, Feb. 13, 2011, IIEER Fact Sheet, Sept. 2010

Steady Progress Against Uranium Weapons

148 Countries Call for Disclosure of DU Target Data

An overwhelming majority has supported a United Nations General Assembly resolution calling on users of depleted uranium (DU) weapons to reveal where the weapons have been fired when asked to do so by targeted countries.

The UN Resolution received 148 votes with just four states voting against. As with similar resolutions in 2007 and 2008, only Britain, the U.S., Israel and France voted "no." All four have used or developed DU weapons. The three UN Resolutions were prompted by the U.S.'s continuing refusal to release information on where Pentagon and NATO tanks and planes used at least 881,000 pounds (440 tons) of DU munitions in Iraq.

Britain has provided pertinent UN agencies with details of its use of DU weapons in Iraq in 2003, but the U.S. has made no effort to do so. It is 19 years since the first major use of the uranium weapons in Iraq, 12 years since their use in and around Kosovo.

Research has shown that the quick release of targeting data is crucial in reducing avoidable civilian radiation exposures. Recommendations that governments monitor soil and water contamination and, where necessary, decontaminate sites — as the UN Environment Program suggested for Kosovo — are reliant on disclosure of the data.

U.S. Bill Aims to Identify and Examine Vets Exposed to DU

Environmental and peace activists cheered a new bill that seeks to identify members of the U.S. military who may have been exposed to DU dust and that aims to ensure health monitoring for veterans. The bill, HR 248, titled "Depleted Uranium Screening and Testing Act," was submitted in January by Rep. José Serrano, D-New York, who himself served in the U.S. Army Medical Corps in the 1960s. Similar bills have been submitted in previous years but have failed from lack of support. Activists and veterans' groups are urging supporters to contact their representatives at their Washington, DC offices and urge them to support and co-sponsor the law. The bill has been referred to the Committee on Armed Services.

France Dismisses DU Fears But Seeks Alternate Metal

In late January, France's Ministry of Defense revealed that it has no plans to remove DU rounds from its arsenal as part of a non-binding Europe-wide moratorium on their use — as requested by a 2008 European Parliament resolution. The French MoD claims that DU is harmless. However, the MoD also admitted that it is studying alternatives to DU in order to replace it as soon as it has a material that is as effective at smashing through armored targets.

— Reports from the International Coalition to Ban Uranium Weapons

IKEA's Do-It-Yourself Clean Energy

DENMARK, Sweden — The furniture giant IKEA has engaged the normally small-scale "Do It Yourself" ethic across its entire corporate energy culture. It's now at the forefront of supplying its own energy to heat, cool and power all 17 of its buildings in Sweden. The company's recent installation of nine new wind turbines will provide 100 percent of its headquarter's electricity by early 2012 — and the corporation intends to sell excess electricity to the market. IKEA now owns over 90 megawatts of wind power which is produced by 52 units in Germany and France. In addition to the turbines, IKEA has been installing solar panels on stores in Belgium, Germany, Canada and the U.S. In Canada, where electricity costs are expected to rise 60 percent in the next 4 years, IKEA will soon be generating one million kilowatt hours (kWh) of its own electricity per year using solar panels. In California, eight of IKEA's stores are getting a combined total of 20,000 solar panels which will have an annual output of 6.65 million kWh. The 7,980-panel installation at the company's U.S. distribution center will be among the top 10 largest commercial systems in the country. IKEA has solar energy systems in Brooklyn, NY, Pittsburgh, Pennsylvania, and Tempe, Arizona, and it's got solar water heating systems in Charlotte, N. Carolina, and Orlando and Tampa, Florida. A geothermal heating system is under construction in Centennial, Colorado. — *Renewable Energy World.com*, Feb. 24, 2011; *Central Valley Business Times*, Oct. 13; *Suite101.com* (on line news service), Oct. 16, 2010

More Wind Power in From the Coast

Construction of a 320 megawatt wind farm, "Borkum Riffgrund 1," with 89 giant turbines, is set for completion off the North Sea coast of Germany in 2014, and will supply electricity for 330,000 homes. Siemens Corp. heads the project's turbine construction, installation and maintenance, and Denmark's Dong Energy is investing \$1.25 billion. Over the next 20 years, Germany plans to install enough wind power to replace what's now produced by its 17 nuclear reactors. About 21,000 wind turbines produce seven percent of Germany's electricity, one of the highest rates in the world. China meanwhile is now the world leader in clean energy investments, having spent \$51.1 billion last year alone. China also moved to the top of the installed wind power list, with 41.8 gigawatts, compared to the U.S.'s 40.2 GW capacity. (A megawatt, MW, is a million watts of electricity, while a gigawatt, GW, is 1,000 megawatts, or a billion watts.) — *Bloomberg*, Jan. 19; *Power-Gen Worldwide*, Feb. 24; & *New York Times*, Jan. 26, 2011; *National Geographic News*, Apr. 2, 2010



East Coast Green Futures

NORFOLK, Virginia — The U.S. departments of the Interior and Energy intend to speed development of wind farms on the east coast by streamlining the approval process and spending \$50 million over the next five years. Wind projects could eventually involve up to \$25 billion in investments for new transmission lines to connect wind turbines to the electric grid. Four newly planned wind farms, off the coasts of Virginia, Maryland, Delaware and New Jersey, should be running by 2020 and provide 24 percent of New England's electric power. The new sites will be developed 10 to 20 miles off the coast. Today, New England produces 270 megawatts of wind energy, enough to electrify 270,000 average homes. Google, the internet giant, is backing a plan to lay 350 miles of undersea cable connecting the wind turbines planned for the mid-Atlantic coast. — *Daily Hampshire Press*, Feb. 8, & *New York Times*, Feb. 8, 2011; *Los Angeles Times*, Oct. 13, & AP, Dec. 20, 2010

eventually involve up to \$25 billion in investments for new transmission lines to connect wind turbines to the electric grid. Four newly planned wind farms, off the coasts of Virginia, Maryland, Delaware and New Jersey, should be running by 2020 and provide 24 percent of New England's electric power. The new sites will be developed 10 to 20 miles off the coast. Today, New England produces 270 megawatts of wind energy, enough to electrify 270,000 average homes. Google, the internet giant, is backing a plan to lay 350 miles of undersea cable connecting the wind turbines planned for the mid-Atlantic coast. — *Daily Hampshire Press*, Feb. 8, & *New York Times*, Feb. 8, 2011; *Los Angeles Times*, Oct. 13, & AP, Dec. 20, 2010

Why No Nukes, in a Nutshell

Wind Power Installation Sprints, Nuclear Crawls

The U.S. installed 9,922 megawatts of wind power generation in 2009 breaking all previous wind production records. The one-year increase is equal to the building of six large power reactors, or three times the giant 2,700 MW South Texas Project — and all in one-tenth the time it takes to build one new nuclear station, normally 10 years. The U.S. wind industry began 2011 with over 5,600 MW of electric power under construction, while just one reactor is being built. And wind is now cost-competitive with natural gas for new electric generation and is being buoyed by a 1-year extension of the 1603 Investment Tax Credit for renewable energy.

— American Wind Energy Association, 2010 Annual Report

General Electric: "today ... you would never do nuclear"

"If you were a utility CEO and looked at your world today, you would just do gas and wind. ... You would never do nuclear. The economics are overwhelming," says Jeffrey Immelt, CEO of General Electric, the global reactor engineering firm. About nuclear's future without tax-payer handouts, Immelt says, "The nuclear industry is here because government supported it.... This notion that government is not a catalyst in this industry has no basis in fact."

— *Wall Street Journal*, Sept. 25, 2010, & *London Financial Times*, Nov. 18, 2007

Solar Power Cheaper Than Nuclear

"Electricity from new solar installations is now cheaper than electricity from proposed new nuclear" reactors. — "Solar and Nuclear Costs — The Historic Crossover," Blackburn & Cunningham, Duke University, July 2010

F.E.R.C. Chair Says We May Not Need One New Reactor

"We may not need any, ever," said Jon Wellinghoff, chairman of the Federal Energy Regulatory Commission, about new nuclear, calling it "too expensive." Renewables "like wind, solar and biomass would be able to provide enough energy to meet base load capacity and future demand," since the U.S. can reduce energy usage by 50 percent, he said.

— *Wall Street Journal*, April 23, & *New York Times*, April 22, 2009

Federal Commission Says 'No' to Nuclear Subsidies

The U.S. Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism has concluded that we can and should help stop the spread of nuclear weapons by "... discouraging, to the extent possible, the use of financial incentives in the promotion of civil nuclear power."

— CPWMDPT, "The Clock is Ticking," Oct. 21, 2009 (<http://preventwmd.com/static/docs/report/WMDRpt10-20Final.pdf>)

NUKEWATCH QUARTERLY



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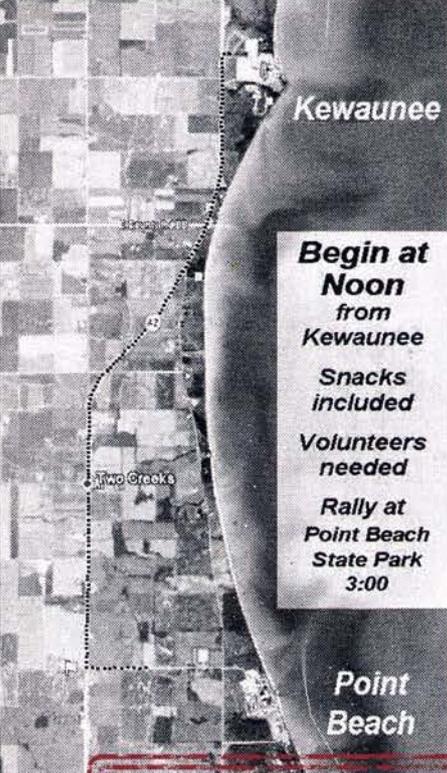


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WALK FOR A NUCLEAR-FREE FUTURE

**SATURDAY
APRIL 23
NOON - 4:00**

Nuclear power causes cancer,
birth defects, environmental
destruction and worsens
climate change



Begin at Noon from Kewaunee

Snacks included

Volunteers needed

Rally at Point Beach State Park 3:00

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