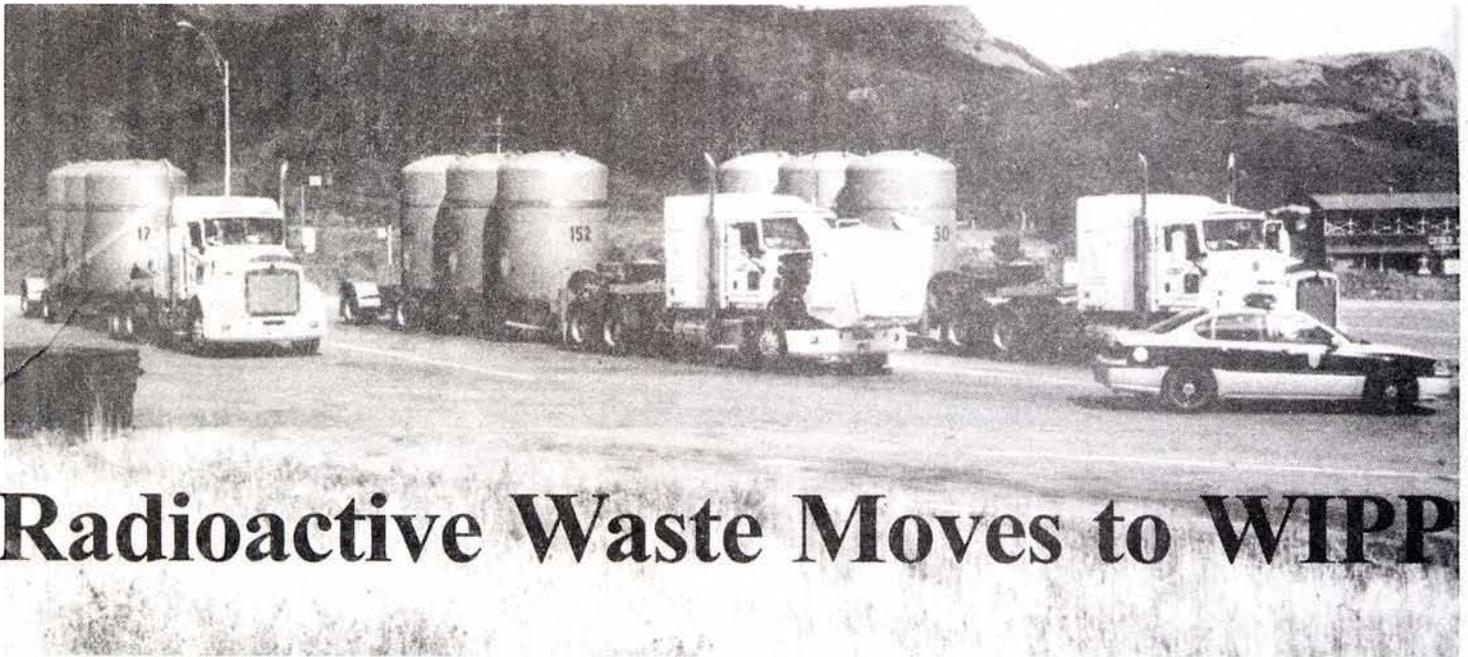


# NUKEWATCH

# PATHFINDER

A publication of the Progressive Foundation — Fall 2003

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



## Radioactive Waste Moves to WIPP

### Introduction by Jerry Mechtenberg-Berrigan

At 7 a.m. Thursday, July 17, Bonnie Urfer, Molly Mechtenberg-Berrigan and I left Anathoth Farm in Luck, Wisc. Over ten days we traveled 2,600 miles to and from Carlsbad, New Mexico, home of the Waste Isolation Pilot Plant (WIPP), run by the U.S. Dept. of Energy. Opened in 1999, WIPP is the first permanent repository for waste generated by the U.S. nuclear weapons program. WIPP takes in around 20 shipments of waste per week, via trucks traveling on Interstate highways, from the following national laboratories: Rocky Flats, Colorado; Los Alamos, New Mexico; Idaho National Environmental Engineering Laboratory (INEEL); Hanford, Washington; and Argonne National Lab in Chicago, Illinois.

The WIPP facility, built on “geologically stable” salt formations, consists of large buildings on the surface of the desert

*Photo by Bonnie Urfer*

30 miles east of Carlsbad, centered around a large elevator. The waste, packed in steel drums, is lowered via the elevator 2000 feet underground, where it is stored in rooms mined out of the salt. In theory, the salt will collapse around the barrels, encasing them safely for the rest of time. Our mission was to find these trucks on the road, photograph them, monitor the radiation emitted by them, follow them to the WIPP facility and have a look around.

Our tool for measuring radiation was a RadAlert nuclear radiation monitor purchased from International Medcom in Sebastapol, Calif., Serial #92484. We calibrated the monitor to read Radiation Allowed Doses (RADs) per minute. Forty-five minutes into the trip we read 6 counts per minute (CPM) in Taylors Falls, Minn. Later in the day we read 11 CPM in Des Moines, Iowa. The CPMs increased slightly as we drove west, and increased again when we entered the mountains.

Over the weekend we attended the War Resisters' League National Conference in Colorado Springs where Molly gave a presentation on U.S. plans to develop “mini nukes.” On July 21 we began our investigation. Molly, Bonnie and I will take turns reporting

**INSIDE: Special section on “depleted” uranium weapons, pp. 5 - 8.**

# Radioactive Waste Moves to WIPP

Continued from cover

**Monday, July 21 (Molly):** Bonnie, Jerry and I arrived in Santa Fe, New Mexico, just in time for our 1 p.m. appointment with the local anti-nuclear group Concerned Citizens for Nuclear Safety (CCNS). We met with Joni Arends and Amy Williams, two staff members, to learn about WIPP and waste transport.

Joni conveyed to us the power of the nuclear industry in New Mexico. Of the 1.5 million people in the state, Los Alamos National Laboratory employs 12,000 people; the WIPP facility another 1,500. Senator Pete Domenici, head of the Senate Energy and Natural Resources Committee, continues to push for expansion of WIPP as well as additional nuclear facilities in the state. Domenici said in March, "Nuclear technologies are well understood and appreciated in this area." Bob Forest, mayor of Carlsbad, is quoted as saying, "If it meant that I had to have a barrel of radioactive waste in my living room, it would be worth it for national security." However, as the folks at CCNS estimated, about half of New Mexico's citizens do not support the WIPP facility.

Joni provided detailed information about waste shipments and their routes. The trucks from Rocky Flats often travel in groups of three, which we would later see for ourselves. The shipments from Los Alamos stop at a Texaco gas station and Taco Bell that we had passed earlier. Two accidents involving WIPP trucks — one that Nukewatch reported on last spring — had occurred recently on New Mexico's highways. We left the CCNS office after absorbing all this information, realizing that anti-nuclear groups in New Mexico have a huge amount of work to do in striving for a safer and saner state.

Next we met with Nuclear Watch New Mexico. Geoff Petrie explained to us the physical and technical aspects of the site itself. The DOE would like to see the WIPP site expanded to hold more hazardous waste and possibly nondefense waste (as of right now, the WIPP facility is only authorized to hold military waste). Geoff speculated that WIPP might replace Yucca Mountain as permanent repository for commercial waste, as the Yucca Mt. plan continues to meet strong resistance within the state of Nevada and elsewhere.

During our two hour meeting with Geoff, many doubts about the safety and practicality of permanent waste storage at WIPP were raised. We ended the day eager to see for ourselves the facility and surrounding landscape.

**Tuesday, July 22 (Bonnie):** This wasn't the first time I had tracked WIPP trucks. The first was back in 2000 when Yvonne Mills and I followed a truck from Rocky Flats to the New Mexico border. That truck was accompanied by security vehicles. The trucks we saw on the current journey included no such safety net and traveled alone on the highways.

Our first viewing of a WIPP truck occurred as we headed south from Santa Fe toward Carlsbad. Jerry, who turned out to be the most observant on the trip, spotted a truck parked in a lot adjacent to an oil refinery on the north end of Artesia, New Mexico, along Highway 285. By the time we'd turned around, the truck was moving north on the road and had clearly posted signs saying "Empty." We followed it for just a bit after taking photos but decided to turn south again for further exploration.

Heading once again through Artesia, we spied another empty WIPP truck, parked without a driver in another lot along the road. Being a bit timid about proximity and without getting too close, I took a reading that didn't register elevated levels of surface contamination. After the fact I wished I'd been courageous enough to get inches away rather than feet.

Once we'd taken photos of that truck we headed for the WIPP site itself.

The main road into WIPP off Highway 180/62, 12 miles from the facility itself, wasn't hard to find. It had signs posted labeling it and discouraging trespass. Molly, Jerry and I staked out the gate for about an hour without seeing too much traffic going in or out. We grew restless with the landscape after watching a roadrunner and lizards scurry around and decided to do more investigation of the surrounding area. We headed east until finding a road that would take us south and perhaps closer to the site.

What drew our attention was the myriad of oil rigs dotting the landscape as far as we could see. We took one of the roads leading to oil wells and determined that it would be possible to get to the WIPP site if we just found the right combination of lanes that connected oil wells like a dot-to-dot game. Our first excursion led to a dead end but our second try, down a road called Mills Ranch Road, led us inward to more oil rig roads and eventually within scary distance of the WIPP buildings. We decided to turn around before being spotted and stopped by security.

Before dark we traversed the whole of the WIPP site via back roads that eventually led us to a secondary entrance, obviously much more traveled than the "main gate" we'd first encountered. It was too dark to take photos so we decided to return the next day for more exploration.

**Wednesday, July 23 (Jerry):** We began the day with a trip to Carlsbad Caverns, 25 miles south of town. The Caverns are the largest network of caves on earth, and we enjoyed a 3 1/2 mile walk underground in 53 degrees Fahrenheit as we marveled at the massive, exquisite mineral formations.

From the caverns we drove to the WIPP Visitor Center at DOE headquarters in Carlsbad. As we read the very expensive, attractive, chipper displays, we were greeted by the PR man, Steve Longchase. Mr. Longchase explained various tech-

nical aspects of the operation at WIPP, and answered questions. He optimistically predicted that groundwater would never reach the barrels of waste -- a situation which surely would result in the rusting of the barrels and the disbursement of radiation into groundwater channels. We were incredulous: the WIPP facility is only some 45 miles from the Caverns, which were formed, and continue to be formed, by the movement of mineral-laden groundwater.

From the Visitor Center we went back to WIPP. Having found the back door the previous evening, we photographed the WIPP site from about 1/4 mile distant. We also learned something new in the daylight: within 2 miles of the facility are multiple lakes of salt-saturated standing water on the desert floor. Whether these pools were fed by underwater springs or generated by nearby salt and potash mining operations, the discovery increased our skepticism that the WIPP facility will be dry and safe for the next 200 million years.

Around 8 p.m., heading north on Route 25 near the juncture with Interstate 40, we saw a truck with three full Trupak casks heading south. We pulled a U-turn and caught the truck, took a bunch of photos and measured 36 Rads per minute off the containers, a higher reading than Bonnie measured two years ago at the Nevada Test Site in a windstorm. A lead shield behind the cab would measurably protect the driver of this truck from a constant dose of radiation, but such a shield would be prohibitively heavy, so the drivers are exposed, hour after hour.

After tailing the truck for 20 miles or so, we made a U-turn and again headed north. Shortly thereafter we saw this truck's running mate, carrying two full casks. With no opportunity to turn around and with our mission fulfilled as it was, we continued to Santa Fe.

**Thursday, July 24 (Bonnie):** Our destination for the day was Denver via the New Mexico Port-of-Entry at Raton. We'd gotten reports of WIPP trucks stacking up at the border as they go through inspection. This proved to be true for us.

We reached Raton in the early afternoon and once again Jerry's eagle-eye spotted a WIPP truck carrying three casks, parked in the lot of the Port-of-Entry. We circled back and pulled into the weigh station. There was no security and we were free to approach the truck. The driver informed us that the truck originated at Rocky Flats. We decided to wait for more to arrive. Within a few minutes a second did indeed drive in. Now we had photos of two trucks parked side-by-side in the lot. It still seems astounding to me that trucks carrying waste laden with plutonium — the most hazardous substance on Earth — would be unguarded. Although anxious to get to Denver we agreed to wait for the third truck. It arrived within 20 minutes or so and we had our cover photo of all three WIPP trucks at the New Mexico border. After the fact I felt disappointed that we didn't ask more questions and ask to see the radiation reports generated from the on-side monitors that all trucks drive through as they enter. There's no doubt that some of the canisters are more contaminated than others.

Perhaps no one will ever know the extent of the environmental damage done as thousands of trucks pass up and down Interstate 25 and Highway 285 in New Mexico. What seemed clear is that with so much waste moving around our country, the nuclear industry has no right to continue producing radioactive waste.

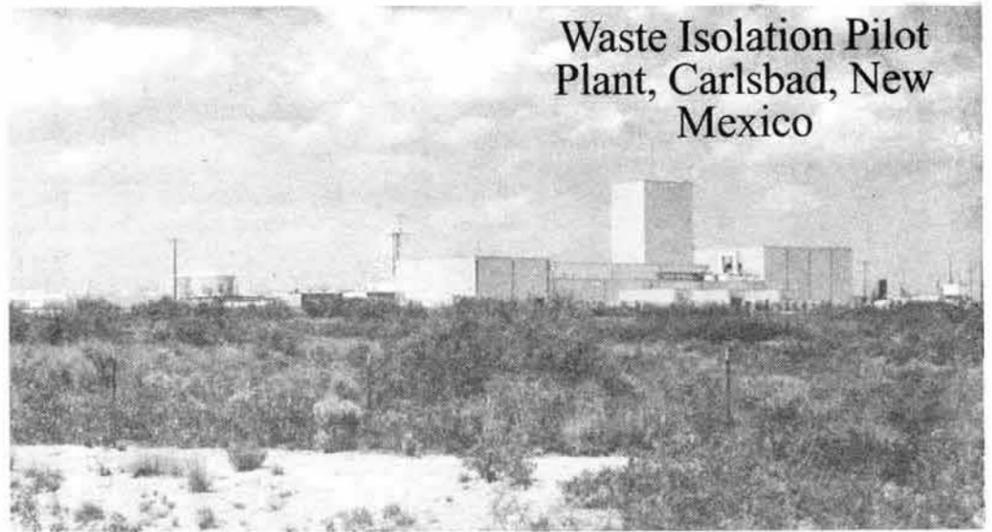
**Conclusion (Molly):** As we began our trip back to Wisconsin, relieved to leave the desert and heat for the more familiar landscape of trees and lakes, we considered the accomplishments of the journey. All three of us had become much more familiar with the WIPP site and its shortcomings. We were able to network with anti-nuclear groups in New Mexico. Most importantly, we carried on the tradition of Nukewatch and set out to observe and report on the timely nuclear issue of waste transportation.

Nuclear reactors throughout the U.S. continue to produce more waste as storage capacity dwindles; a resurgence of nuclear weapons production is on the horizon; cleanup of contaminated sites call for continued removal and relocation of waste. If a permanent repository is opened, thousands of shipments of deadly waste will travel the highways. It will no longer be an issue that only states like New Mexico are forced to deal with.

We can continue to educate and familiarize ourselves with these issues. We can speak and act in opposition to the nuclear industry and its legacy of radioactive waste. And, as more trucks and trains carrying waste are sent through communities throughout the country, we can follow them, observe them, photograph them, and let the industry know that people are watching.

Jerry, Bonnie and I were empowered by the experiences of the trip. Though it was on a very small-scale, we hope to employ what we learned in future truckwatches.

## Waste Isolation Pilot Plant, Carlsbad, New Mexico



Photos by Bonnie Urfer

## Waste Isolation Pilot Plant

By Bonnie Urfer

The Waste Isolation Pilot Plant (WIPP) sits among the oil, gas and potash industry of southeast New Mexico. The 10,000 acre facility, located an hour East of Carlsbad, is being filled with U.S. nuclear weapons waste and military transuranic radioactively contaminated garbage, including powdered plutonium.

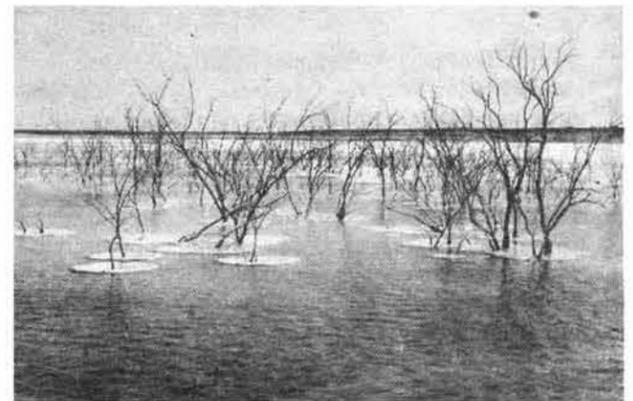
The deadly garbage comes in the form of contaminated gloves, rags, tools, shoe coverings, laboratory equipment and suits, but the vast majority — 60% — is mixed waste. Mixed waste includes radioactive trash and hazardous chemicals, solvents and heavy metals. Most of the shipments to WIPP are contact handled, although some of the containers, due to high levels of radioactivity, must be remotely handled by machine.

More than 40,000 shipments will travel to WIPP in 55-, 85-, and 100-gallon drums, plus another 8,000 canisters of remotely handled waste. There is no end in sight for excavation and dumping at WIPP since the U.S. is planning a new round of nuclear weapons production.

Caverns have been carved out of the salt bed 2,150 feet below ground into which the radioactive waste is stacked in barrels and drums. Citizens Against Radioactive Dumping (CARD) in Albuquerque, New Mexico, reports that brine — salt water — is seeping into the WIPP caverns.

CARD states that, "After eleven other states rejected the WIPP project, in 1978 the old Atomic Energy Commission (precursor to the Department of Energy) made a deal with a failing potash company to buy land and locate WIPP in New Mexico. No geological investigation was held before WIPP was sited."

The southeastern part of New Mexico is one of the largest karst areas in the world. Underground erosion, caverns and tunnels characterize karst formations. These fea-



This photo of a salt lake was taken about two miles from the WIPP site, which contains bore holes, seeping brine, salt water lakes and unpredictable hydrology.

tures are formed as salt is dissolved by water running from the surface and underground. The area around WIPP contains pools of salt water, as seen in the photo above taken just over a mile from WIPP's gate. CARD's research has shown, "...streams of water run underground instead of above ground, dissolving the soft rock and old salt deposits as they flow, making the WIPP site an unsuitable location for permanent disposal of radioactive wastes. Independent earth scientists believe that WIPP will contaminate the nearby Pecos River, used for irrigation and drinking water in the arid lands of west Texas and Mexico, down gradient from the repository."

Oil and gas wells provide access for water, and the industry often floods oil wells to force remaining oil to the surface. Upwards of 30 shafts and boreholes already penetrate below the caverns within the WIPP boundary with more expected in the future. In spite of the corrosive nature of salt and water, the DOE flippantly guarantees that the site will remain effective for 10,000 years. Extensive information on the geology and hydrology of the WIPP site by Dr. Richard Phillips is available on the CARD website: [http://www.cardnm.org/hmtopright\\_a.html](http://www.cardnm.org/hmtopright_a.html).

Shipments to WIPP began in March of 1999 and will continue for the indefinite future.

# Disarmament Specialists Sentenced



Photo by Bonnie Urfer

Sisters Ardeth Platte (L), Jackie Hudson (C) and Carol Gilbert (R) give their sentencing statements outside of the federal courthouse in Denver, Colo., on July 25.

By Susan Crane

On July 25, 2003, Dominican Sisters Carol Gilbert, Ardeth Platte and Jackie Hudson were sentenced in Federal Court in Denver, Colo., for exposing a weapon of mass destruction right here in the USA. On October 6th of 2002, wearing white mop-up suits with "Citizen Weapons Inspection Team" written on the back and "Disarmament Specialists" on the front, the sisters went to N-8, a Minuteman missile silo in northeast Colorado, poured their blood on the cover of the silo in the shape of a cross, hammered on the silo, and opened the fence up so that the public could inspect the weapon of mass destruction they had found.



Photo by Bonnie Urfer

Hundreds of nuclear weapons abolitionists gathered for vigils at 49 silos in Colorado and additional silos in Montana and Wyoming after the Dominican Sisters were sentenced in Denver the previous day. Silo N-8 was the scene of the nuns' symbolic disarmament action for which they were imprisoned.

On the morning of their sentencing, the sisters wore black to be in solidarity with the Women in Black, an international movement of women who stand in silent protest of war and wear black as a symbol of mourning. They gave their sentencing statements, which are usually given in court, in front of the courthouse to a gathering of press and over 300 supporters. Judge Robert Blackburn had not allowed international law or any affirmative defense during the trial. Consequently, the sisters wanted to speak to people who would listen, not to the judge in the courtroom.

The lawyers for the sisters argued that there should be downward departures for acceptance of responsibility. The judge did not grant this, but did give the sisters two downward points for their community service and support, which he said was local, regional, national and international. People who worked in support and sent letters to the judge should know that their efforts made a real difference.

The judge then dropped 6 points for mitigating circumstances — they didn't aid a foreign government, no real harm was done to the national defense, and their action caused no substantial risk of injury or death.

Judge Robert Blackburn imposed sentences: 41 months for Ardeth, 33 months for Carol, 30 months for Jackie. Restitution: \$3,080.04; Special Assessment: \$200; Supervised Release: three years.

Outside the court, we reflected that the sisters should not be in prison for their action. The trial was a railroad, they were guilty neither of Sabotage nor Felony Destruction. The work of the sisters didn't cause damage over \$1,000. And yet, in this country, which is criminally detaining people, criminally destroying the earth, criminally using radioactive weapons, which is the largest bully on the earth, maybe we all should be in prison.

The next day, people went to all 49 silos in Colorado to vigil against the weapons of mass destruction. There were many creative actions at the silos.

Jackie's family, religious from Colorado, and other close friends and supporters went to N-8, the silo that the nuns had begun to convert. We tied banners to the silo fence, and then prayed the liturgy that the nuns used during their action.

Steve Kelly, S.J., offered the Eucharist. There was a healthy tension because we went, uninvited, inside the farmer's fence right up to the silo.

Later, in Stoneham, Colorado, people from most of the 49 silos gathered for celebration, and for the hope of further actions that would lead to the silos being shut down.

#### From Sentencing Statements:

"We know something is very wrong with a system that can incarcerate us for years in prison for inspecting, exposing and symbolically disarming America's Weapons of Mass Destruction.

"We should be acquitted for upholding international laws which this court has deemed unnecessary but which it is bound to enforce under Article 6 of the U.S. Constitution.

"I don't fear going to prison. I don't fear loss of freedom to move about. I don't even fear death. The fear that fills me is not having lived hard enough, deep enough and sweet enough with whatever gifts God has given me."

—Sr. Carol Gilbert, OP

"Well, today is the day. It holds many unknowns as regards the judgments/decisions of Judge Blackburn. Yet it holds many knowns: the continued presence of nuclear weapons — latest figures list the U.S. ownership at 10,455 and a

president in office who has stated publicly that he would use these weapons in violation of multiple treaties, charters, conventions and protocols.

"Millions of people worldwide do not have sufficient food, shelter, education and health care.... We went to N8 to inspect, expose and symbolically disarm one of our 10,455 nuclear weapons and to declare it a crime scene.... We went to the silo site because of a burden of knowledge. We have studied the various treaties declaring the threat to use, and the use of nuclear weapons as illegal. I refer today to the Nuremberg Principles and the Tokyo Tribunal which our government was principally responsible for writing after WWII.

"They declare that: 'Individuals have international duties which transcend the national obligations of obedience.... Therefore [individual citizens] have the duty to violate domestic laws to prevent crimes against peace and humanity from occurring' (Nuremberg War Crime Tribunal, 1950). We brought the evidence to prove that our action was legal. Two eminent international law professors testified on the stand at our motions hearing that what we had done was legal and that we should be released from our jail cells."

—Sr. Jackie Hudson, OP

"Sisters Carol, Jackie and I believe that we had a responsibility to inspect, expose, and symbolically disarm this weapon of mass destruction to avert a crime of our government and uphold the laws of the United States, not break them. Don't people claim today that the citizens of Germany should have blocked the trains carrying people to the crematoriums, dismantled the ovens, or done something to stop the mass murder of people by Hitler?"

—Sr. Ardeth Platte, OP



Photo by Bonnie Urfer

Sara Thomsen performed at the May 2003 "Cultivate Peace" gathering at the Project ELF site in northern Wis-

## Sara Thomsen: Keepin' the Peace

The latest compact disk from Minnesota singer/songwriter Sara Thomsen, *By Breath*, includes an insightful and ironic reflection on the nature of nuclear weapons. "Keepin' the Peace" presents a beautifully simple breakdown of the disarmament actions taken against the ELF/Trident system by Bonnie Urfer and Michael Sprong in June 2000, and by Donna Howard and Tom Hastings in April 1996.

Thomsen's style and vocalization are warm and inviting, holistic and inventive. As the title cut says, "The fire in my heart, my soul flame burning / Is the fire in your heart, your soul flame burning / We are Spirit burning bright, by the light of day, in the dark of night / We are shining like the sun, and like the moon, like the Holy One / By breath, by blood, by body, by spirit, We are all one."

The liner notes with the CD include an explanation of the ELF submarine system and generously acknowledge Nukewatch as the contact for more information.

Thomsen's *By Breath* is available from Common Place Music, 2323 County Road 6, Barnum, MN 55707. For more information: <commonplacemusic@hotmail.com>; www.sarathomsen.com



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# Peace Declaration, August 6, 2003

Tadatoshi Akiba, Mayor, the city of Hiroshima

HIROSHIMA, Japan — This year again, summer's heat reminds us of the blazing hell fire that swept over this very spot fifty-eight years ago. The world without nuclear weapons and beyond war that our *hibakusha*\* have sought for so long appears to be slipping deeper into a thick cover of dark clouds that they fear at any minute could become mushroom clouds spilling black rain.

The nuclear Non-Proliferation Treaty (NPT), the central international agreement guiding the elimination of nuclear weapons, is on the verge of collapse. The chief cause is U.S. nuclear policy that, by openly declaring the possibility of a pre-emptive nuclear first strike and calling for resumed research into mini-nukes and other so-called "usable nuclear weapons," appears to worship nuclear weapons as God.

However, nuclear weapons are not the only problem. Acting as if the United Nations Charter and the Japanese Constitution don't even exist, the world has suddenly veered sharply away from post-war toward pre-war mentality. As the U.S.-U.K.-led war on Iraq made clear, the assertion that war is peace is being trumpeted as truth. Conducted with disregard for the multitudes around the world demanding a peaceful solution through continued UN inspections, this war slaughtered innocent women, children, and the elderly. It destroyed the environment, most notably through radioactive contamination that will be with us for billions of years. And the weapons of mass destruction that served as the excuse for the war have yet to be found.

However, as President Lincoln once said, "You can't fool all the people all the time." Now is the time for us to focus once again on the truth that "Darkness can never be dispelled by darkness, only by light." The rule of power is darkness. The rule of law is light. In the darkness of retaliation, the proper path for human civilization is illumined by the spirit of reconciliation born of the *hibakusha's* determination that "no one else should ever suffer as we did."

Lifting up that light, the aging *hibakusha* are calling for U.S. President George Bush to visit Hiroshima. We all support that call and hereby demand that President Bush, Chairman Kim Jong Il of North Korea, and the leaders of all nuclear-weapon states come to Hiroshima and confront the reality of nuclear war. We must somehow convey to them that nuclear weapons are utterly evil, inhumane and illegal under international law. In the meanwhile, we expect that the facts about Hiroshima and Nagasaki will be shared throughout the world,

and that the Hiroshima-Nagasaki Peace Study Course will be established in ever more colleges and universities.

To strengthen the NPT regime, the city of Hiroshima is calling on all members of the World Conference of Mayors for Peace to take emergency action to promote the abolition of nuclear weapons. Our goal is to gather a strong delegation of mayors representing cities throughout the world to participate in the NPT Review Conference that will take place in New York in 2005, the 60th year after the atomic bombing. In New York, we will lobby national delegates for the start of negotiations at the United Nations on a universal Nuclear Weapons Convention providing for the complete elimination of nuclear weapons.

At the same time, Hiroshima calls on politicians, religious professionals, academics, writers, journalists, teachers, artists, athletes and other leaders with influence. We must establish a climate that immediately confronts even casual comments that appear to approve of nuclear weapons or war. To prevent war and to abolish the absolute evil of nuclear weapons, we must pray, speak, and act to that effect in our daily lives.

The Japanese government, which publicly asserts its status as "the only A-bombed nation," must fulfill the responsibilities that accompany that status, both at home and abroad. Specifically, it must adopt as national precepts the three new non-nuclear principles — allow no production, allow no possession, and allow no use of nuclear weapons anywhere in the world — and work conscientiously toward an Asian nuclear-free zone. It must also provide full support to all *hibakusha* everywhere, including those exposed in "black rain areas" and those who live overseas.

On this 58th August 6, we offer our heartfelt condolences to the souls of all atomic bomb victims, and we renew our pledge to do everything in our power to abolish nuclear weapons and eliminate war altogether by the time we turn this world over to our children.

\**Hibakusha* is the Japanese term for survivors of the atomic bombings.



Photo by John LaForge

Above, Weapons Inspectors prepare to enter Project ELF in northern Wisconsin. Activists with the Chicago based Christian Peacemaker Teams, Loaves and Fishes Catholic Worker Community from Duluth, Minn. and Nukewatch organized the event for August 9. Trespassers include: (Not in order shown) Elizabeth Garcia, Sunrise, Tex.; Sheila Provencher, South Bend, Ind.; Kitty Ufford-Chase, Tucson, Ariz.; Matthew Chandler, Springfield, Or.; Kryss Chupp, Chicago, Ill.; Rose Whiteside, and Haven Whiteside, both of Tampa, Fl.; Mortimer Cushman, LaPoint, Wisc.; Muriel Fitzgerald, Ironwood, Mich.; Catherine McClean, Strathroy, Ontario; Pat Basler, Webster, Wisc.; and Ozone of Duluth, Minn. Corey Chupp, 12, crossed the line but was not cited.

## Citizen Weapons Inspectors Refused Access to Project ELF

CLAM LAKE, Wisc. — Twelve people were cited for trespass and two were jailed overnight after they attempted to conduct a citizens' inspection of the Navy's Project ELF submarine transmitter on Saturday, Aug. 9, the 58th anniversary of the U.S. atomic attack on the Japanese city of Nagasaki.

About 75 people gathered at the remote "extremely low frequency" transmitter to commemorate the Aug. 9, 1945, bombing which killed 70,000 people instantly. In the morning there was a panel discussion that included reports on U.S. plans to design and develop the "mini-nuke" and robust nuclear earth penetrator, the use of depleted uranium in Iraq, and an update from two members of the Christian Peacemaker Team who were recently in Iraq.

The ELF facility, secluded in the Chequamegon National Forest in north central Wisconsin, sends one-way messages to submerged British and U.S. submarines around the world.

Dressed in hardhats and carrying clipboards, the 12 modeled UN inspectors and demanded "unfettered access" to the compound, just as U.S. and UN inspectors demand of other countries suspected of concealing weapons of mass destruction. The group, calling themselves the (U)nited for (N)onviolence Weapons Inspectors, read the following statement of intent to the eight or nine police officials guarding the facility before walking under a wooden gate onto the national forest property: "Given the overwhelming evidence, the Weapons Inspection Team will investigate the scope and specifics of ELF's nuclear weapons activities and demand cessation and termination of those activities pursuant to Article VI of the Nuclear Non-Proliferation Treaty (NPT), which entered into force and became U.S. law in 1970. The NPT's Article VI reads: *Each of the Parties of the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.*"

The Trident submarines that receive ELF messages can carry 192 hydrogen bomb warheads — eight each on 24 missiles. Each warhead can be as much as 38 times the power of the atomic bomb that incinerated Hiroshima. The U.S. maintains 18 Trident submarines.

Elizabeth Garcia and Sheila Provencher were taken into custody and transported to Ashland County Jail for refusing to give their names to arresting officers. They were released the morning of Sunday, Aug. 10, after providing identification. Their overnight jail witness was undertaken in solidarity with the thousands of "nameless" individuals in the world taken into custody and disappeared. Garcia and Provencher were additionally charged with obstructing an officer. All of those cited on August 9 were given arraignment dates of Oct. 14 for federal court in Madison, Wisc.

In other ELF news, an arraignment date of Sept. 18 is set for Bonnie Urfer, who was ticketed at Project ELF on May 10, 2003. Her codefendants were arraigned by telephone July 18 and have been given a trial date of Oct. 24 in federal court in Madison on trespass charges. Urfer pled guilty in the same court phone call, and the judge ordered an appearance in person to accept the plea. It is uncertain whether Bonnie will still plead guilty at that time.

## Current U.S. Nuclear Weapons Arsenal

**The B61** — A "dial-a-yield" weapon, ranging between 100 and 500 kilotons (kt.), and a special low 10 kt. yield. The latest version of this is the earth-penetrator B61-11. Approximately **1500 are still in deployment**;

**W62** — Minuteman III intercontinental ballistic missile (ICBM). **600 are still in deployment**. Two or three W62's can be carried on each Minuteman III missile. Explosive yield is believed to be 170 kt.

**W78** — Minuteman III ICBM, with 2 - 3 warheads on each missile. **900 are still deployed**. Yield believed to be around 335 kt.

**W80** — Warhead for sea-launched cruise missiles from ships and subs. Also adapted for air-launch on B-2 and B-52 bombers. **1,120 still in deployment**. Yield is believed to be around 150 kt.

**B83** — Air Force strategic bomb for use against hardened targets. Up to **950 may still be in deployment**. Yield is believed to be between 1 - 2 megatons.

**W87** — MX ICBM, sadly called "peacekeeper," which can carry up to 12 warheads each. **500 still in deployment**. Yield is 300 kt. and can be increased up to 475 kt.

**W76** — A Trident I missile. Each Trident submarine can carry 24 missiles with eight warheads each. Yield of the W-76 is believed to be around 100 kt. **3,000 are still deployed**.

**W88** — Trident II missile. Yield is 475 kt. Each Trident carries up to 24 Trident II missiles with up to eight independently targeted W88's each. **384 still in deployment**. The W88 is considered to be the U.S.'s most advanced nuclear weapon; its plutonium pit is the first scheduled for resumed stockpile pit production.

**The current nuclear arsenal carries the  
equivalent explosive force of over  
200,000 Hiroshima bombs.**

Source: *Bulletin of the Atomic Scientists*

# "Closed For War Crime Inspections"

By John LaForge

BÜCHEL, Germany — A group of citizen inspectors demanded but were refused entrance to the German Air Force base here Sept. 1. The base is suspected of storing up to ten U.S. Air Force nuclear bombs, which are to be loaded onto German Tornado jet aircraft in the event of nuclear war.

When the self-appointed inspectors were denied "free and unfettered access" to investigate the area for signs of weapons of mass destruction (WMD) — as the U.S. and UK demand of a select number of countries suspected of having nuclear weapons — the group began a peaceful blockade of the three main base entrances.

The blockaders held a large banner, "Hey Blix, They're Here!" referring to UN weapons inspector Hans Blix who failed to find WMD in Iraq prior to the U.S. attack that began last March.

No arrests were made, most likely because of the involvement of dozens of internationals and because of the military's wish to avoid bringing attention to the alleged pres-

## Sellafield Nuclear Dream Dashed

SELLAFIELD, England — *The Guardian* reported on Aug. 26 that Sellafield's Thorp reprocessing operation, a \$1.8 billion project owned and operated by British Nuclear Fuels (BNFL) that opened only nine years ago, is to close by 2010. Thorp, an acronym for thermal oxide reprocessing plant, reprocesses spent fuel to produce plutonium and uranium for potential reuse. It was once hailed as the savior of the British nuclear industry with its promise of producing limitless electricity throughout the 21st century.

Brian Watson, director of the Sellafield site, told the newspaper, "There is £30 billion (US \$19 billion) worth of clean-up work here. We are switching from reprocessing to clean-up. We hope that will be seen in a more positive light."

British Nuclear Fuels denied that any closure announcement had been made, although they acknowledged a shift in focus. A statement said, "Thorp has an order book which currently extends to 2010. Although the focus of the Sellafield site is shifting from commercial reprocessing to clean up and managing the historic legacy, BNFL has made it clear that all existing reprocessing contracts will be honoured.

"Any new business for Thorp will depend upon the wishes of our customers, the Nuclear Decommissioning Authority which will assume ownership of the site in 2005 and ultimately the sanction of government."

BNFL is being changed from the owner of Sellafield into a management company since it became technically bankrupt two years ago with liabilities now estimated at £41 billion (US \$26 billion). The government is creating a Nuclear Decommissioning Authority to take over the assets and liabilities.

There are 75 tons of plutonium and 3,336 tons of uranium recovered from the reprocessing with no obvious use. The plant is being run at 50% capacity because the dangerous liquid waste produced by reprocessing cannot be disposed of fast enough to satisfy safety regulators.

—*The Guardian*, Aug. 26, 2003; *BBC News*, Aug. 26, 2003.

## Hypocrisy in Action — U.S. vs. N. Korea

By Bonnie Urfer

In on-going banter between North Korea and the U.S., North Korea declared it already had a nuclear weapon and threatened to conduct a nuclear test if the United States does not offer a non-aggression treaty. The U.S. refuses such a treaty saying that North Korea first must dismantle its nuclear program. Senator Richard Lugar, chairman of the Senate Foreign Relations Committee, suggested that the Bush administration might use economic sanctions against North Korea if it continues to develop a nuclear weapon.

Six nations gathered in Beijing during the last week of August to discuss the dismantling of North Korea's nuclear weapons program. China joined the talks with the U.S., North Korea, South Korea, Japan and Russia. China sits in a key position because of its long-time alliance with N. Korea and its growing relationship with the U.S. China urged further negotiation when talks became heated and stalled. All agreed to resume the discussion within two months.

Japan feels especially vulnerable to the North Korean threat. Just hours after North Korea announced its intent to test a nuclear weapon, Japan's Defense Ministry asked its Parliament to spend \$1 billion a year through 2007 to build an American-designed missile-defense shield to defend the main cities of the Japanese archipelago.

Japan has been working to develop a space wars system with regular launches from Tanegashima, Japan, and from the U.S., as NASA is helping Japan to launch its space war equipment. With the new plans, Japan — the world's fourth biggest defense spender after the United States, Russia and China — would realign portions of its \$42 billion budget to address the threat from North Korea.

Some members of the Bush administration have argued that North Korea does not intend to stop its nuclear program and are pushing for a tougher approach including sanctions, inspections, interdiction of seaborne cargo, and military ac-

ence of nuclear weapons. Participants came from Germany, Belgium, Sweden, Kurdistan, the UK and USA.

The Sept. 1 action was part of peace demonstrations all across Germany held annually to memorialize the date in 1939 when German forces invaded Poland, beginning the Second World War and eventually ending the lives of 50 million people. It was also the 20th anniversary of the giant blockades of the Mutlagen Air Force Base near here where the U.S. had positioned Pershing II medium-range nuclear missiles during the cold war.

The anti-nuclear movement has employed the citizen inspection campaign across four European countries (Netherlands, Belgium, Germany, Italy) and Turkey, all of which are used by the Pentagon for the "forward deployment" of U.S. nuclear weapons. Since the end of the cold war the United States is the only government that places its nuclear weapons in other countries.

As the ten inspectors and about 20 supporters expected to be turned away, they carried signs that announced, "Closed for War Crimes Inspection." The signs were read by the hundreds of employees who were turned away from the blockaded entrances. The authorities had to open a fourth gate, closed for the past 10 years, for workers and military personnel.

The thwarted inspection came as the last stop of a ten-day-long "Bike-for-Peace" tour by about 30 cyclists that began August 22 in the village of Kaiserslautern. The 300 kilometer tour made protest stops at four U.S. Air Force bases and an Army ammunition depot on the way to Büchel. The cyclists targeted Ramstein Air Force Base (AFB), the 2nd largest U.S. base in Germany, because it is the center of troop deployment for U.S. forces going to Afghanistan and Iraq. The Spengdahlem AFB, where we attempted an informal inspection, is the launching place for the infamous A-10 "Warthog" aircraft that has fired many tons of depleted uranium munitions into Iraq both in 1991 and this past spring. Thirty-millimeter depleted uranium shells are fired by the A-10 at a rate of 60 rounds per second.

Coming on the tail end of the summer-long heat wave that has plagued Europe and ruined as much as 80 percent of the crops in some places, the cyclists enjoyed sunny warm weather for nine of ten days. I was honored to be the only U.S. citizen on the tour and had the chance at several stops to describe anti-war activities across the United States and to thank the Germans and the French for their stalwart opposition to the U.S. war on Iraq. Just as the commercial news industry ignores anti-war activities in the U.S., the German public saw practically no news coverage of the large peace marches that took place in 115 U.S. cities.

Photos of the inspection at Büchel AFB can be seen at the websites of the groups GAAA, German Nonviolent Action for Abolition of Nuclear Weapons, and For Mother Earth.

tion. China, which like the United States has a permanent seat with veto power on the Security Council, has so far strongly resisted the possibility of United Nations sanctions.

The U.S. State Department, under Secretary of State Colin Powell, is being viewed in some parts of the world as pressing for diplomacy efforts to reassure the North Koreans that the U.S. is not seeking a regime change. Secretary of Defense Donald Rumsfeld, however, has reportedly called for joining with Beijing to push for removal of the North Korean government.

George Bush, on January 30, 2002, declared North Korea part of the "Axis of Evil" and trained nuclear warheads in that direction. This was taken by North Korea as a serious infringement on the fundamental spirit of the Nuclear Nonproliferation Treaty (NPT) in which countries possessing nuclear weapons are obliged not to threaten other countries with nuclear weapons or create a state of emergency that endangers the fundamental interests of non-nuclear states. Weapon holding countries are required to exert all efforts to avoid a nuclear war. However, the United States has turned South Korea into the biggest forward nuclear base in the Far East.

A command post exercise by the U.S. has numerous commanders and staff of the U.S. Army, Navy, and Air Force organizing for nuclear war in Asia. Warships and state-of-the-art combat equipment on U.S. bases here, in Guam, Hawaii, Japan, and other areas of Asia and the Pacific have been mobilized. The United States has staged more than 10,000 war exercises since 1999, involving some 20 million troops.

Bush, during his first year in office, doubled the number of war exercises in Asia from those conducted during Clinton's administration.

Global security depends on cooperation and compromise in this complex web of nuclear relationships. The U.S. has been a major hold out for disarmament, with hypocritical plans for a new round of nuclear weapons. If we want peace, let's get on with our disarmament.



Clay Bennett/*The Christian Science Monitor*

## Another Nuclear Submarine Sinks in the Barents Sea

The nuclear age is catching up with itself as yet another Russian nuclear submarine has sunk to the ocean floor with two reactors aboard. This time a 40-year-old, *K-159* submarine sank in the Barents Sea on August 30 as it was being towed to a junkyard for dismantling. Nine crew members died as the submarine submerged in 560 feet of water.

The onboard reactors had been shut down in 1989 but the irradiated fuel rods had never been removed. The *K-159*, a November-class attack submarine, was decommissioned on July 16, 1989.

According to news reports, rough seas battered the aged vessel situated on four floating hulls. Waves ripped the pontoons off as the sub was being towed from its base in the town of Gremikha to Polarnye, 800 miles north of Moscow.

Although the navy insisted that the *K-159*'s nuclear reactors posed no environmental hazard, environmentalists quickly warned of a possible radiation leak that could contaminate the busy fishing area.

This major accident in the Barents Sea follows a similar disaster on August 12, 2000, in which the nuclear powered submarine the *Kursk*, an Oscar II-class vessel, sank with 118 men aboard. The *Kursk* was eventually raised from the Barents Sea floor in October 2001. According to a Navy Spokesman, the *K-159* submarine will also be raised.

Russia has about 200 decommissioned submarines, which clutter harbors and pose an increasing environmental risk. Most of them still have their irradiated fuel on board. Russian scientists say the radiation locked inside the corroding hulls of 122 decommissioned nuclear-powered submarines represents 3,000 times the radiation levels of the A-bomb that destroyed Hiroshima in 1945. Defueling the fleet, placing the fuel in safe interim storage and doing modest environmental clean-up is expected to cost a minimum of \$300-\$400 billion over 30 to 40 years.

The long list of accidents involving Russian nuclear submarines includes the following:

On June 29, 2002, a first generation Echo-II class nuclear submarine, the *Shkval*, fell on its portside in a floating dock during decommissioning at the Polyarny naval shipyard on the Kola Peninsula. The *Shkval* had been floating in dock on keel holders at the naval shipyard when it fell on its side. Luckily the irradiated fuel rods had been removed earlier.

In May of 2002 a *K-192*'s damaged fuel rods were loaded on a train in Polyarny and sent to a reprocessing facility in southern Ural. Yury Vishnevsky, head of Russia's nuclear regulatory agency, reported that upon arrival some parts of the irradiated rods were missing and their location unknown. The fuel rods were removed from the submarine in 2000.

On April 7, 1989, the *K-278 Komsomolets* sank in the Norwegian Sea following a fire. The sub had a reactor and two nuclear warheads aboard. A fire broke out, short-circuiting the electrical system. The fire spread quickly and the submarine lost power and ran out of compressed air. The vessel sank to a depth of 510 feet. Forty-one people were killed.

On October 6, 1986, the nuclear sub *K-219*, equipped with two nuclear reactors and carrying 16 nuclear missiles, sank in the Atlantic Ocean north of Bermuda. An explosion in one of the missile tubes led to a chain of events that resulted in a fire. Four people died.

April 10, 1970, the *K-8* sank in the Bay of Biscay off the coast of Spain. Two fires began simultaneously, tripping the emergency reactor system and leaving the submarine without power. Some crew members were evacuated, but by April 11 the submarine had sunk to 1,418 feet. Fifty-two people died.

# “Depleted” Uranium: War’s Special Effect

## Use of Uranium-238 Weapons Lingers As Health Concern

By Larry Johnson, *Seattle Post-Intelligencer*

BAGHDAD, Iraq — The ideal legacy of the war in Iraq is a free and democratic society, but a sinister legacy of another kind is possible as well — cancers and birth defects.

Depleted uranium weapons were used in populated areas in Iraq.

Although there is no firm consensus, nuclear experts and laymen alike generally agree that depleted uranium, which is toxic as well as radioactive, is at the very least a potential cause of cancers and birth defects. Some Iraqi physicians and others blame depleted uranium weapons used in the 1991 Gulf War for a major increase of cancers and birth defects that occurred a few years later. It is also a prime suspect for the Gulf War Syndrome that has sickened and killed thousands of U.S. veterans.

The Pentagon and United Nations estimate that U.S. and British forces used 1,100 to 2,200 tons of armor-piercing shells made of depleted uranium during attacks in Iraq in March and April — far more than the estimated 375 tons used in the 1991 Gulf War.

U.S. tanks, Bradley fighting machines, A-10 attack jets and Apache helicopters routinely used depleted uranium rounds, but in the recent war, the ammunition was used in and near heavily populated areas, not just in the desert.

There are some studies under way that could shed more light on the effects of depleted uranium, a highly complex and poorly understood subject. Critics say DU shouldn’t be used until the studies have been completed, while supporters, primarily the military, say it is critical to success on the battlefield.

Rep. Jim McDermott, D-Wash., has introduced legislation requiring the U.S. government to conduct studies of DU’s effects on health and the environment, and cleanup of DU contamination in the United States. The bill, co-sponsored by 23 other Democrats, remains in committee.

He said DU may well be associated with increased birth defects.

“We continue to get these sporadic reports of various places where a lot of people are getting sick, and nobody is willing to connect the dots yet,” he said. “I’m afraid we’re going to have a lot of people get sick before they finally admit that depleted uranium really causes a problem for us (U.S. veterans and their families) as well as for the Iraqis.”

After NATO’s use of DU weapons in Kosovo in 1999, the Council of Europe parliamentarians called for a worldwide ban on the manufacture, testing, use and sale of weapons using depleted uranium, asserting that NATO’s use of DU weapons would have “long term effects on health and quality of life in South-East Europe, affecting future generations.” The call went unheeded.

An independent policy analyst on the use and effects of DU, in a June 24 report, was critical of both the British and the Americans for not doing more to protect their troops and civilians from DU in Iraq. But the report held criticism for those on all sides of the DU issue. “What is clear ... is that elements of the U.S. government will manipulate information and even lie about the health of U.S. combat veterans to avoid liability for DU’s health and environmental effects,” said Dan Fahey, who has testified on DU at a number of congressional hearings. “Equally as clear is the willingness of some anti-DU activists to promote theories as fact, fabricate data and manipulate statistics, and exploit the suffering of people to further political or financial interests.”

### ‘A well-established risk’

In June, the *Seattle Post-Intelligencer* conducted tests at six sites from Basra to Baghdad, and found elevated levels of radiation at all of them. One destroyed tank near Baghdad was 1,500 times more radioactive than normal background radiation. Another was 1,400 times more radioactive than background.

To get additional evidence that DU was used on these tanks, the *P-I* used swabs of cloth to gather samples of residue from the blackened bullet holes on two tanks on the outskirts of Baghdad, and from the black ash on a tank in Kut.

Bruce Busby, radiation safety officer for Fred Hutchinson Cancer Research Center in Seattle, analyzed the swabs. Although stressing that far more sophisticated equipment and tests are required to positively identify DU and precisely measure contamination levels, he was able to determine that the swabs had elevated levels of radioactive contamination, consistent with DU. Still, Busby is not convinced it is a severe problem in Iraq. “... Considering all the other hazards those people are exposed to, this is a small risk,” he said.

Others were more alarmed by the *P-I* findings. “... if you found it (DU), it’s possible kids could get it on their hands by playing on tanks, and adults could inhale resuspended dust if salvaging equipment,” Fahey said.

Tedd Weyman, deputy director of the Uranium Medical Centre, an independent research group in Canada and Washington, D.C., was also concerned about DU in Iraq.

“... Alpha emitters — DU is one — are carcinogenic and ... inhalation exposure of low quantities of low-level radioactive material is a well-established risk,” Weyman said. “Externally,

the radioactivity travels a very short distance — centimeters — before fully releasing all its energy and disintegrating. (But) if inhaled and lying adjacent to cells in the body, it is a serious hazard.”

Although the Pentagon has said depleted uranium is the material of choice because its density allows it to slice through heavy tank armor, the Army is currently looking at an alternative. A Florida company, Liquidmetal Technologies, says it can get comparable performance from ammunition using an exotic alloy of tungsten, and if the Army decides to switch, the new rounds could be in service within two years.

The Pentagon has sent mixed signals about the effects of depleted uranium, saying there have been no known health problems associated with the munition. At the same time, the military acknowledges the hazards in an Army training manual, which requires that anyone who comes within 25 meters of any DU-contaminated equipment or terrain wear respiratory and skin protection, and says that “contamination will make food and water unsafe for consumption.”

According to the Army Environmental Policy Institute, holding a spent DU round would expose a person to about 200 mRem per hour. That’s a level of radiation equivalent to receiving eight chest X-rays per hour, said Tom Carpenter, director of the Government Accountability Project’s Nuclear Oversight Campaign. That’s also twice the annual radiation exposure limit allowed by Washington state.

The Environmental Protection Agency Web site says, “There is no firm basis for setting a ‘safe’ level of exposure (to radiation) above background. Most regulatory and advisory bodies around the world (including EPA) assume that any exposure carries some risk and that the risk increases as the exposure increases.”

The April issue of *New Scientist* magazine reported that Alexandra Miller, a radiobiologist with the Armed Forces Radiobiology Research Institute in Bethesda, Maryland, has discovered the first direct evidence that radiation from DU can damage chromosomes. “The chromosomes break, and the fragments reform in a way that results in abnormal joins. Both the breaks and the joins are commonly found in tumor cells,” the article says. The implication is that it could cause cancer.

Miller’s work suggests that the toxic nature of DU, combined with its radioactivity, could produce effects more dire than either of those characteristics acting alone.

“I think that we assumed that we knew everything that we needed to know about uranium. (But) This is something we have to consider now when we think about risk estimates,” the article says.

### Cancer on the rise

Researchers aren’t the only ones concerned. The U.S. and British use of DU during the latest conflict also alarms doctors in Iraq. Cancer had already increased dramatically in southern Iraq. In 1988, 34 people died of cancer; in 1998, 450 died of cancer; in 2001 there were 603 cancer deaths. The rate of birth defects also had risen sharply, according to doctors in Iraq.

Now, doctors in Iraq say, the number of cancers and birth defects may be “devastating.”

“This is the right time for active support to help prevent the catastrophic effects of the bombing,” said Dr. Alim Yacoub, on his last day as dean of the Al Mustansiriya Medical School in Baghdad.

“It is the right time for our U.S. friends to alleviate the consequences of depleted uranium and dirty weapons,” he said.

“If there isn’t a centralized health plan soon, the consequences could be devastating,” said Yacoub, the foremost Iraqi authority on the effects of DU. Yacoub has tracked the rise of cancer in Iraq for years, and places the blame squarely on DU.

“For the past 12 years, we have only been able to watch what’s going on in this country, now it is time for a comprehensive health plan for cleaning up DU and for treating cancer,” he said. Yacoub has carefully preserved his studies and is eager to present them to other researchers. From the cancer ward at the Mother and Child Hospital in Basra, Dr. Janan Ghalib Hassan has also tracked the rise in cancer in Iraq, primarily in the south, for years. It is a phenomena that she also says is most likely caused by the DU used by U.S. forces in the Gulf War in 1991.

“I worked here in this hospital in 1980 and never saw so much cancer, but after 1991, I started to see many more cancer cases,” Hassan said. She said that because the incubation period for cancer is about five years, the effects of the latest war should start showing up in 2008. “I think the number of cancer cases will be as much as 10 times or more higher,” she said. “It is a crime, a crime.”

### Note on “Depleted” Uranium

#### What it is:

Depleted uranium, a highly dense, toxic and radioactive metal, is the byproduct of the process during which fissionable uranium used to make nuclear bombs and reactor fuel is separated from natural uranium. The U.S. uses it for bullets, tank armor and shells.

#### What it does:

Depleted uranium contains the highly toxic U-238 isotope, which has a radioactive half-life of about 4.5 billion years. As U-238 breaks down, an ongoing process, it creates protactinium-234, which radiates potent beta particles that may cause cancer as well as mutations in body cells, that could lead to birth defects.

#### How it spreads:

When a depleted uranium round hits a hard target, as much as 70 percent of the projectile can burn on impact, creating a storm of depleted uranium particles. The toxic residue of this explosion is an extremely fine insoluble uranium dust that can be spread by the wind, inhaled, ingested, absorbed into the human body and absorbed by plants and animals, becoming part of the food chain. Once in the soil, it can pollute the environment and create up to a hundredfold increase in uranium levels in ground water, according to the U.N. Environmental Program.

## Some U.S. Government Documentation of DU’s Harmful Effects

\* A 1984 memo warns Federal Aeronautics Administration crash site investigators, “If particles are inhaled or ingested, they can be chemically toxic and cause a significant and long-lasting irradiation of internal tissue.” Still in effect today, this 17-year-old FAA advisory bulletin puts the lie to industry, Pentagon, UK and NATO denials of health risks associated with DU exposure. (*Avoiding or Minimizing Encounters With Aircraft Equipped With Depleted Uranium Balance Weights During Accident Investigations*, FAA Advisory Circular 20-123, M.C. Beard, Dec. 20, 1984.)

\* “Not only the people in the immediate vicinity (emergency and fire fighting personnel) but also people at distances downwind from the fire are faced with potential over exposure to air borne uranium dust.” (*U.S. Army Mobility Equipment, Research & Development Command*, March 7, 1979.)

\* “The radiation dose to critical organs depends upon the amount of time that depleted uranium resides in the organs. When this value is known or estimated, cancer and hereditary risk estimates can be determined.” Depleted uranium has the potential to generate “significant medical consequences” if it enters the body. (*U.S. Army Environmental Policy Institute*, June 1995 report to Congress.)

\* In animal studies, embedded DU, unlike most metals, dissolves and spreads throughout the body depositing in organs like the spleen and the brain, and a pregnant female rat will pass DU along to a developing fetus. (*Armed Forces Radiobiology Research Institute*, Bethesda, Maryland, quoted in *The Nation* magazine, May 26, 1997.)

\* Depleted uranium is a “low level alpha radiation emitter, which is linked to cancer when exposures are internal, [and] chemical toxicity causing kidney damage.” The U.S. Army Armaments, Munitions and Chemical Command’s radiological task group has said that “long term effects of low doses [of DU] have been implicated in cancer...there is no dose so low that the probability of effect is zero.” (*U.S. Army Armaments, Munitions and Chemical Command*, July 1990, quoted in *The Nation* magazine, May 26, 1997.)

\* “When soldiers inhale or ingest DU dust, they incur a potential increase in cancer risk. The magnitude of that increase can be quantified (in terms of projected days of life lost) if the DU intake is known (or can be estimated) ... Expected physiological effects from exposure to DU dust include possible increased risk of cancer (lung or bone) and kidney damage.” (*Letter, Col. Robert G. Claypool of the U.S. Army Surgeon General’s Office*, August 16, 1993.)

\* Depleted uranium “Increased risk of lung carcinoma and chemical toxicity to kidney. Hazardous decomposition products ... Decay products of U-238, U-235, and U-234 are radioactive also.” (*Health Hazards Data*, in the *Materials Safety Data Sheet* from the U.S. Department of Labor/OSHA.)

Source: Case Narrative: Depleted Uranium (DU) Exposures, 2nd Edition, July 2, 1998, National Gulf War Resource Center, Inc., by Dan Fahey.



Photo: *The Ecologist*, March 2003

# Wars of Mass Deception: What the Pentagon Does

By Frida Berrigan, *In These Times*

In the weeks leading up to the war on Iraq, TV screens across America were crowded with images of U.S. soldiers readying for upcoming battles with a crazed dictator who would stop at nothing. One clip after another showed U.S. soldiers racing to don \$211 suits designed to protect them from the chemical and biological attacks they would surely suffer on the road to ousting Saddam Hussein.

But these grim forecasts were wrong. Despite the advance hype, Hussein's dreaded arsenal was not the biggest threat to Americans on the battlefield in Iraq. In fact, it was no threat at all.

The real threat — not only to U.S. troops but to Iraqis as well — may prove to be a weapon scarcely mentioned before, during or after the war: depleted uranium.

A toxic and radioactive substance, depleted uranium (DU) — otherwise known as Uranium 238 — was widely used by U.S. troops as their Abrams battle tanks and A-10 Warthogs thundered through Iraq this spring.

Depleted uranium is a by-product of enriched uranium, the fissile material in nuclear weapons. It is pyrophoric, burning spontaneously on impact. That, along with its extreme density, makes depleted uranium munitions the Pentagon's ideal choice for penetrating an enemy's tank armor or reinforced bunkers.

When a DU shell hits its target, it burns, losing anywhere from 40 to 70 percent of its mass and dispersing a fine dust that can be carried long distances by winds or absorbed directly into the soil and groundwater.

Depleted uranium's radioactive and toxic residue has been linked to birth defects, cancers, the Gulf War Syndrome, and environmental damage.

But the Pentagon insists depleted uranium is both safe and necessary, saying it is a "superior armor [and] a superior munition that we will continue to use." Pentagon officials say that the health and environmental risks of DU use are outweighed by its military advantages. But to retain the right to use and manufacture DU weaponry and armor, the Pentagon has to actively ignore and deny the risks that depleted uranium poses to human health and environment.

To keep depleted uranium at the top of its weapons list, the Pentagon has distorted research that demonstrates how DU dust can work its way into the human body, potentially posing a grave health risk. According to a 1998 report by the Agency for Toxic Substances and Disease Registry, the inhalation of DU particles can lead to symptoms such as fatigue, shortness of breath, lymphatic problems, bronchial complaints, weight loss, and an unsteady gait — symptoms that match those of sick veterans of the Gulf and Balkan wars. Dr. Rosalie Bertell, a Canadian epidemiologist, released a study in 1999 revealing that depleted uranium can stay in the lungs for up to two years. "When the dust is breathed in, it passes through the walls of the lung and into the blood, circulating through the whole body," she wrote. Bertell concluded that exposure to depleted uranium, especially when inhaled, "represents a serious risk of damaged immune systems and fatal cancers."

The Pentagon has to cloak this dangerous weapon in deceptive and innocuous language. The adjective "depleted," with its connotation that the substance is nonthreatening or diminished in strength, is misleading. While depleted uranium is not as radioactive and dangerous as U235 — a person would not get sick merely from brief DU exposure — depleted uranium has a half-life of 4.5 billion years (as long as the solar system has existed) and may pose serious health risks and environmental contamination.

## Don't Believe the Hype: Propaganda Wars

As the U.S. military prepared to launch a new offensive against Iraq early this year, the Pentagon and White House embarked on a parallel effort to promote depleted uranium as a highly effective weapon that would protect the lives of innocent Iraqis. At the same time, the Iraqi government sought to exploit the use of depleted uranium and the serious public health concerns about its use in its propaganda war against the United States.

At a March 14 Pentagon briefing, Col. James Naughton of the U.S. Army announced that U.S. forces had decided to employ DU munitions in the looming war on Iraq. When asked about depleted uranium's possible effects on civilians, Naughton characterized opposition to the use of DU weapons as a product of propaganda and cowardice. "Why do [the Iraqis] want [depleted uranium] to go away?" he asked. "They want it to go away because we kicked the crap out of them [in the first Gulf War]."

The White House echoed Naughton's sentiment, rejecting reports linking depleted uranium to birth defects and cancers in Iraq. Early this year the White House released a report titled *Apparatus of Lies: Saddam's Disinformation and Propaganda 1990-2003*, which includes a section on "The Depleted Uranium Scare." In it, the White House accuses the Iraqi government of launching a "disinformation campaign" that uses "horrific pictures of children with birth defects" as a tool to "take advantage of an established international network of antinuclear activists." Iraq's aim, the report charged, was to promote the "false claim that the depleted uranium rounds fired by coalition forces have caused cancers and birth defects in Iraq."

But few anti-DU activists say that depleted uranium is the sole cause of cancer and birth defects. Rather, they contend there is an obvious link between depleted uranium and other toxins released into the environment during the 1991 Gulf War, that independent study is now required, and, in the meantime, that the United States should declare a moratorium on any future use of depleted uranium.

## Depleted Uranium Use Increasing

Over the past 15 years, the Pentagon has become increasingly dependent on DU weapons and armor. The 1991 Gulf War was the first major conflict in which DU weaponry and armor were used. Almost 320 tons — an amount equal to the weight of five Abrams battle tanks — were fired in the Iraqi desert. About 10 tons of DU munitions were used in Kosovo and the former Yugoslavia in the '90s. DU weaponry was reportedly used in Afghanistan in 2001 as well, but reliable estimates are not yet available.

Depleted uranium was used extensively in this year's war on Iraq, but if Pentagon officials have an accurate accounting of total DU use, they are keeping that number to themselves. In a May 15 article in the *Christian Science Monitor*, reporter Scott Peterson wrote that after the war, the Pentagon, when pressed by reporters, announced that about 75 tons of DU munitions were fired from A-10 Warthogs. However, the Pentagon has stalled on releasing additional relevant data on how much depleted uranium was fired from Abrams battle tanks — the other system that uses only DU munitions. More importantly, it has not addressed concerns that DU weaponry was used much more extensively in Iraq's urban and densely populated areas in the 2003 war than in 1991.

The use of DU weapons in urban areas and against civilian targets in Iraq gives lie to the Pentagon's insistence that it needed the DU advantage in order to win the recent war quickly. To illustrate the power of this wonder weapon, a March Pentagon press conference prominently featured pictures from the first Gulf War of an Abrams tank firing a DU munition through a sand dune to destroy an Iraqi tank hidden behind. While this makes good TV, did depleted uranium really provide a critical advantage to the U.S. military in Iraq? The answer is no. The U.S. military did not need a wonder weapon in Iraq because the crippled country was not a wonder opponent. Its arsenal was antiquated and had been poorly maintained since the first Gulf War. Suffering under more than 12 years of U.N. economic sanctions, moreover, Iraq had not been able to develop or purchase comparable high-tech armored weaponry.

Source: *The Ecologist*, March 2003

## DU NUMBERS

70	Percentage of a DU penetrator rod that burns and oxidizes into extremely small, easily inhaled particles during impact.
900-3,400	Grams of uranium oxide particles created by the impact of one 120-millimetre DU penetrator fired from a U.S. Abrams tank.
67	Percentage of children in a Gulf War veterans community in Mississippi born either without eyes, ears or brain, or with thyroid or other organ malformations.
700,000	Gulf War veterans estimated to be suffering from illnesses related to the conflict.
0	\$ paid to veterans in compensation.
10	Factor by which cancer cases have increased in Iraq since the Gulf War.
0	Days the US and UK military spent decontaminating the war zone in the aftermath of the 1991 Gulf War.

Source: *The Ecologist*, March 2003

## HUMAN RIGHTS

A sub-commission of the UN Human Rights Commission resolved in 1996 that DU is a weapon of mass destruction that should be banned.

Four reasons why using DU rounds violates the UN Convention on Human Rights

**1. Rule: The effects of using a weapon must be limited in territory to the actual field of combat.**

Using a DU round generates minute particles that can migrate beyond the battleground to cause harm in neighboring areas or even in non-combatant countries.

**2. Rule: Weapons must not continue to harm or kill after the war has ended.**

The health damage that results from DU continues for some years after the war has ended and can even affect coming generations through congenital defects, etc.

**3. Rule: Weapons must not be unduly inhumane.**

Many non-combatants in the southern part of Iraq, especially innocent children, are suffering from leukemia and other illnesses. Radiation and toxic chemicals are affecting the next generation as well.

**4. Rule: Weapons must not cause long-lasting, widespread environmental damage.**

The use of DU rounds contaminates the ground, the atmosphere and water, as well as negatively affecting the ecology of plants, etc.

Source: *The Ecologist*, March 2003

hog strafing the Iraqi Ministry of Planning in downtown Baghdad. This was not an armored target; it was a building in a heavily populated neighborhood. Peterson visited the area and found "dozens of spent radioactive DU rounds, and distinctive aluminum casings with two white bands, that drilled into the tile and concrete rear of the building."

The indiscriminate use of DU munitions in densely populated areas throughout Iraq, which put large numbers of civilians in jeopardy of radioactive and toxic exposure, violates the Geneva Convention's protocol prohibiting the use of weapons that do not distinguish between soldiers and civilians during wartime.

So why did the Pentagon insist on using DU weapons in Iraq? Tungsten alloys would have worked as well. Depleted uranium, it turns out, has one tremendous advantage over tungsten: It is provided to weapons manufacturers nearly free of charge by the U.S. government — an ingenious method of radioactive waste disposal. Essentially, depleted uranium is the waste left over from decades of nuclear weapons development. In fact, the United States has stockpiles of depleted uranium scattered at sites throughout the country — 728,000 metric tons to be exact — a tiny fraction of which is used in the manufacture of depleted uranium warheads.

## Lies and Silence

In an April 14 video address, President Bush spoke directly to military personnel and their families, thanking them for their role in the Iraq war. The monuments to Hussein had been toppled in Baghdad, and the first troops were beginning to return home triumphant. The message, broadcast on armed services networks around the country and beamed to troops on the Iraq battlefield, included Bush's promise that veterans of "Operation Iraqi Freedom" would receive "the full support of our government. We will keep our commitment to improving the quality of life for our military families."

The same day, the Defense Department and the Centers for Disease Control released the results of their four-year study on birth defects in the children of Gulf War Veterans. Although the study did not mention depleted uranium specifically, it found a "significantly higher prevalence" of heart and kidney birth defects in veterans' children. Unfortunately, the study's disturbing findings were not reported by any U.S. media outlets until June.

The Pentagon and White House propaganda on depleted uranium was never challenged by the mainstream media this past spring. If members of the national press corps had done their homework, they would have found ample evidence that the Pentagon is fully aware of the dangers posed by DU weaponry and is actively ignoring its own research and warnings.

A 1974 military report evaluated the medical and environmental effects of depleted uranium, noting that "in combat situations involving the widespread use of DU munitions, the potential for inhalation, ingestion, or implantation of DU compounds may be locally significant." This contradicts recent Pentagon claims that depleted uranium does not pose a threat and demonstrates the military's understanding of how

# Don't Want Us to Know About "Depleted" Uranium

depleted uranium is absorbed into the human body, posing risks to organs.

In a 1998 training manual, the U.S. Army acknowledged the hazards of depleted uranium, requiring that anyone who comes within 25 meters of DU-contaminated equipment or terrain wear respiratory and skin protection. The manual cautioned: "Contamination will make food and water unsafe for consumption."

And in November 1999, NATO sent its commanders the following warning: "Inhalation of insoluble depleted uranium dust particles has been associated with long-term health effects, including cancers and birth defects."

## They Hid It Well

The fact that these reports are in the public record is the result of years of hard work, study, and Freedom of Information Act (FOIA) requests by anti-DU activists. The Pentagon and Bush administration have also been hard at work. In the past two years, they have clamped down on sources of information that had been immensely valuable to service personnel and their families over the past decade.

Dan Fahey served in the United States Navy just months after the fighting ended in the Gulf War. Seeing the havoc the war wreaked on his fellow veterans, he set out to become an independent expert on depleted uranium. He sits on the board of Veterans for Common Sense and has played a major role in obtaining U.S. government documents about depleted uranium through FOIA.

Fahey says that, under President Bush, the Department of Defense is controlling the release of information about depleted uranium so tightly that if he were starting his research and disclosure efforts today, he would be unable to get any information through the Freedom of Information Act. "There is less information and more secrecy," he says. "There are tighter restrictions on access to information."

Fahey was responsible for publicizing the findings of a July 1990 report by Science Applications International Corporation (SAIC), a defense contractor commissioned by the Pentagon to study depleted uranium.

The report revealed that the Pentagon knew that depleted uranium was harmful before 1991, when they sent 697,000 American troops to the Gulf, where they could be exposed to DU dust and residue. SAIC asserted that depleted uranium is "a low-level alpha radiation emitter" that could be "linked to

The Pentagon says more study is needed. But veterans of the Gulf War, meanwhile, need medical care, information, and benefits, and for the Pentagon to come clean about depleted uranium. The veterans had been exposed to a "toxic soup" of smoke from oil and chemical fires, pesticides, vaccinations, depleted uranium and, most likely, plutonium.

Two types of depleted uranium exist. One is "clean" depleted uranium, a by-product of the processing of uranium ore into uranium-235 (which is used in nuclear fuel and weapons). The other type is created at government facilities as a by-product of reprocessing irradiated nuclear fuel (done to extract plutonium for nuclear warheads) and is known as "dirty" depleted uranium because it contains highly toxic plutonium.

In November 2000, U.N. researchers examined 11 sites in Kosovo hit by DU shells and found radioactive contamination at eight of them. Furthermore, those tests uncovered evidence that at least some of the DU munitions in the U.S. arsenal used in Kosovo contained "dirty" depleted uranium. This raises the question: How much of its plutonium-processing waste did the U.S. government supply to weapons manufacturers?

If some of the DU shells in the U.S. arsenal have been made from dirty depleted uranium, that could help explain why about 300 of 5,000 refugees from a Sarajevo suburb heavily bombed by NATO jets in 1995 had died of cancer by early 2001. And it could also help explain the fact that 28 percent of veterans who served in the first Gulf War have over the past 12 years sought treatment for illness and disease resulting from their military service and filed claims with the Veterans Administration for medical and compensation benefits. In all, 186,000 veterans of that war have sought treatment for a collection of maladies including chronic fatigue, joint and muscle pain, memory loss, reproductive problems, depression, and gastrointestinal disorders. Together these ailments are known as the Gulf War Syndrome.

Based on the struggles of Gulf War veterans, Congress passed a law in 1997 requiring the Pentagon to conduct pre- and postdeployment medical screenings of troops and military personnel so that medical professionals would have an accurate base of information if health problems developed. In the early months of this year, as U.S. troops were being deployed to Iraq, lawmakers found that the Pentagon was not complying with the 1997 law: The troops were not being screened at all.

According to Steven Robinson, a former Army Ranger who now directs the National Gulf War Resource Center, it took two congressional hearings, 30 news interviews, 60 radio interviews, and a timely *New York Times* ad courtesy of <www.TomPaine.com> to pressure the Pentagon to follow the law. On April 29, the Pentagon announced it would begin conducting post-deployment examinations. Anti-DU activists say the military's grudging compliance is too little, too late.

Activists are struggling for treatment of veterans, for information about depleted uranium and other toxins that could be responsible for the Gulf War Syndrome, and for some sort of government acknowledgment or apology. But they are also battling against a legacy of lies, secrecy, and official promotion of an ends-justifies-the-means posture. Veterans with Gulf War Syndrome can be seen as the latest in a long line of Pentagon guinea pigs that includes the troops ordered to witness the atomic blasts in the early days of the Cold War, soldiers exposed to Agent Orange in Vietnam, and the black men in Tuskegee, Alabama, who were subjected to federal government-sponsored syphilis experiments.

## Keeps on Killing

If the Pentagon and the Federal government can treat American troops and their families with such casual disregard and use doublespeak with such abandon, what hope is there for Iraqi civilians and troops?

The people of Iraq have known nothing but decades of war, deprivation, and oppression. It is understandable that many cheered when the statues of dictator Saddam Hussein toppled. At the same time, how could they greet the United States, their liberators, with anything other than the deepest skepticism?

In his just-released book *The New Rulers of the World*, Australian journalist John Pilger recounts conversations with Iraqi doctors like Jawad Al-Ali, a cancer specialist in Basra. Before the Gulf War, Dr. Al-Ali told Pilger, "We had only three or four deaths in a month from cancer. Now it's 30 to 35 patients dying every month, and that's just in my department. That is a 12-fold increase in cancer mortality. Our studies indicate that 40 to 48 percent of the population in this area will get cancer. That's almost half the population."

Not only are Dr. Al-Ali's patients suffering, but his own family members are ill as well. "Most of my own family now

have cancer, and we have no history of the disease," he told Pilger. "We strongly suspect depleted uranium."

The public has had to rely on anecdotal evidence like Dr. Al-Ali's testimony to get a sense of the health crisis in Iraq. Throughout the '90s, Hussein's government released data on cancer and birth defects, but it is unlikely that those figures provide an accurate picture.

Kathy Kelly, director of the Chicago-based Voices in the Wilderness and three-time nominee for the Nobel Peace Prize, has visited Iraq repeatedly since the first Gulf War and has built strong relationships with doctors and nurses there. She recounted a day she spent in a pediatric hospital in November 1998. "Four babies were born that day with deformities. I was shocked, but the doctors said, 'This is not unusual.'"

"So, I asked them," she continues, "'Did you know where the mothers were when they conceived? Were their fathers involved in the war? Were they in an area exposed to depleted uranium?'"

"One of the doctors replied, 'All of these questions are very important, and we need to be collecting this data, but we cannot. Let me show you something.' And she showed me a prescription for a baby that was written on the back of a candy wrapper. Because of the effects of the economic sanctions, they did not even have paper to write prescriptions on."

There is an overwhelming need for medical research in Iraq, but it is impossible to initiate within the context of the pressing health needs and the lack of medical supplies and equipment that constitute the fallout of war. This situation allows the U.S. military to continue insisting that there is no proof that DU exposures lead to cancers. "No proof of harm is not proof of no harm," Richard Clapp, an epidemiologist at Boston University, told the *San Francisco Chronicle*. "The potential for a DU-cancer link (especially lung cancer in those who breathe depleted uranium through dust and smoke particles) is still an open question."

Rep. Jim McDermott, a doctor from Washington State, traveled to Iraq in the fall of 2002. He visited hospitals, speaking with his peers, and saw the hospital beds crowded with the dying. He returned to the United States adamantly opposed to a new war in Iraq and deeply committed to challenging the continued use of depleted uranium. McDermott drafted legislation requiring studies of the health and environmental impact of depleted uranium. His bill, introduced just as the war started this past spring, is cosponsored by a number of other Democrats but needs wider support.

Clearly, this legislation, if passed, would be an important first step in understanding the long-term effects of depleted uranium.

German Chancellor Gerhard Schröder has called for an outright ban on shells made from depleted uranium. That would indeed be another sensible place to start.

In addition, anti-DU activists Dan Fahey, Steve Robinson, and Kathy Kelly should be encouraged and financially supported in their ongoing efforts to compile data and release their findings to the public. Next, manufacturers of DU weapons — like the Minnesota-based Alliant Techsystems, which built 15 million DU shells for the A-10 Warthog — should be held accountable for the long-term effects of their "products."

Finally, we might take up Yugoslavian President Vojislav Kostunica's suggestion: "We should be discussing the depleted conscience of those who used the notorious depleted uranium."

Only then will the cycle of deception and silence about depleted uranium be broken.

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Wearing heavy protective gear, workers at Alliant Techsystems in Minnesota, the number one DU munition assembler, attempt uranium decontamination. Meanwhile Pentagon spokesman Lt. Col. David Lapan, in an interview with the BBC Online, said, "I don't believe we have any plans for a DU clean-up in Iraq." Lapan claimed that, "One thing we've found ... is that there are no long-term effects from DU." The May 15 *Christian Science Monitor* reported that the Pentagon, under pressure, admitted that about 75 tons of DU munitions were fired into Iraq from

cancer when exposures are internal." The report further warned, "DU exposures to soldiers on the battlefield could be significant, with potential radiological and toxicological effects." In addition the report found that "short-term effects of high doses [of depleted uranium] can result in death, while long-term effects of low doses have been implicated in cancer."

SAIC says in its report that widespread knowledge of depleted uranium's harmful properties could lead to public outrage about the "acceptability of the continued use of DU kinetic energy penetrators for military applications." That's what worries the Pentagon.

All the while, as the Pentagon hides behind claims that more study is needed to prove depleted uranium's connection with the ailments suffered by Gulf War veterans and Iraqi civilians, their own research demonstrates that, at best, depleted uranium is radioactive and toxic — and that at worst, it can lead to incurable diseases and death.

## Veterans Suffer

## UK GOVERNMENT AWARE OF DANGERS

The quotes below are taken from an unpublished report by UK Ministry of Defense medical experts dated March 1997:

1 — "Inhalation of insoluble uranium dioxide dust will lead to accumulation in the lungs with very slow clearance — if any."

2 — "Although chemical toxicity is low, there may be localized radiation damage of the lung leading to cancer."

3 — "First and foremost, the risk of occupational exposure by inhalation must be reduced."

4 — "All personnel ... should be aware that uranium dust inhalation carries a long-term risk ... [The dust] has been shown to increase the risks of developing lung, lymph and brain cancers."

Source: *The Ecologist*, March 2003

# Pu in the DU

By John LaForge

An uproar of indignation rose across Europe in December 2000 after Italian soldiers and others died of cancer following their peacekeeping service in the Balkans. Fingers were pointed at the U.S. for its use of some 10,800 "depleted" uranium shells in its 1994-95 bombardment of Bosnia, and another 31,000 rounds it shot into Kosovo in 1999.

The Pentagon said in February 2001 that the DU shells used in the bombardment of Kosovo were tainted with traces of plutonium (PU), neptunium and americium — byproducts of reactor operations that are far more radioactive than the uranium-238 used in the infamous "DU" armor-piercing shells and tank armor.

Assistant Secretary for Environment, Safety and Health at the Department of Energy, Dr. David Michaels, replied to the Military Toxics Project's Tara Thornton in a January 20, 2000 letter on the subject. Thornton asked him: "What measures are in place now to assure that depleted uranium metal does not contain plutonium?"

Dr. Michaels replied, "One may normally expect that depleted uranium contains a trace amount of plutonium. ... We have initiated a project to characterize the level of transuranics in the various depleted uranium inventories. Results from this project should be available in June 2000."

In January 2001, the Swiss Federal Institute of Technology discovered traces of uranium-236 in the DU used against Serbia. This led to the Pentagon's February 2001 admission, and the understanding that the uranium in DU was not only left from uranium enrichment, and "less radioactive than natural uranium," as the Pentagon is fond of saying, but that some had come from "recycled" reactor-burned uranium used for plutonium extraction at some of the most radioactively contaminated places on earth, specifically Hanford, Washington.

As Pierre Roussel, a physicist at the National Center for Scientific Research in Paris, has said, "The problem is that this isotope [U-236] can only be produced in a reactor, where it is accompanied by far more radioactive elements."

Dr. Asaf Durakovic, a retired U.S. Army Col., has studied veterans of the 1991 Persian Gulf War, and found U-236 in 67 percent of the sick veterans he examined. Dr. Durakovic has since established the Uranium Medical Research Center in Toronto and Washington, DC.

Although the Pentagon and NATO continue to downplay the dangers from what they call "mere traces" of plutonium — one millionth of a gram can cause cancer — former DOE official Robert Alvarez says, "They really don't have reasonable estimates of how much [plutonium] (contamination) was in a lot of this recycled uranium. It could range ... to relatively high levels."

And Jean-Francois Lacronique, director of the National Radiation Protection Agency in France, said, "We now have the duty to find out if other contaminants from burnt fuel are present like plutonium or americium, which are much more harmful."

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Here is a sample of what scientific experts, authors and journalists have reported about highly radioactive fission products and transuranics, their deadly properties and their presence in DU shells and tank armor.

In the Feb. 2, 2003, *Science for Democratic Action*, Dr. Arjun Makhijani, President of the Institute for Environmental and Energy Research, writes that, "DU derived from recycled uranium (i.e., uranium that has been irradiated in a reactor) contains small amounts of some fission products (notably technetium-99) and some transuranic radionuclides (like americium-241 and plutonium). These may cause a significant contribution to the total dose to workers during processing of the DU into metal. Most of these impurities would be removed during processing and therefore, in general, tend not [to] be present in significant amounts (relative to total uranium radioactivity) in finished munitions."

In his book *Plutonium: Deadly Gold of the Nuclear Age* (International Physicians Press, 1992), Dr. Makhijani says, "A safe conclusion is that plutonium is probably the most carcinogenic substance known. Exposure to this nuclear poison must be prevented. ... Colonel Stafford Warren called it 'the most poisonous chemical known.' ... Warren's comment has particular relevance with respect to chromosomal damage and cancer. ...

"Over the decades, medical estimates of the dangers of internal alpha exposure have increased with more research. ... The International Commission on Radiation Protection has recommended that this [the 'relative biological effectiveness' or RBE] be increased [from 10] to 20. Very recent research has heightened concern that the true biological damage of alpha radiation may be even higher. ...

"In workers who accidentally inhaled plutonium-238 oxide in an insoluble matrix, plutonium was observed to appear in urine within six weeks of exposure, and then remained measurable in urine for years."

Helen Caldicott writes in her autobiography *A Desperate Passion* (Norton, 1997), "[T]he element that really scared me was plutonium. Not only was its half life 24,400 years, but only one-millionth of a gram caused cancer."

In *Nuclear Madness*, Dr. Caldicott wrote, "It is so toxic that ... [o]ne pound, if uniformly distributed, could hypothetically induce lung cancer in every person on earth."

Dr. Chris Busby, Scientific Secretary of European Committee on Radiation Risks, in his book *Wings of Death* (Green Audit, 1995), says, "An alpha decay from an atom of plutonium has a range in tissue of about a millimeter, but the energy deposited is so large that most cells in the particle's path are smashed to pieces." (emphasis added)

Robert Alvarez, the former DOE official, reported in the *Nation* April 9, 2001, "From the early 1950s through the 1970s, some 150,000 tons of uranium, containing plutonium-239 and larger amounts of ... dangerous neptunium-237, were recycled from nuclear-weapons production reactors and processed at the three gaseous-diffusion plants. This material also went throughout the DOE nuclear weapons production complex in several states, and some apparently found its way to the Persian Gulf and Balkans battlefields." (The government has admitted only that plutonium-spiked DU was used in Kosovo and in some tank armor.)

In *USA Today*, Peter Eisler reported that: "Tiny particles of plutonium, neptunium, technetium and other dangerous isotopes contained in the recovered material didn't add significantly to the radiation that would be expected from natural uranium, scientists reasoned. For the next 50 years, as the weapons program shipped thousands of tons of recycled uranium around the world, officials rarely even measured the contaminants." (Emphasis added)

"Now a *USA Today* review of new data from those studies reveals that recycled uranium circulated far more widely than first believed....

"The studies, released quietly this spring [2001], show that more than 250,000 tons of tainted uranium circulated among hundreds of government plants, private manufacturers and university labs. ...

"Some ... plants ... performed work that concentrated contaminants at dangerous levels.

"A dozen or more facilities beyond those initially identified appear to have processed the uranium in ways that concentrated its highly radioactive contaminants."

Health physicist Dr. Donald P. Geesaman, formerly of Lawrence Livermore Lab, has said, "Plutonium is a fuel that is toxic beyond human experience. It is demonstrably carcinogenic to animals in microgram quantities [one millionth of a gram]. The lung cancer risk is unknown to orders of magnitude. Present plutonium standards are certainly irrelevant."

In *Multiple Exposures* (Harper & Row, 1989), author Catherine Caufield says, "Like radium, plutonium is a bone-seeker, but rather than spreading throughout the bone, plutonium tends to settle on the surface, near the blood-forming bone marrow. ... a condition for which there is no remedy. ... Once plutonium has settled in the body, it remains there, continuing to irradiate the surrounding tissues long after the person has died." Robert Stone, chairman of the Department of Radiology at the University of California Medical School in San Francisco, came to "insist that 'the only amount of product [plutonium] that should be inhaled is none at all.'"

Dr. Rosalie Bertell, in her book *No Immediate Danger* (Women's Press, 1985), says, "Plutonium is biologically and chemically attracted to bone as is the naturally occurring radioactive chemical radium. However, plutonium clumps on the surface of bone, delivering a concentrated dose of alpha radiation to surrounding cells, whereas radium diffuses homogeneously in bone and thus has a lesser, localized cell damage effect. This makes plutonium, because of its concentration, much more biologically toxic than a comparable amount of radium. Some allowance for this physiological difference has been made in setting plutonium standards, but there is evidence that there is more than 20 times more damage caused than was suspected at the time of standard setting."

**A WORLD URANIUM WEAPONS CONFERENCE**, will be held in Hamburg, Germany, Oct. 16-19. The German group GAAA (Nonviolent Action to Abolish Nuclear Weapons) is sponsoring the gathering, which will involve medical doctors, scientific experts, journalists, legal scholars and campaigners from around the world. The conference is designed to help build an international campaign seeking the ban of DU and uranium weapons and their classification as weapons of mass destruction.

"We believe a World Uranium Weapons Conference is needed to bring together the scientists with their independent studies and the peace, veterans, and anti-nuclear movements to get updated, and to combine the results of their studies and their work. Specifically, attention must be given to Iraq before the data is lost or corrupted by the occupation." **For details see:**

<[www.uraniumweaponsconference.de.htm](http://www.uraniumweaponsconference.de.htm)>



Photo: Courtesy of Circle Vision.Org

An activist stands in opposition to the use of DU at a rally at Alliant Techsystems, a manufacturer in Minneapolis, Minn.

## RECENT NEWS OF "DEPLETED" URANIUM WEAPONS\*

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*Chicago Sun Times*, Dec. 31, 2002, "Burning Semen Haunts Gulf War Vets," by Jim Ritter

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*Le Monde Diplomatique* [Paris], March 2002, "Depleted Uranium In Bunker Bombs: America's Big Dirty Secret," by Robert J. Parsons

\*These articles are available via email from [Nukewatch](mailto:Nukewatch).

# NUCLEAR SHORTS

## Politics Alleged in Arrest of Iraqi Scientist

CAMBRIDGE, Mass. — The U.S. publishers of the writings of Dr. Huda Ammash say there may be political motivations for her May 5 arrest in Baghdad by the U.S. military on allegations that she oversaw Iraq's purported development of biological weapons. Dr. Ammash, Dean of Baghdad University, is the author of "Toxic Pollution, the Gulf War, and Sanctions," a peer reviewed research paper published in *Iraq Under Siege* (South End Press, 2002). This anthology examines the effects on Iraq of sanctions and the 1991 U.S. bombardment.

"The U.S. government is trying to silence Dr. Ammash's outspoken criticism of the U.S. role in causing cancers and other illnesses in Iraq through its own use of biologically hazardous weapons such as radioactive depleted uranium," said Alexander Dwinell, co-publisher at South End.

UN Monitoring, Verification and Inspection Commission spokesperson Hiro Ueki told South End in Baghdad on January 13, 2003, that the commission "did not single Dr. Ammash out for interviews because UNMOVIC did not have clear evidence to link Dr. Ammash to biological weapons programs."

In *Iraq Under Siege*, Ammash wrote, "Iraqi death rates have increased significantly, with cancer representing a significant cause of mortality, especially in the south and among children." — *South End Press*, May 5, 2003

## California Landfills Poisoned With Radiation

SACRAMENTO, Calif. — The State Environmental Protection Agency said in March that in 22 of 50 samples, ordinary landfills not licensed for radioactive waste contained levels of radiation that exceeded drinking water safety standards. The Calif. Department of Health Services reported in 2001 that low-level radioactive materials had been dumped for 20 years into similar neighborhood landfills. The nuclear waste comes from hundreds of research laboratories, hospitals, construction companies and power reactors. The health department has been lambasted increasingly after a Los Angeles TV station reported that 30 radioactive devices, potential "dirty bombs," have been stolen around the state.

In a case that should raise concern across the country, James Dykes maintains Moravek Biochemicals fired him after he threatened to alert the health department to the company's illegal dumping of radioactive waste at a landfill in Brea. The site is one of 22 found to have excessive contamination. After being fired, Dykes wrote to health services about the Brea office's "refusal" to investigate violations by Moravek.

The health department has acknowledged that it relies primarily on dumping records provided by companies, and its deputy director for prevention services admitted that he could not recall an instance of prosecuting a polluter for illegal radioactive waste dumping.

Last year, Gov. Gray Davis vetoed a bill that would have banned low-level radioactive waste from all the state landfills. — *Sacramento Bee*, Apr. 7, 2003

## NASA to Risk "Chernobyl in the Sky"

CAPE CANAVERAL, Florida — In spite of the 1986 Challenger and 2003 Columbia disasters and a series of accidental satellite reentries involving the dispersal of radioactive materials, NASA continues launching its nuclear robots and rockets into space. The agency sent two Delta II rockets carrying plutonium-heated "rover" cars to Mars — "Spirit," launched June 10, and "Opportunity," launched on July 7, 2003. NASA also hopes to load a nuclear reactor-driven "ion engine" aboard a rocket for a lengthy trip to Jupiter. Alan Newhouse, the director of Project Prometheus, as it's called, said in an interview, "It will not pose a hazard to any people on Earth."

"Safety is our number one priority," said Dan Beck of Boeing, one company pushing nuclear power in space. Don Savage, a NASA spokesperson, agreed, saying safety "is our biggest job in that [nuclear] program." Texas A & M Univ. engineer Mike Jacox touts that "a nuclear reactor power system would allow us to go to the edge of the solar system and beyond."

"What people don't know is (that the shuttle mission after Challenger) was scheduled to be carrying 46.7 pounds of plutonium. About seven-thousandths of an ounce of plutonium is enough to constitute a lethal dose if someone inhaled it," said Lloyd Dumas, author of *Lethal Arrogance: Human Fallibility and Dangerous Technologies*. NASA now claims that the chance of plutonium dispersal from a launch explosion or reentry burn-up is 1 in 230.

The House Science Committee supports NASA's Space Science plan and the Bush FY 2004 budget request for \$93 million. The space nuclear power and propulsion plan gets \$2.07 billion over five years. The DOE wants space reactors to power weapons and military systems in orbit. — *San Francisco Chronicle*, Apr. 28 & Feb. 4, 2003

## Reactor Fires "Safe, Appropriate"

PENNSYLVANIA, MICHIGAN, JAPAN — Fires at nuclear reactors in Michigan, Pennsylvania and Japan had operators repeating their trance-like mantra — "At no point was there any danger to the public." That's what Exelon Nuclear said about its transformer fire that broke out next to the destroyed Three Mile Island reactor in Pennsylvania. Another transformer fire erupted at the often-shuttered Donald C. Cook reac-

tor in southwest Michigan. One worker was sickened by smoke inhalation. The fire activated the emergency system and automatically shut down Unit 1, which was operating at full power. "All safety systems responded appropriately," the operator, American Electric Power, said.

An explosion at the Tsuruga reactor west of Tokyo apparently came from the site's incinerator which overheated and began smoking. The incinerator shut itself off and the Nuclear and Industrial Safety Agency said "there was no danger" because the reactor had been shut down since March. — *New York Times*, July 3, 5 & 17, 2003

## DOE Predicts Worker Cancer & Death

WASHINGTON — Radioactive contamination at a proposed plutonium factory would kill one worker "for each four and a half years the facility operates," says a government draft environmental impact statement.

A spokesman for the Energy Dept., Anson Franklin, told the press that nine deaths over the proposed 40-year lifetime of the factory "should not obscure the fact that that's a very conservative standard for radiation exposure."

The Bush White House says the Modern Pit Facility, the new Bomb factory, is needed to make "smaller" h-bombs and replacements for existing warheads that become "unreliable."

Congress has not yet approved such weapons but has agreed to fund studies of them. Arjun Makhijani, president of the Institute for Energy and Environmental Research, who disclosed the worker death estimate, argues that it is "unconscionable to build such a risky and unneeded facility. There isn't a weapon in the current arsenal that's ever had an aging reliability problem." — *New York Times*, June 26, 2003

## Nuclear Waste Shipment Criticized for Secrecy

WEST VALLEY, New York — Shortly after midnight on July 13, a shipment of 125 fuel rod assemblies left West Valley, NY, headed by rail to the Idaho National Engineering and Environmental Lab (INEEL). The shipment had been on hold since the Sept. 11 attacks. The high-level nuclear waste shipment was one of the largest in U.S. history, according to a spokesperson for the West Valley Demonstration Project, a closed nuclear reprocessing facility. While the shipment arrived at INEEL safely after the four day, 2,360 mile journey, the Dept. of Energy has been criticized for the secrecy surrounding the transport. No local officials, emergency responders, or public along the route were informed.

In a letter sent to the National Academies Committee on Transportation of Radioactive Waste, Public Citizen, a non-profit public interest group, wrote, "While we do not dispute the need to address the national security implications of nuclear waste transportation, we are not convinced that this level of secrecy is justified, or that it meaningfully reduces risks."

"At least tell the fire chief," said Bill King, town supervisor of Ashford, where the West Valley facility is located. "These volunteer firefighters are the ones who come running any time of day or night to respond to emergencies. If they're not prepared and on notice, it threatens them and it threatens the community."

The shipment is a precursor to what will be thousands of nuclear waste shipments if Yucca Mountain is opened. Brendan Hoffman, organizer at Public Citizen, foresees difficulties ahead for the DOE: "The DOE wants the public to believe that these shipments are safe and then they proceed under cover of darkness without notifying local officials. If this is how the agency handles one shipment, it certainly does not bode well for the proposed Yucca Mountain shipping campaign."

— *Public Citizen and West Valley Coalition on Nuclear Waste*, Aug. 11, 2003

## Uranium Tainted Water into Great Miami River

CINCINNATI, Ohio — The Fernald nuclear weapons site in Ohio released more than 2.9 million gallons of rainwater tainted with uranium into the Great Miami River July 10-12. The water carried levels of uranium nearly three times the amount allowable for safe drinking water. The discharge was caused by hard rainfall and was worsened because part of the site's water treatment facility was down for maintenance.

Fernald acted as an enrichment factory producing uranium for H-bombs between 1953 and 1989. It's now undergoing a 14-year, \$4.4 billion cleanup. Officials with Fluor Daniel, the company managing the effort, say the discharge was necessary to prevent storage basins on the site from overflowing into Paddy's Run, a small stream that feeds directly into the Great Miami Aquifer. The aquifer was contaminated while the facility was operating, and purifying the underground water is a priority of the cleanup.

The Ohio Environmental Agency permits routine releases of millions of gallons of uranium-tainted water into the Great Miami River. Fluor Daniel is discharging 5 to 6 million gallons of water per day with a uranium content of about 325 parts per billion. Drinking water standards are 30 parts per billion. Beyond the monthly allowance, the site is allowed up to 10 additional discharges per year, plus special exemptions when the water treatment plant is down for maintenance. The public is notified when discharges are to take place.

Fernald has a history of environmental and health violations. The government has paid more than \$90 million in penalties as a result of lawsuits over violations that took place during the site's three decades of operation, including failure to notify workers of dangerous conditions and failure to notify residents

of polluted drinking water and radon gas in the air. — *Cincinnati Enquirer*, July 18, 2003

## Bush's Nuclear Plan Meets Resistance

WASHINGTON — The debate continues in Congress over nuclear weapons funding. In June, both the House and Senate voted to ease restrictions of the Spratt-Furse amendment, the 10-year-old ban on research, design and development of low-yield nuclear weapons. Both chambers agreed to allow research while placing restrictions on development. The full House and Senate then authorized the \$68 million the administration requested for advanced nuclear weapons research: \$15 million to study converting weapons into earth-penetrating "bunker busters," \$6 million to study low-yield nuclear weapons, \$25 million to shorten the lead time for conducting underground tests to 18 months from three years, and \$22 million for an environmental study into the manufacturing of plutonium pits, the triggers for modern nuclear weapons.

The funding request then went to an appropriations subcommittee for approval of financing. To the great surprise of the Energy Department, on July 8 a Republican led House Appropriations Subcommittee denied more than \$50 million of the administration's request. The committee removed all of the \$6 million to research advanced concepts like mini-nukes, \$10 million from the \$15 million spending request to research Robust Nuclear Earth Penetrators, and \$37 million in funding to research shortening the time limit for nuclear tests and the environmental study proposal to build plutonium triggers.

Just days after the subcommittee voted to cut financing, the Senate Appropriations Subcommittee gave its support to the full \$68 million requested by the Bush administration. The difference will be worked out between the full House and Senate after their August recess. — *New York Times*, July 15, 2003; *PeaceWorks*, Kansas City, Aug., 2003

## Drum Destined for WIPP Catches Fire

INEEL, Idaho — A radioactive waste drum being prepared for shipment to New Mexico caught fire, forcing the evacuation of part of the Idaho National Engineering and Environmental Laboratory. The radiation did not escape the container and workers were not injured during the fire, lab spokeswoman Ann Riedesel said.

Workers in the lab's Advanced Mixed Waste Treatment Facility were preparing the drum for shipment to the Waste Isolation Pilot Plant near Carlsbad when they noticed that the drum was bulging. This indicates some sort of gas buildup inside, Riedesel said. In the past, the problem has been solved by simply venting the drum, allowing the gas to escape, she said. "We've vented dozens already without incident," she said.

In this case, flames leapt from the drum as it was vented. Lab workers have not identified the gas that caused the fire.

The drum contains radioactive sludge from Rocky Flats nuclear weapons site in Colorado. In the 1970s, drums from Rocky Flats were sent to Idaho for long-term storage until a permanent waste dump could be built. The fire occurred as the Senate considers a measure by Sen. Pete Domenici, R-N.M., to relax required testing of gases before shipping.

The bill containing the change was approved by a Senate subcommittee last month. WIPP, a Department of Energy dump which opened in March 1999, buries plutonium-contaminated waste from the defense industry 2,150 feet underground in ancient salt formations. As of June, it had received more than 41,000 drums of material, including about three tons of plutonium.

— *Associated Press*, Aug. 14, 2003

## RESOURCES

- \* Agency for Toxic Substances and Disease Registry, Toll-free: 1-888-422-8737; Email: ATSDRIC@cdc.gov
- \* European Committee on Radiation Risks, Avenue de la Fauconnerie 73, B-1170 Bruxelles, BELGIUM, Email: info@euradcom.org
- \* Institute for Energy and Environmental Research, 2104 Stevens Ave. S., Mpls., MN 55404; (612) 879-751; Email: ieer@ieer.org; Web: ieer.org; Main office: 6935 Laurel Ave., Suite 201, Takoma Park, MD 20912; (301) 270-5500
- \* Military Toxics Project, PO Box 558, Lewiston, ME 04243; (207) 783-5091
- \* Movimento Del Consumatori, 30171 Venezia Mestre, Viale Venezia; Phone: 041938092. CCP 15015308; Email: info@consumocritico.it; Web: movimentoconsumatori.it/index.htm
- \* *The Nation*, 33 Irving Place New York, NY 10003 (212) 209-5400 Web: thenation.com
- \* National Gulf War Resource Center, Inc., 1224 M St. NW, Washington, DC, 20005; (202) 628-2700
- \* National Radiation Protection Agency, Fontenay-aux-Roses and Clamart, BP17 - 92262 Fontenay-aux-Roses Cedex, 77-83, avenue du Général-de-Gaulle - 92140 Clamart, France Phone: 33 (0)1 58 35 76 76; Email: irsn@ipsn.fr
- \* *New Scientist*, Web: newscientist.com/
- \* Public Citizen - Critical Mass Energy and Environment Program, 1600 20th St. NW, Washington, DC. 20009; (202) 588-1000
- \* *South End Press*, 7 Brookline Street #1, Cambridge MA 02139-4146; Phone: (617) 547-4002
- \* Swiss Federal Institute of Technology, Zentrum CH - 8092 Zurich, Switzerland; Email: info@ethz.ch; Phone: +41 (0)1/632 11 11
- \* Uranium Medical Research Center, 38 Steeplechase Ave., Aurora, Ontario L4G 6W5, Canada; Email: info@umrc.net; (905) 713-1151; Web: www.umrc
- \* *Voices in the Wilderness*, POB 634, 5315 N. Clark St, Chicago, IL 60640; (773) 784-8065; Email: info@vitw.org
- \* World Policy Institute - Arms Trade Resource Center, 66 Fifth Ave. 9th fl., New York, NY 10011; (212) 229-5808; Web: worldpolicy.org/projects/arms/

# DOE Seeks to Expand Plutonium Pit Production

By Molly Mechtenberg-Berrigan

In this issue of the *Pathfinder*, we report on waste transportation to the Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico. This facility, permanent repository for the nation's military nuclear waste, will become one of the most dangerous sites in the U.S. as it fills with hazardous and radioactive material. In reporting on WIPP, it is important to address the origins of the waste, one of which is Rocky Flats, Colorado, site of plutonium pit production for nuclear weapons between 1952 and 1989. Pits are hollow spheres of plutonium that initiate the fission that leads to a nuclear explosion. Often called the "trigger" of a nuclear weapon, a plutonium pit is a critical component of the bomb.

Rocky Flats was closed in 1989 after an FBI raid exposed serious environmental, safety and health problems at the plant. Over the course of cleanup at Rocky Flats, 2,000 shipments of radioactive debris, including plutonium-laden waste, will travel our highways down to the WIPP facility.

The U.S. has an estimated 5,000 plutonium pits on reserve and over 12,000 stored in surplus at the Pantex Plant in Texas. The Department of Energy (DOE) wants to build a new pit production plant, the "Modern Pit Facility" (MPF). There are many dangers and long-term consequences of building such a facility, and yet the DOE is moving forward with no clear justification or explanation as to why the U.S. needs more plutonium pits.

In 1996 it was decided that pit production would be re-established on a small-scale at Los Alamos National Laboratory (LANL) in New Mexico. In April 2003 the first pit was successfully produced, and LANL hopes to upgrade the program to increase production capacity to 50 pits per year. The DOE, however, is looking for about 450 pits per year and will award the Modern Pit Facility contract to either Los Alamos or to one of the following sites: the Waste Isolation Pilot Plant in New Mexico; the Nevada Test Site; the Pantex Plant in Texas; or the Savannah River Site in South Carolina. It should be noted that while the debate over the MPF progresses, such as it will, LANL is producing pits right now.

The recent arms reduction treaty signed by Bush and Putin of Russia, the "Moscow Treaty," calls for both countries to reduce their strategic nuclear arsenals to 2,200 or under by 2013. Given the number of pits the U.S. has on reserve and in surplus, why is the current level of pit production not sufficient for a nuclear arsenal that is being downsized?

The answer: the Moscow Treaty is a farce. The Bush Administration's guiding document, on the other hand, is the Dec. 2002 Nuclear Posture Review (NPR), which calls for a more flexible, responsive nuclear policy, including capabilities to "upgrade existing weapons, surge production of weapons, or ... if directed, to design, develop, manufacture and certify new warheads in response to new national requirements." The administration is currently seeking to design and develop new weapons, including low-yield nuclear weapons and a modification of an existing weapon to be used as a bunker buster. The NPR explicitly calls for the construction of the Modern Pit Facility.

The DOE's official justification for the MPF is that "classified analyses indicate that the [pit production] capacity being established at LANL will not support either the projected capacity requirements...or the flexibility to produce pits of a new design in a timely manner..." Tom Clements, with the Greenpeace International Nuclear Campaign, writes, "If DOE anticipates a nuclear confrontation in the future or has plans to fight a nuclear war, then those arguments for the new pit plant should be presented. If DOE has plans for new nuclear weapons and thus 'the flexibility to produce pits of a new design in a timely manner,' then those new nuclear weapons plans must be revealed."

The target goal of 500 pits per year approaches Cold War rates. However, the Cold War is over, and justification for nuclear weapons continues to erode. Furthermore, construction of a MPF will violate the 1970 Nuclear NonProliferation Treaty (NPT), to which the U.S. is a signatory. The NPT mandates nuclear weapons holding states to pursue nuclear disarmament.

The DOE also argues that potential aging effects of plutonium could render useless half of the nuclear stockpile in a short period of time. However, DOE documents and other sources indicate that plutonium-239 (the isotope used in pits) is stable over many decades. Recent studies have suggested that pits can last a minimum of 50 to 60 years. Under questioning, the National Nuclear Security Administration (NNSA) now officially states that age-induced effects affecting safety, reliability, and performance have never been found in pits up to 42 years old (the average age of pits in the deployed stockpile is 19 years). The DOE has not made a strong argument that the 50 pits per year being established at Los Alamos is not

enough to maintain the current stockpile's "safety and reliability."

Others concerns about the MPF include the following:

- Plutonium pit production is inherently dangerous. If inhaled, dust specks of plutonium can cause lung cancer (see short pg. 7). Health risks involved with a new MPF would not only affect workers at the facility, but would also endanger communities located nearby.
- Pit production is expensive. Construction of the MPF alone is expected to cost more than \$4 billion and does not include operation and eventual decontamination, decommissioning and cleanup.
- The DOE estimated in 2001 that the pit manufacturing process "would generate a maximum of approximately 33,600 gallons per year of high level waste." It is likely that this waste would be converted to a disposal form allowing it to be shipped and stored at the WIPP facility.

As evidenced by the DOE's insistence on reestablishing massive plutonium pit production, it is clear that a large-scale nuclear stockpile will be maintained far into the 21st century. Under the National Environmental Policy Act, federal agencies are required to analyze alternatives to their proposed actions, including a "No Action Alternative." Given the long-term negative consequences of producing plutonium pits and the DOE's inadequate justification, a decision to not build the facility is the appropriate alternative.

## Radioactive Waste Stored in Trashy Cans; Whistleblower Sacked

By Bonnie Urfer

WASHINGTON, DC — In 2000, former Exelon quality control auditor Oscar Shirani discovered nine flaws in a steel and concrete waste container used by Exelon to store high-level irradiated fuel rods. Exelon operates nuclear reactors in the U.S. The casks, designed by New Jersey-based Holtec International, may not match the licensed design specifications but are being used at reactors in Illinois, Oregon, New York, Georgia and Washington for "dry cask" storage of fuel rods. Failure within the Nuclear Regulatory Commission's (NRC) Quality Assurance Program could mean disaster for citizens across the country.

Shirani brought his concerns and allegations to the NRC in December 2001. He alleges that Exelon did not adequately respond to his quality assurance audit findings, which indicated the waste casks might not stand up under stress or strain. According to Shirani, unqualified welders did some of the work; the neutron shields had holes; and some materials were unacceptably brittle. Shirani also claims that Exelon falsified quality assurance documents. Shirani was transferred from the nuclear division to the finance division within Exelon and was subsequently laid off.

Shirani had audited Holtec and its suppliers for the Nuclear Users Procurement Issues Committee, identifying what he calls "major design and fabrication issues" against Holtec in 1999 and 2000. He filed those with the NRC in November 2000. The NRC closed the allegations procedure a year later. Shirani said he tried to put a "stop work" order on the casks' fabrication to no avail. Brian Gutherman, Holtec manager of licensing, is reported as saying that Shirani is "just making things up."

The NRC is investigating whether they appropriately responded to Shirani's charges that the nuclear waste containers are flawed. The NRC is responsible for licensing and regulating nuclear facilities, including reactors and their on-site waste storage areas. The questionable casks could be used to transport and store nuclear waste at Yucca Mountain if it ever opens. Holtec International, boasting major profits for reactor contracts, is a likely bidder for the Yucca waste container contract.

Private Fuel Storage, a consortium of reactor owners, hopes to use the casks to move fuel rods to Skull Valley Goshute Indian Reservation in Utah for interim storage. Holtec is trying to convince the NRC that the casks could withstand the impact of a crashing F-16 jet crashing at Skull Valley. The "on-again-off-again" Goshute proposed dry cask storage site is situated between Hill Air Force Base and the Utah Test and Training Range.

Public Citizen, the Nuclear Information and Resource Service, and Utah Governor Mike Leavitt requested an independent evaluation of the NRC's Quality Assurance Program. Leavitt is concerned because up to 44,000 tons of irradiated reactor fuel would come to Utah from around the nation to be stored on the Goshute reservation for up to 40 years.

The NRC has proposed limited physical testing of a Holtec cask relying on computer models to evaluate transport cask licensing. Approval of the cask came with the understanding that the containers could probably withstand a big earthquake without cracking and releasing radiation.

Ross Landsman, NRC Region III inspector, said that the issues raised by Shirani on the casks headed for the Dresden reactor in Illinois had not been resolved, despite an August 2000 audit stating the problems had been fixed.

# Food Irradiation Update

Compiled by Molly Mechtenberg-Berrigan

## Biased Irradiation "Educational" Program in Minnesota Designed to Benefit Industry, Not Children

A Minnesota pilot program designed to develop "educational" materials about food irradiation for teachers, parents and students is intended to promote irradiation rather than provide fair information. The Food and Nutrition Service, part of the United States Department of Agriculture, provided the Minnesota Department of Children, Families and Learning with a \$151,000 grant to develop educational materials about food irradiation for three school districts. The materials promote the benefits of irradiated food and omit any mention of negative information, including the fact that studies suggest irradiated meat can create potentially carcinogenic chemicals.

The bias is clear in the project proposal, which states, "A successful outcome of the educational campaign will be the acceptance and introduction of irradiated ground beef in select school districts." The project's partners include SureBeam, a major food irradiation company; the Minnesota Beef Council, which is partially subsidized by SureBeam; the Dairy Queen Corporation, which irradiates meat; and the American School Food Service Association, whose general council represents irradiation companies.

"This project is a complete sham, and the materials produced — which present a glowing endorsement of irradiation — ought to be tossed out," said Wenonah Hauter, director of Public Citizen's Critical Mass Energy and Environment Program. "Serious questions exist as to the long-term health effects of eating irradiated food, and parents are justifiably concerned. The government needs to stop pushing this food on the nation's children immediately."

The pro-irradiation propaganda is to be distributed nationwide. This move by the irradiation industry comes at an important time, as school districts throughout the U.S. are deciding whether they want to purchase irradiated meat for the 27 million children enrolled in the National School Lunch Program. — *Public Citizen*, July 21, 2003

## Indiana Refuses USDA Irradiated Ground Beef for Schools

In late July, Monroe Central in Indiana was the first school to approve serving United States Department of Agriculture (USDA) purchased irradiated ground beef in school lunches. The school board voted in line with the USDA recommendation, despite not knowing anything about the irradiation process. However, after checking with Indiana state education officials in early August, Monroe School Superintendent Monte Stebbins found that the state would not be ordering

irradiated ground beef this year due to insufficient demands. — *Radfood*, Aug. 5, 2003; *The Star Press*, Muncie, Ind., July 21, 2003

## Pennsylvania Residents Oppose Irradiator

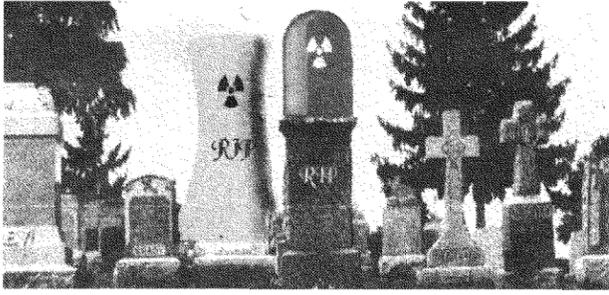
The residents of Milford Township in Bucks County, Penn., have mounted growing opposition to a proposed food irradiation facility in their township. At a Q & A session held by the Nuclear Regulatory Commission (NRC) on July 17, approximately four hundred local residents angrily responded to NRC presentations. The moderator, president of a local Community College, started off by asking questions, but was quickly shouted down by audience members who had their own questions. Milford resident Jack Sutton began by asking, "Can you give us a 100 percent guarantee that there will never be an accident?"

CFC Logistics is seeking the license that would allow the Milford Township cold-storage facility to start testing its radioactive cobalt-60 irradiator. Concerned residents requested a formal hearing with the NRC to present experts and evidence of possible dangers of an irradiation facility, but the NRC has not agreed to the hearing. — *The Morning Call*, Allentown, Penn., July 19, 2003

## UN Food Commission Lifts Irradiation Limits

On July 7, The Codex Alimentarius Commission, a subsidiary of both the UN Food and Agriculture Organization and the World Health Organization, adopted a controversial new standard for irradiated foods that allows the foods to be subjected to higher levels of gamma rays to kill bacteria and increase shelf life. Despite objections from 10 countries — including Austria, Denmark, Germany, Italy, Mexico, and Spain — the Commission removed the maximum radiation dose of 10 kiloGray that had been in place since 1979. The commission determined that higher levels of radiation would eliminate bacterial spores and the radiation resistant pathogenic bacteria *Clostridium botulinum*, and also reduce the need to use more toxic chemical methods of combating bacteria, some of which can be harmful to the environment.

Giulio Labbro Francia of the Italian consumer's group Movimento Dei Consumatori said, "We are at a loss to explain Codex's contention that irradiated foods are safe to eat in the face of so much evidence to the contrary. Now consumers throughout the world are in danger of the unknown health impacts." Among the toxic chemicals formed in irradiated foods are 2-alkylcyclobutanones (2-ACBs), which have been found to promote cancer development and cause genetic damage in rats, and cause genetic damage to human cells, consumer groups point out. — *Environment News Service*, July 9, 2003



## To Bush: UK Energy Exec. Calls Nuclear Power Dead

**Record £4.3 billion (US \$2.7 billion) loss; energy giant abandons plan for new reactors, says only renewable energy is "financeable"**

LONDON — Nuclear reactor operator British Energy (BE) has abandoned its campaign for a new line of UK nuclear power stations. Mike Alexander, the new chief executive of the embattled company, is now focusing on completing a financial restructuring of the business.

Along with ruling out plans for new reactors, Alexander is also unlikely to seek extensions to the operating licenses of those currently on line.

Last week BE announced a record pre-tax loss of £4.3 billion (US \$2.7 billion) for the year, largely consisting of a £3.7 billion (\$2.5 b) write-down in the value of its eight nuclear and one coal-fired power stations. The write-downs were due to the slump in electricity prices, which the company believes is set to continue this year, and came on top of a deterioration in UK operating performance, which saw losses here grow from £41 million (US \$26 million) the year before last to £274 million (\$175 m).

Alexander said, "I don't believe we should be thinking about a new generation of nuclear power stations if we are not making money on the ones we have got."

Like the nuclear lobby in the U.S., BE and British Nuclear Fuels have pressed hard for new reactors, seeking to win government backing in the Energy Review, published in the spring. But it was rebuffed and BE abandoned active lobbying. Alexander said that his priority was a four-year turnaround for the company that last year collapsed into the arms of the Government, which supported it with a loan facility [read: bailout]. — *The Observer*, London, June 8, 2003

## Power Outage Closes 9 Nuclear Reactors

By Bonnie Urfer

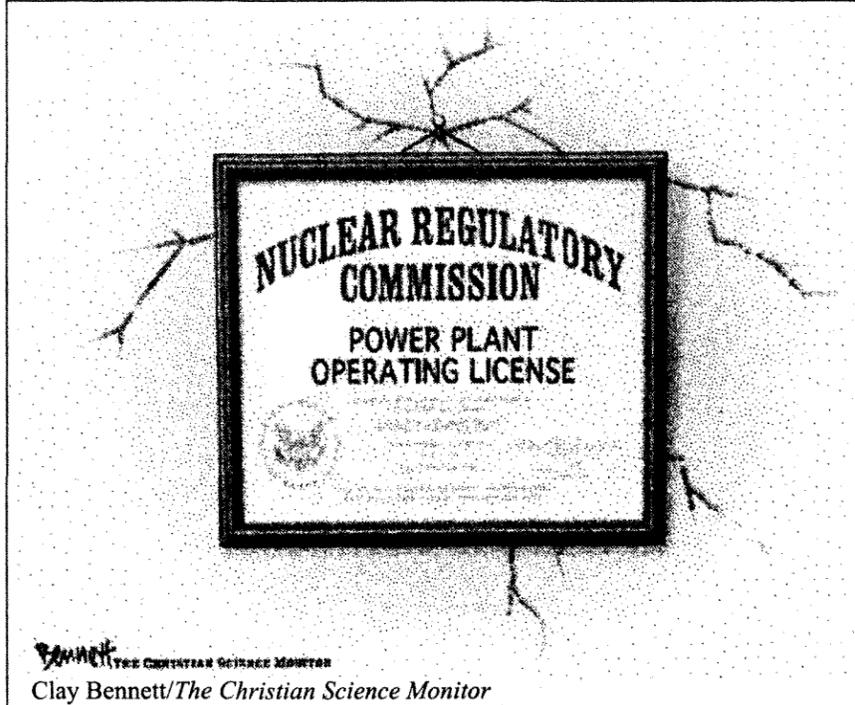
As a result of the power blackout on August 14, nine nuclear reactors in four states were taken off-line according to the Nuclear Regulatory Commission. Nuclear reactors rely on off-site electricity for their primary power. In New York, Indian Point 2, Indian Point 3, Fitzpatrick, Nine Mile 1, Nine Mile 2, and the Ginna 1 were shutdown. The other reactors shut were the the 619-MW Oyster Creek facility in New Jersey, the 1,320-MW Perry 1 in Ohio, and the 1,130-MW Fermi 2 in Michigan. The outages affected 50 million people.

Nuclear power is not helpful in maintaining the stability of the electrical grid in an emergency; in fact, nuclear reactors make unpredictable occurrences even more dangerous. Energy consultants said the collapse of the northeastern U.S. grid is clear evidence that grids across the country are as vulnerable as ever. Outages spread over 9,300 square miles. Within a three-minute period, 21 power stations — including the 9 nuclear reactors — were off-line. New York state lost 80

percent of its power.

Electricity generation stations throughout the U.S. are interconnected in a power grid system. This allows electricity generated in one state to be sent to users in another state. In the U.S. there are more than 6,000 power generating units energized with coal, oil, gas, falling water, wind or nuclear. The system is directed by more than 100 control centers.

In a power outage, nuclear reactors are forced to rely on emergency backup diesel generators to continue cooling the reactor fuel rods. According to Wenonah Hauter, Director of Public Citizen's Critical Mass Energy and Environment Program, "Sudden reliance on backup diesel generators is less than reassuring, especially considering that there have been 15 instances in the past 12 months in which emergency generators have either malfunctioned or failed to operate at all, in certain cases leading to a plant shutdown; on several occasions all backup generators failed at once." Fermi, near Detroit, experienced failure of all four of its backup generators in February of this year. In a power failure, emergency sirens would fail as well, leaving citizens unaware of reactor problems.



Clay Bennett/The Christian Science Monitor

## Two Workers Inhale Plutonium at Los Alamos

By Molly Mechtenberg-Berrigan

LOS ALAMOS, New Mexico — On Aug. 8 at Los Alamos National Laboratory in New Mexico, two workers were exposed to plutonium while taking inventory of old cans of plutonium. Both men worked with the Plutonium 238 Science and Engineering Group (PSEG), which manufactures, tests and conducts surveillance of heat sources and radioisotope

thermonuclear generators, or RTGs, used to heat and power space probes and instruments for national security applications. PSEG is the only group in the DOE complex that can handle plutonium 238 oxide, metal and solutions in substantial quantities in unencapsulated forms.

Neither man saw leaks or visible defects on the cans but became aware of possible contamination when an air monitor alarm sounded. Radiation control technicians helped the pair remove their protective coveralls and gloves and monitored them for skin and nasal contamination. Tests showed evidence of nasal contamination on both employees, indicating they might have inhaled plutonium. Other results indicated skin contamination on one employee's head, upper torso and arms and on the other employee's head. The Lab reported that the plutonium was contained within the building. The Department of Energy will be pursuing an investigation to determine the cause of the accident. Both employees returned to work in non-radiation areas.

Plutonium is known as the most carcinogenic substance on earth. Inhaling one millionth of a gram of plutonium is enough to cause lung cancer. Both employees were placed on a monitoring program to determine at what level plutonium entered their bodies. Despite the seriousness of the situation, Jim Danneskiold, a spokesman for the lab, said afterwards, "Clearly this was not a major contamination."

In March of 2000, eight workers were exposed to plutonium at Los Alamos. In that case, Energy Secretary Bill Richardson announced a "Type A" safety investigation, the highest level the department conducts.

## U.S. Kills Nuclear Weapons "Watchdog"

By Julian Borger

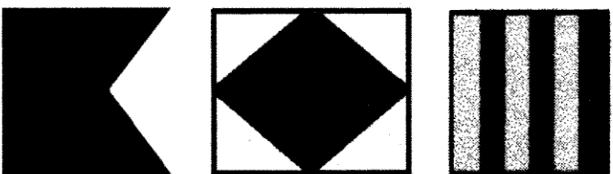
A U.S. Energy Department panel of experts which provided independent oversight of the development of the U.S. nuclear arsenal was quietly disbanded by the Bush administration in July. The decision to close down the National Nuclear Security Administration advisory committee — required by law to hold public hearings and issue public reports on nuclear weapons issues — came just days before a closed-door meeting at a U.S. Air Force base in Nebraska to discuss the development of a new generation of tactical "mini nukes" and "bunker buster" bombs, as well as an eventual resumption of nuclear testing.

Ed Markey, a Democratic congressman and co-chairman of a congressional taskforce on nonproliferation, said, "Instead of seeking balanced expert advice and analysis about this important topic, the Department of Energy has disbanded the one forum for honest, unbiased external review of its nuclear weapons policies." Neither the NNSA — part of the Department of Energy — nor the 15 panel members returned calls seeking comment. The NNSA advisory panel is made up of academics, retired officials and business leaders. Although federal law requires regular open meetings and publication of its reports, the Energy Department has not convened the panel since May 2002. Its reports have not been released. The statute establishing federal advisory committees requires their dissolution to be offi-

cially gazetted in the federal register but, according to Mr. Markey, the NNSA panel was disbanded by a simple email to its members.

Daryl Kimball, the head of the independent, Washington-based Arms Control Association, said, "This will make the Department of Energy and the NNSA even more opaque. It will be all the more difficult to understand what they are planning to do." Hawks in the Pentagon and the energy department are pushing for the development of tactical nuclear weapons with yields of less than 5 kilotons and hardened "bunker buster" nuclear bombs, designed to penetrate deeply buried targets, where enemy leaders or weapons may be hidden. According to the leaked agenda for the Omaha meeting in early August, Pentagon and Energy Department officials discussed how to test small numbers of these new weapons, and whether this will require a break from the moratorium on nuclear tests. Critics argue that the new weapons will blur the distinction between conventional and nuclear arms, and trigger a new arms race. "The Bush administration is considering policy changes that will alter the role of nuclear weapons in national defence," Mr. Markey said. "Given the importance and sheer complexity of the issues raised ... why was the only independent contemplative body studying nuclear weapons disbanded — and disbanded in such a surreptitious fashion?" — *The Guardian*, July 31, 2003

## U.S. Ship Carrying Uranium Oxide Grounds on Cape Town Coast



By Bonnie Urfer

CAPE TOWN, South Africa — The U.S. cargo ship *Sealand Express* owned by North Carolina-based U.S. Shipping Management sits stranded aground in Table Bay about 500 feet off Sunset Beach in Milnerton, near Cape Town, South Africa. It went aground on August 19 carrying 56 tons of unprocessed uranium bound for the United States. U.S. officials in South Africa said the stranded uranium oxide shipment, loaded in Cape Town, was headed to a uranium processing plant in Newport News, Virginia. The uranium shipment was being made in accordance with International Atomic Energy regulations.

The *Sealand* carries 5,000 tons of crude oil, containers of industrial chemicals, including a leaking container of propyl acetate, 40,000 pounds of a form of the toxic metal antimony, fireworks, corrosive liquids and the 59 drums of uranium oxide, a by-product of gold mining and the raw material used to produce nuclear fuel. Of the 1,037 containers onboard, 33 are full of hazardous materials.

Port Authority initially claimed there were no hazardous materials onboard.

Company spokesman for AngloGold, a South African gold mining company, said that the uranium shipment was low in toxicity and radiation and would simply disperse in the sea if the ship foundered and the drums somehow opened. Nufcor, a subsidiary of AngloGold, exports a thousand tons of uranium oxide every year.

The *Sealand Express* had been driven onshore during heavy storms with swells of up to ten feet. An average of two ships per year go aground in the rough waters.

The route is familiar to cargo ships carrying irradiated reactor fuel rods from Europe to Japan that pass south of Cape Town.

Salvage operators reported that the odds of getting the *Sealand* off the sand are slim and the ship's cargo will most likely need to be unloaded. The ship's 3,700 tons of fuel was being off-loaded in an operation expected to take up to 8 days to both minimize potential pollution and lighten the load.

Despite danger warnings by Cape Town port authorities, the *Sealand* sent assurances that everything was under control. Port Control, with its multi-million state of the art communications system that normally records all ship-to-shore and shore-to-ship exchanges, lost the voice recordings.

An inquiry into whether there had been any "negligence and incompetence" on the part of the ship's master that could have led to the grounding will be carried out by the United States Coast Guard.

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# CALENDAR

**Sept. 19-21 — Nonviolence Weekend** at Edgewood College, Madison, Wisc. Father Roy Bourgeois, speaker, founder of the School of the Americas Watch. **Contact:** Sister Marge Eilerman; Phone: (608) 257-8753; Email: csn@igc.org

**Sept. 20 — Longing for Peace**, a day for peacemakers to reflect, uphold and embrace each other. 10 a.m. - 8 p.m. Merrill, Wisc. **Contact:** (715) 536-5389

**Sept. 25-28 — NY, Washington, SF, LA... Global Day Of Protest** Against Occupation and Empire. In solidarity with those who resist - from Palestine to Iraq to the Philippines & Cuba. The A.N.S.W.E.R. Coalition expresses its solidarity with locally and nationally coordinated demonstrations. **Contact:** internationalanswer.org

**Sept. 27 — First Annual Northern Peace Initiative Gathering**, Luck, WI. Anathoth Community Farm. Camping, talking circles, drumming, bonfires, and more. **Contact:** Mike Miles, 740 Round Lake Rd. Luck, WI 54853; Phone: (715) 472-8721; Email: anathoth@lakeland.ws

**Oct. 3-4 — Wisc. Network for Peace and Justice "Mobilizes a State of Peace"** Annual Assembly, Stevens Point, Wisc. Event includes: peace vigil; panel discussion; music fundraiser; reports from the field and Peacemaker of the Year Awards. **Contact:** WNPJ, 122 State St. #404, Madison, WI 43703; Phone: (608) 250-9240

**Oct. 4-11 — Keep Space for Peace — International days of protest to stop the militarization of space.** The recent war in Iraq has dramatically shown how space technology is now the key element in modern warfare. There are local actions planned throughout the world. To find the action nearest you or to plan your own event, **contact:** Global Network, P.O. Box 652, Brunswick, ME 04011; Phone: (207) 729-0517; Web: space4peace.org; Email: globalnet@mind-spring.com

**Oct. 16-19 — World Conference on DU**, Hamburg, Germany. GAAA Web: uraniumweaponsconference.htm

**Oct. 24 — Trial of Mothers' Day ELF defendants**, Federal Courthouse, 1:30, 120 N. Henry, Madison, Wisc.

**Oct. 24-25 — Northeastern WI Activist Training Project. Green Bay, WI.** Workshops to include Middle East, Colombia/School of the Americas, disarmament, civil liberties, military spending vs. human needs and skill training workshops. **Contact:** Peace Action Wisconsin; Phone: (414) 964-5158; Email: peace@peaceactionwi.org

**Oct. 24-26 — "Cry Justice!"** The All People's Activist Conference concurrently with the National Lawyers Guild's "Demand Democracy" national convention in Minneapolis, Minn. Strengthen and build our movements through coalition, networking, information sharing, and creating strategies for effective advocacy. **Contact:** Ted Dooley; (612) 339-1453; Web: cryjustice.org

**Oct. 25 — March on the Pentagon — The World Unites Against U.S. Militarism**, Washington, DC to Pentagon City, VA. Demand an end to looting of social programs by the war machine. Demand an immediate end to the new nuclear arms race. **Contact:** A.N.S.W.E.R., Web: internationalanswer.org

**Nov. 14-15 — Western WI Activist Training Project, LaCrosse, WI.** See Oct. 24 - 25 above. **Contact:** Peace Action Wisconsin; Phone: (414) 964-5158; Email: peace@peaceactionwi.org

**Nov. 22-23 — School of the Americas Vigil and Nonviolent Civil Resistance Action**, Fort Benning, GA. Join thousands from across the Americas & engage in nonviolent direct action. **Contact:** SOA, PO Box 4566, Washington DC 20017. Phone: (202) 234-3440. Email: info@soaw.org

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