NUCLEAR SHORTS

Radioactive Food Chain

KONGSFJORD, Arctic Circle — Dumping of radioactive waste into the sea, above ground nuclear tests and the Chernobyl reactor explosion all may be the source of elevated levels of radioactivity on an island close to the Arctic. Mark Dowdall and his team at the Norwegian Radiation Protection Authority in Tromsø spent two years between 2000 and 2002 collecting soil, vegetation and guano samples from a remote coastal inlet called Kongsfjord on the Arctic archipelago of Svalbard. They conclude that birds — kittiwakes, puffins and fulmars — may be dropping radioactive guano because they eat contaminated fish which have become part of the food chain. The guano is a major source of nutrients for plants, which are then eaten by animals, including reindeer.

They found high concentrations of the isotope cesium-137 which does not occur naturally, as well as some naturally occurring uranium.

In 1999, the guano of pigeons roosting in contaminated buildings on the site of British Nuclear Fuels' Sellafield reprocessing complex in Cumbria was found to contain 40 times the European Union's safe limit of cesium-137.

— *New Scientist*, Jan 4, 2003

Nuclear Wasteland in Washington

RICHLAND, Washington — For over 40 years, Hanford was the site of plutonium production for the U.S. nuclear arsenal. The site is now contaminated and more than 1 million gallons of radioactive waste have leaked into the aquifer and the Columbia River. A $4 billion waste treatment complex being built at Hanford will use a process called vitrification to solidify and entomb 54 million gallons of radioactive waste.

Vitrification mixes radioactive waste with glass-forming materials and melts them at 2,000 degrees. The "glass" is then poured into canisters for long-term storage.

Plans call for the high-level waste to eventually end up at the Yucca Mountain site near Las Vegas, Nevada. Low level radioactive waste at Hanford will be buried in trenches in the 560-square-mile reservation.

Additionally, workers have been moving more than two million pounds of deadly irradiated reactor fuel from a storage pool into dry cask storage. The 957 metric tons were situated 400 yards from the Columbia River and the pools have leaked twice since the 1980s.

— *New York Times,* Sept. 19, 2002; *Associated Press*, Jan. 2, 2003

$2 Billion Danger to Earthlings

CAPE CANAVERAL, Fla. — In spite of the 1986 Challenger and 2003 Columbia disasters and a series of accidental satellite re-entries involving the dispersal of radioactive materials, NASA plans to continue launching nuclear-powered robots and rockets into space. Launch dates are under review for two Delta II rockets carrying plutonium-heated "rover" cars destined for Mars. 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 No. 1 priority," said Dan Beck of Boeing, one of the companies 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 predicts 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 program and the Bush Administration's FY 2004 budget request for $93 million. The space nuclear power and propulsion plan gets $2.07 billion over five years. The Department of Energy is expecting space reactors to power space weapons and military systems in orbit.

— *San Francisco Chronicle*, April 28 & Feb. 4, 2003

Truck Hauling Uranium Concentrate Wrecks

KNOXVILLE, Tenn. – As the Energy Department and the nuclear industry make plans for tens of thousands of highway and rail shipments of deadly radioactive waste, a truck carrying five heavy canisters of uranium hexaflouride overturned on Interstate 40 near Harriman, Tenn. None of the five containers, each of which weighs 14 tons, were thrown from the flatbed and emergency responders reported that there was no danger to the public. "It basically just took the curve too quick (sic) and tipped over. These trucks have a tendency to be top-heavy," said Cecil Whaley of the Tenn. Emergency Management Agency. The DOE has some 6,000 large canisters filled with uranium hexaflouride kept in the open air in various stages of corrosion. These five were going from Paducah, Kentucky to Wilmington, North Carolina where the uranium hexaflouride is to be fabricated into fuel rods for nuclear reactors. The uranium hexaflouride is toxic and radioactive and forms highly corrosive hydrogen fluoride if exposed to water or water vapor.

— *Knoxville News Sentinel*, April 11, 2003

Vets' Radiation Doses Grossly Underestimated

WASHINGTON — U.S. troops whose cancers were caused by radiation from nuclear weapons tests "were denied compensation because the Pentagon grossly underestimated their doses," according to a May 8 report from the National Academy of Sciences (NAS).

Twenty years after Dr. Arjun Makhijani of the Institute for Environmental and Energy Research criticized the Pentagon's official radiation dose estimates, the NAS Board on Radiation Effects Research (BRER), has agreed that the GIs were subjected to up to ten times the radiation dose that was used by investigators who decided whether to approve medical compensation. Based on the discredited estimates, some 3,950 of the 4,000 veterans who applied were denied.

Because of the explosive nature of the BRER admission, the NAS overseers have worked to downplay the findings and avoid reaction. The final report included the ironic assertion that "ionizing radiation is not a potent cause of cancer," and that most of the denials were "appropriate."

The underestimations were made by the Defense Threat Reduction Agency. The BRER critique found that some of the earlier calculations were "illegible or unexplained," that they failed to account for all likely sources of radioactive fallout, and that they downplayed the number or types of detonations to which troops were exposed.

— *New York Times*, May 9, 2003

Radioactive DU Tested in Fishing Waters

SEATTLE, Washington — Glen Milner with the Ground Zero Center for Nonviolent Action filed a Freedom of Information request with the Navy and discovered that depleted uranium munitions are routinely fired into prime fishing waters off the coast of Washington's Olympic Peninsula. The Navy insists that firing depleted uranium into the sea off the coast poses no threat to the environment. DU remains radioactive for about 4.5 billion years. No major studies apparently have been done on the effects of such weapons in the ocean.

— *Seattle Post-Intelligencer*, January 11, 2003

Rocky Flats to Remain Radioactive

DENVER, Colorado — A lack of adequate funding means that Rocky Flats can't be cleaned up.

Nuclear weapons were manufactured at the 6,500-acre site 15 miles northwest of Denver for 40 years and operations contaminated the soil and water. The DOE plans to convert it into a wildlife refuge. Plutonium, uranium and americium will remain and, "there will be at least 10 times more protection," according to Joe Legare, an assistant environmental manager with the DOE.

Currently, 651 Pico curies of contamination per gram of soil are allowed to remain in the surface soil with an aim for 50 Pico curies of contamination per gram of soil. Lowering the contamination level is essential if the government intends to employ a full time Fish and Wildlife Service ranger in 2006.

The DOE plans to continue monitoring for water contamination after Rocky Flats becomes a wildlife refuge. Some contaminated soil lies six feet below the surface and at the present time will be left untouched.

Area citizens want cleanup levels of radiation to match background levels. The DOE says it's impossible given current funding. Plutonium remains deadly for a quarter of a million years and is an alpha emitter that is dangerous to inhale. — *Environment News Service*, October 3, 2002

Lockheed Martin Avoids Indictment After Workers Allege Uranium Cover-Up

PADUCAH, Kentucky — Lockheed Martin, the world's largest weapons contractor, announced that the Justice Department, headed by John Ashcroft, closed a grand jury investigation into whether toxic radioactive waste was improperly handled at the Paducah, Kentucky uranium enrichment facility run by Lockheed. Workers had filed several lawsuits charging the company with lying about its storage and disposal of radioactive waste. At the Paducah Gaseous Diffusion Plant, three miles south of the Ohio River, operators have buried seven million pounds of uranium waste, released 60,000 pounds into local streams and vented 130,000 pounds into the air during the 1950s, 60s, 70s and 80s.

— *New York Times*, May 9, 2003; Deadly Defense: Military Radioactive Landfills, 1988

Strontium-90 Stolen, Dumped, Recovered

LENINGRAD, Russia — Vandals who plundered a remote beacon used for navigation stole steel, aluminum and lead from the device, then threw a hot (570-650 degrees F) radioactive cylinder into the Baltic Sea. The container of deadly strontium-90, weighing five kilograms, melted through about three feet of ice and sank to the seabed where it was retrieved March 28.

The highly radioactive strontium "batteries" power approximately 100 lighthouse beacons in the eastern part of the Sea of Finland. They aid navigation in the Russian part of the sea. *Pravda* reported that the dose of radiation emitted by the 5 kilogram device is 1,000 roentgen per hour eight inches from the cylinder. This dose is enough to kill a human being in just a few minutes.

The same beacon had its strontium stolen three years ago and three thieves are reported to have died of radiation poisoning. They had left the strontium at a bus stop in the town of Kingisep where an unknown number of bus riders were contaminated.

In a related event, two teenagers died of radiation poisoning after stealing a container of unidentified radioactive material from a destroyed chemical factory in Grozny, Chechnya.

—*The Moscow Times*, Apr. 17, 2003; *Pravda*, Apr. 17, 2003

Iraq Nuclear Emergency

BAGHDAD — Reports of looting and destruction at nuclear sites in Iraq has led to what International Atomic Energy Agency (IAEA) chief Mohamed ElBaradei calls "a nuclear contamination emergency." The IAEA has received reports of uranium being emptied on the ground from containers then taken for water storage. Radioactive materials, including cesium-137, have been stolen. Citizens in the area of Al-Tuwaitha, Iraq's largest nuclear research complex, drank water from contaminated water barrels and are now suffering from breathlessness, frequent nosebleeds, rashes and vomiting. Dr. Jaafar Nasser, a doctor at the nearest hospital to Al-Tuwaitha, has diagnosed several people with acute radiation sickness. Doctors are just beginning to keep detailed case files on patients affected by radiation sickness.

ElBaradei said he was especially concerned about "the potential radiological safety and security implications of nuclear and radiological materials that may no longer be under control." On April 10, ElBaradei asked the U.S. to secure nuclear material stored under U.N. seal at Al-Tuwaitha. The U.S. promised that its military would keep the site secure. However, numerous reports of looting were released after the 10th, and the IAEA is seeking permission to send a mission to Iraq to investigate the crisis. There is no coordinated effort being taken on the part of the U.S. to track down items that may have been stolen.

— *Reuters,* May 19, 2003; *Capital News*, Albany NY, May 16, 2003

May 29, 2003

Approval of Irradiated Meat for National School Lunch Program Is Wrong Decision

Statement by Wenonah Hauter, Director of Public Citizen's Critical Mass and Energy and Environment Program

Despite thousands of comments to the federal government from parents, teachers and children nationwide opposing irradiated meat in the National School Lunch Program (91 percent of those commenting were against it), the government ignored the will of its constituents and approved the use of irradiation for the federal nutrition program. By offering schools the option of purchasing irradiated meat for school lunches, which feed 27 million children each year, the U.S. Department of Agriculture (USDA) could become the largest distributor of irradiated food in the world.

Beginning in January 2004, children who participate in the federal program will become guinea pigs in a government experiment that has neglected parental concerns and disregarded numerous studies that show the potentially harmful health effects of eating irradiated food. This horrendous decision benefits the meat industry at the expense of society's most vulnerable citizens – our children. Approving irradiated meat for school cafeterias nationwide means the USDA is willing to put our children's health at risk to help cover up the meat industry's sanitation failures.

Because federal law does not require labeling of irradiated food served in schools, restaurants, hospitals and similar venues, irradiated meat served in school cafeterias need not be labeled. This makes it impossible for parents to know what school cafeterias are feeding their children.

More importantly, the children most likely to eat food purchased through the school lunch program are from lower-income families who cannot afford to send their children to school with homemade lunches. These children must depend on food provided by government nutrition programs. If irradiated meat ends up on their lunch trays at schools, they don't have the option of refusing it.

Irradiation is not an acceptable antidote for food safety problems. From strengthening government meat inspection to addressing the appalling disrepair in many school cafeterias, there is much that should be done to improve the safety of food served to our nation's children at school. But using the purchasing power of the federal government to bail out a struggling industry and serving this questionable product to children have no place in a sensible food safety plan.