

NUCLEAR MONITOR

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DPRK TO REMOVE AND REPROCESS FUEL FROM YONGBYON?

As South Korean foreign ministry officials reported, and satellite pictures seem to confirm, North Korea suspended operation of its 5 MW Yongbyon reactor since early April. Will it remove the irradiated fuel from the reactor for reprocessing? If this is the case it would mean a further escalation in relations between the DPRK and the U.S.

(626.5677) **WISE Amsterdam** - North Korea has suspended the operation of the 5 MW reactor at the Yongbyon nuclear facility, a South Korean foreign ministry official reported. The official said the purpose of the stoppage was unclear, but could be an indication that the North Koreans intend to unload its irradiated fuel and reprocess it.

Earlier in April senior North Korean officials told a visiting US specialist that they would halt the reactor and unload irradiated fuel for reprocessing by the end of the month.

The U.S is planning to put the issue to the UN Security Council, but South Korea opposes such a move. Meanwhile, a senior North Korean diplomat at the UN, Han Song-Ryol added to the

tension by saying in an interview with a US newspaper, that reprocessing would allow North Korea to "increase our deterrent" against the US.

The last time North Korea unloaded and reprocessed its fuel, in 2003, experts say it produced enough weapons-grade plutonium for six to eight nuclear weapons.

In March 1993, after the IAEA reported North Korea had more plutonium produced than it had disclosed, the country announced its intention to withdraw from the Non-Proliferation Treaty. Under the NPT non-nuclear weapons states are not allowed to have a nuclear weapons program and are obliged to allow inspections by the IAEA. Washington believes that North Korea had already diverted enough

bomb-grade plutonium at that time for up to two crude nuclear devices.

Bilateral negotiations between the U.S. and North Korea led to the Agreed Framework of October 2, 1994: North Korea promised to freeze its nuclear program, with the freeze to be monitored by the IAEA. In return, DPRK would receive 2 LWRs build by the international consortium KEDO; and prior to construction of the LWRs 500,000 ton oil annually.

The 1994 deal collapsed after Washington accused North Korea in October 2002 of running a separate program based on enriched uranium to produce nuclear weapons. The Framework states that "Dismantle-ment of the DPRK's graphite-moderated reactors and related facilities will be completed when the LWR project is completed". The reactors were never built, although a ground-braking ceremony took place.

In February 2003 North Korea raised the stakes by reopening the Yongbyon reactor, kicking out international monitors, and claimed it had reprocessed fuel. It said it would give up its nuclear weapons drive in return for rewards but Washington refused to offer incentives.

Six-nation talks involving the two Koreas, China, Russia, the United States and Japan aimed at ending the

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"PAKISTAN WILL NEVER ALLOW IAEA INSPECTIONS"

On 20 April, Pakistan President Pervez Musharraf said he would never allow foreign inspectors into the country to examine its nuclear facilities. Asked whether he would allow inspectors from the IAEA, he said: "Why? Our nuclear program is for the protection of the people of Pakistan. You have to understand that this is a very sensitive issue for us. And our people are sensitive to outsiders coming into our country asking questions. It's as though we cannot be trusted. If the IAEA has questions about our nuclear program then let them ask us. We have nothing to hide. We will give them all the information they want but we will not allow their inspectors into our country to question our officials or inspect our facilities. If we did that

it would be admitting that we can't be trusted."

Musharraf also said the same applies to Abdul Qadeer Khan, often described as the father of Pakistan's nuclear program, but now the country's disgraced chief nuclear scientist, who had supplied Iran with centrifuges.

IAEA inspectors have found traces of highly-enriched uranium inside Iran. But Tehran maintains the traces found their way into the country on equipment bought from Khan's black market network. Pakistan has supplied results from sampling it has conducted itself, but has not allowed IAEA inspectors into the country to do their own sampling.

AFP, 20 April 2005

North's nuclear arms ambitions have stalled after three inconclusive rounds. According to a 2003 'Issue Brief for Congress', main elements of Bush Administration policy are terminating the Agreed Framework, no bilateral negotiations and warning North Korea not to reprocess irradiated fuel.

North Korea declared in February that it had nuclear weapons for self-defense and would not return to talks unless the US dropped its hostility. The five-megawatt reactor at the Yongbyon complex, 90 kilometers (50 miles) north of the capital Pyongyang, is North Korea's only functioning reactor.

Sources: Issue Brief for Congress: *North Korea's Nuclear Weapons Program*, US Foreign Affairs, Defense, and Trade Division, March 2003; AFP, 18 April 2005; AFP, 20 April 2005

Contact: WISE Amsterdam

PLUTONIUM FOUND IN PAINT CANS, FOOD CANS AT LIVERMORE LAB

Livermore Lab is storing plutonium in paint cans and other unsafe containers. Most of the plutonium at Livermore is the nuclear weapons grade isotope, plutonium-239. To illustrate just how serious the danger is, the Lab's plutonium facility has been shut down since 15 January due to a slew of other safety violations and problems. But management wants to resume operations with temporary "compensatory measures" instead of fixing the problems.

(626.5678) **Tri Valley CAREs** - In March, the Defense Nuclear Facilities Safety Board (DNFSB) published a blistering notice in the Federal Register, disclosing that Livermore Lab (California, US) is using thin-walled receptacles for plutonium that "have

no technically justified safety or design basis." The safety board also said: "These container types are generally forms of packaging typically used in non-nuclear applications (e.g., paint cans, food pack cans)."

The DNFSB is commissioned by Congress to oversee safety issues in the Department of Energy (DOE) nuclear weapons complex. In its notice, the DNFSB also stated: "Other than two narrowly focused standards... there is no explicit DOE-wide requirement to ensure the safe storage of nuclear materials," such as plutonium.

The safety board found that Livermore Lab had not fully considered the potential effects of radiolysis and gas generation, oxidation due to leaky seals, corrosion and damage from drops and tools in its choice of

storage containers. The DNFSB also found that 15% of weapons-related nuclear materials in Livermore's plutonium facility are stored in unsafe packages more than five years old.

Oxidation has been found in food pack cans with plutonium metal at Livermore Lab. These food pack cans are thin-walled tinned carbon steel and fail leak tests. The paint cans that Livermore uses to store plutonium are also thin walled. Their lids, like most paint cans, are closed with a mallet. These cans are not air tight.

In addition to paint and food cans, the DNFSB found that Livermore Lab also stores plutonium in thin-walled "slip-lid cans" with loose fitting covers closed only by tape. According to the safety board, these cans are not designed to serve a containment

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25 YEARS AGO

What happened 25 years ago? We go back to news from our 1980 WISE Bulletin, comparing anti-nuclear news then and now.

Then

In WISE Bulletin vol. 2 nr. 2 we wrote about leaking waste tanks at the U.S. Hanford site: "Two former employees at the Hanford nuclear reservation testified at US Senate Hearings that the Energy Department and Hanford management covered up reports of leaking underground nuclear waste. [...] They said that some leaks continue, undetected, while others are detected but not labelled as leaks by the management". (WISE Bulletin vol. 2 nr. 2, January/February 1980)

Now

Several former nuclear weapons production sites in the U.S. are severely contaminated due to bad waste management in the 1950-1970s. Radioactive and toxic contamination has damaged the health of thousands of Energy Department workers and people living nearby facilities. The Department of Energy began to address the environmental harm only after years of public pressure. A special "Environmental Management" program was started in 1989.

Almost from its inception, the program itself has been target of reforms, focused on a faster and cheaper cleanup. The quite predictable result of spending less money and less time is less cleanup. An example: in 2001 the Bush administration announced the goal to "shave" US\$ 100 billion from the government's own estimates of total remediation costs. (Alliance for Nuclear Accountability fact sheet, spring 2004)

According to a 2000 estimate, cleaning up environmental damage from the nation's nuclear weapons program will cost the incredible amount of something between US\$168 billion and US\$212 billion. Compared to estimations two years before by the Energy Department, this was even up to 44% more. According to the DoE, there are 113 nuclear weapons sites nationwide to be cleaned up. The DoE is responsible for cleaning up 1.7 trillion gallons of contaminated ground water, 100 million gallons of highly radioactive liquid, 2,000 tons of irradiated nuclear fuel and 18 metric tons of weapons-grade plutonium. (1 gallon = 3.78 liters)

Some details about the most contaminated sites: US\$55.6 billion to clean up Hanford and an estimated end of the cleanup in 2046. US\$36.8 billion to clean up Savannah River and a cleanup deadline of 2038. US\$21.4 billion to clean up the Idaho laboratory by 2050. US\$7.7 billion to clean up Rocky Flats by 2006 and US\$1.9 billion to clean up contamination at Los Alamos National Laboratory in New Mexico by 2015. (WISE News Communiqué 529, 5 May 2000)

The situation at the Hanford waste tanks is very complex and dangerous. An estimated 206,000 cubic meters (54 million gallons) of high-level radioactive waste, mostly from the reprocessing of irradiated nuclear fuel to extract plutonium, are stored in 177 large underground tanks. In addition to the problems faced in other high-level waste projects, remediation of Hanford's high-level waste is complicated by the sheer volume of waste, mixtures of waste from dozens of processes, and deterioration of the tanks themselves.

Estimates for management and treatment of the waste in the tanks have ranged from US\$13 billion to over US\$30 billion. These costs estimates do not include treatment of the large volumes of contaminated soil, groundwater, residual waste in the tanks, nor dismantlement and disposal of the tanks themselves. Nor do they include the costs of disposing of the waste in a geologic repository. (Containing the Cold War Mess, Institute for Energy and Environmental Research IEER, October 1997)

function. Without the tape, these containers "may not even provide gross retention" of the nuclear materials within.

While Livermore Lab had the largest number of container issues listed in the Federal Register notice, the Los Alamos Lab in New Mexico was cited for a serious plutonium-238 contamination incident of multiple workers in 2003 due to leakage from a slip-lid can that has still not been cleaned up.

The DNFSB recommended that DOE "[i]ssue a requirement that nuclear material packaging meet technically justified criteria for safe handling and storage." The safety board had urged DOE to improve packaging and storage conditions for its nuclear materials more than a decade ago, in 1994. The DOE responded by promulgating rules for storage of plutonium declared excess to its nuclear weapons mission, but not for the "program" materials. So, unsafe storage practices for plutonium and other nuclear materials continue to this day.

Moreover, Livermore Lab's plutonium facility has been shut down since January 15th of this year due to a slew of other safety violations and problems, which illustrates just how serious the danger is. Safety procedures at Livermore Lab's plutonium facility are out of compliance with regulations. Faulty gloveboxes and taped up ventilation ducts have been found there. Now, we learn that plutonium is stored in common paint and food cans.

As shocking as this is, it is perhaps

even more frightening to realize that these are repeat violations and safety lapses. For example, more than a decade ago, the DOE Plutonium Vulnerability Assessment Team found plutonium in bulging cans at Livermore. At the time, Livermore Lab management claimed it would resolve the problems, and that plutonium would no longer be stored in unsafe containers. Not true, as we now know.

Today, Livermore Lab wants to reopen its plutonium facility, again without actually resolving the safety issues. Management wants to resume operations with temporary "compensatory measures" instead of fixing the problems.

Lab management says it will take care of things later, and the local DOE has given the green light. However, the DNFSB has demanded that DOE Headquarters provide technical justification for this decision. And, the safety board has asked that the Livermore Lab plutonium facility remain in stand-by mode in the mean time.

We applaud the DNFSB action. Worker and public safety dictate that the Lab's plutonium facility not be allowed to reopen based on mere promises from management of reform at a later date. Further, the DOE should permanently cease plutonium operations at

LIVERMORE LAB: PLUTONIUM SLUDGE FOR FREE

Alameda County supervisors are asking U.S. Sen. Dianne Feinstein to help secure US\$799,216 (597,000 Euros) in federal funding for a new program exploring the impact of a decades-old distribution of plutonium-contaminated sewage sludge to Livermore residents. The money would become a key part of a three-year program to inform residents of sewage sludge that was distributed free of charge between 1958 and 1973 for use in landscapes and gardens throughout Livermore. The sludge is believed to have been contaminated by plutonium released from the Lawrence Livermore National Laboratory into the city's sanitary sewer system. The program would specifically target private homeowners and residents who may have used the sludge in home gardens and lawns. The program would include an educational campaign to inform residents —

especially newer residents — that the sludge could have been used at their homes, as well as money for soil testing, if residents request it.

The request for the federal contribution is based on a recommendation in a 2002 report from the California Department of Health. That report said the county should take the lead in efforts to address the sludge distribution, and that the federal government should play a role in funding it. But a spokesman from the Lawrence Livermore lab questioned the need for the program, saying a number of agencies, including the U.S. Environmental Protection Agency, the Agency for Toxic Substances and Disease Registry and others, have tested Livermore soil over the past 40 years and have found no adverse health effects from the sludge.
Tri-Valley CAREs Citizen's Watch, April 2005

Livermore Lab and de-inventory the plutonium stored there, not restart the facility and increase its storage limit.

You can help make Livermore safer by sending DOE a letter today at www.trivalleycares.org or http://capwiz.com/wagingpeace/mail/oneclick/_compose/?alertid=6718276.

Source: Tri-Valley CAREs' April 2005 newsletter, Citizen's Watch
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UKRAINE: NUCLEAR DEVELOPMENTS—EUROPE NEEDS ELECTRICITY, UKRAINE IS EAGER TO SUPPLY IT

Since the new government was formed following Ukraine's "Orange Revolution" last Fall, there have been no statements or comments from the new government on the future of nuclear energy in Ukraine. That's why it is very difficult to say anything about the President's or Prime-Minister's plans in this sphere.

(626.5679) **Ecoclub** - Both the President Viktor Yushchenko and Prime Minister Yulia Tymoshenko paid official visits to Russia, but according to the media, the only statements on questions of nuclear energy, nuclear fuel or radioactive waste discussed said that "it would be smart for Ukraine to create its own independent full technological cycle of nuclear fuel production" (*Yushchenko want to see*

Ukraine as a full-fledged nuclear state. December 2, 2004. www.for-us.com).

At the same time, however, statements from the former and current presidents of Ukraine's nuclear entity "Energoatom" indicate that there are many things to worry about.

The nuclear power lobby enjoyed its renaissance in Ukraine during the

tenure of the Minister of Fuel and Energy in the pre-revolution government, who was also a President of "Energoatom" at the same time.

Long fought by the world's environmental community, nuclear units at Khmelnytsky and Rivne NPPs (K2R4) were finished in August and October of 2004 respectively. According to the original construction

plans from the 1970s, the Rivne NPP will consist of 5 units, and Khmelnytsky of 4 units.

Now, the nuclear industry is hoping to finish both projects according to the original plan and also to newer plans called "National Program of Energy Sector Development by 2010" of 1996 and "Strategy of Ukrainian Nuclear Energy Development by 2030".

Both of those suggest construction of additional nuclear capacity in Ukraine. The idea to build three new units had the full support of former President Leonid Kuchma and former Prime Minister and presidential candidate Viktor Yanukovich.

During his unsuccessful campaign, Yanukovich many times ensured the nuclear lobby of his full support and even visited Rivne NPP to lay the historical capsule in the foundation of a future fifth unit at Rivne NPP. By contrast, campaign winner Victor Yushchenko did not address the nuclear issue in his election campaign.

Each of the projects for new reactors at Rivne and Khmelnytsky have many weak points. But the common one to all of them is that Ukraine needs no more energy than it has now to provide its needs. It is clear that the new units are intended for electricity export. In a statement on the Energoatom website (www.energoatom.kiev.ua/nngc.php/ua: *Leaders of Energoatom summarize results of their work in 2004 and make new plans for the future*) on February 1, 2005 it is said:

"We not only switched from being the country with an energy deficit to the country with extra energy, but we also started to export it – proudly says the new president of Energoatom Yuri Nedashkovsky. The fact of extra capacity in western Ukraine, when K3 and K4 are built, will be taken care of by construction of new additional power lines to the central and eastern regions of the country, and also by export of electricity to Europe".

During the administration of former

president Kuchma, agreements with Russia were signed and electricity has been exported to Russia from Ukraine since December 2004. From there electricity also is exported to Moldova and Belarus.

According to the former Minister of Fuel and Energy, there are many countries which want to invest in Ukrainian nuclear power, so that they can receive its energy exports, *while leaving the safety risk and radioactive waste problems to Ukraine* [author's note in italics].

Among them are Russia, Turkey, and Western Europe (in: *Sergiy Tulub about the perspectives of increase in nuclear capacities*, October 26, 2004, www.energoatom.kiev.ua/nngc.php/ua)

The new Yushchenko government's program "Towards People" (February 2005) says that diversification of energy sources and strengthening of Ukraine's energy basis—nuclear power, extraction of coal, oil, gas, and renewable energy sources—are the important strategic goals of the new government. It also aims for rehabilitation of existing and construction of new energy units with an orientation for flexible capacities.

In the nuclear area, the government says it will take steps towards modernization and improvements of safety of nuclear units; realization of the program to continue safe use of NPPs' units and insure Ukraine' participation in the international projects to develop reactors of new generation. However, the document stops short of endorsing new reactor construction.

Most nuclear power opponents claim that Ukraine won't be able to finance construction of new nuclear units on its own. But the nuclear industry believes that "they proved their ability to do such work on their own and finish what was promised" (Energoatom statement on its website, February 1, 2005) when it proved able to complete the K2/R4 projects despite failing to obtain construction loans from the European Bank for

EU ENGAGES UKRAINE ON NUCLEAR ISSUES

The European Union has announced that it wants to strengthen its strategic partnership with Ukraine, including funding the new Chernobyl shelter and also upgrading two new nuclear power reactors which started up last year. The EU aims to support the new government's reforms and assist its increased identification with Europe by increasing its financial assistance through the European Bank for Reconstruction & Development (EBRD) for infrastructure and energy.

UIC Weekly Digest, 15 April 2005

Reconstruction and Development, as Ukraine had initially sought.

It is still unclear which direction the new government and president will take. But with their strong orientation for stronger contacts with European Union, there might be quite a threat for new developments and constructions in nuclear sphere, and new agreements for energy exports to Europe.

If European support and financing for new reactors in Ukraine is sought, support and assistance from European environmentalists will be essential if new reactors in Ukraine are to be blocked.

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REQUIEM FOR YUCCA MOUNTAIN; BARRING A MAJOR CHANGE, THE PLAN TO STORE WASTE THERE APPEARS OVER

What follows is a personal account from Bob Loux of Nevada's Office of Nuclear Projects. Maybe it sounds a bit optimistic, but who knows... Nevertheless, it's a little early to declare the battle over.

(626.5680) Nevada's Office for Nuclear Projects - Without a miracle of some sort, it is all over. Yucca Mountain, the federal government's choice for storing nuclear waste from Cold War-bomb production and nuclear power plants, will never open.

The project that began with a congressional mandate 22 years ago seems perennially stalled, even though US\$8 billion has already been spent on everything from scientific studies and modeling to the building of a railroad deep within Yucca Mountain.

Back in the early 1980s, when Congress

selected Nevada as the final resting place for high-level radioactive debris, most Nevadans vehemently opposed the plan. Our resistance, summed up in the frequently seen bumper sticker: "Nevada is not a wasteland," seemed futile to some people. Not any more.

What's changed, is first of all, the science. What began two decades ago as a trickle of evidence suggesting that Yucca Mountain was incapable of isolating deadly radioactive waste has become a deluge.

But instead of acknowledging what its own scientists and research were

showing — that the geology of Yucca Mountain was so seriously flawed that the site should be disqualified — the Department of Energy turned the concept of geologic isolation on its head.

The agency set about changing rules, regulations and guidelines so as to cover up site deficiencies and permit the program to go forward in spite of overwhelming evidence to the contrary.

That was borne out last July, when the U. S. court of Appeals for the District of Columbia upheld the state of Nevada's legal challenge to the

FALSIFIED

The emails about falsified documents on water infiltration by scientists at the USGS (US Geological Surveys) (see *Nuclear Monitor* 624.5666) will only add to the problems Yucca Mountain (YMP) is facing. Here are some excerpts. Transcripts are taken from <http://reform.house.gov/FWAO/News/DocumentSingle.aspx?DocumentID=7447>

• *Undeleted internal DOE Memo states:* "These e-mails describe deliberate failures to follow quality assurance procedures and irreproducible results related to the infiltration of water into the repository... Depending on the current status of the work to which he contributed, these e-mails may create a substantial vulnerability for the program."

• *E-mail from USGS employee 1 to presumed USGS employee 2 dated 17 Dec. 1998:* "The work plan __ has put together as a result of the meeting this week includes model hand-offs... We're not sure how smoothly this is going to go but this is the approach. Like you've said all along, YMP has now reached a point where they need to have certain items work no matter what, and the infiltration maps are on that list. If USGS can't find a way to make it work, _____ will (but for now they are definitely counting on us to do the job)."

(Emphasis added) "I can no longer wait for USGS to figure this out; I'm moving ahead according to the __/____ work plan we put together this week."

• *E-mail from USGS employee 1 to presumed USGS employee 2 dated 22 Apr. 1999:* "The QA bullshit grows deeper. I may need to say that I did everything by hand for the data package I am submitting that you and presumed PFE reviewed. The program I wrote is not in the system and QA will be all over it like flies on &%#\$. All references to PFE are being deleted. Here's my question: When we go to start QA'ing the site-scale modeling work, will I get taken to the cleaners because I am not referencing either a tech procedure or a scientific notebook?" (QA = quality assurance or quality assured, PFE = presumed Federal employee)

• *E-mail from USGS employee 1 to presumed USGS employee 2 and PFE dated 15 Nov. 1999:* "Don't look at the

last 4 lines. Those lines are a mystery that I believe somehow relate to the work PFE was doing in entering the 1994 data. These lines are not used by _____ (we stop at 9/30/94). I've deleted the lines from the "official" QA version of the files (which do have headers). In the end I keep track of 2 sets of files, the ones that will keep QA happy and the ones that were actually used."

• *E-mail from USGS employee 1 to presumed Federal employee (PFE) dated 30 March 2000:* "The programs, of course, are all already installed otherwise the _____ would not exist. I don't have a clue when these programs were installed. So I've made up the dates and names (see red edits below). This is as good as its going to get. If they need more proof, I will be happy to make up more stuff, as long as its not a video recording of the software being installed."

radiation health-protection standards for the Yucca site. The ruling meant that guaranteeing public safety for 10,000 years wasn't enough; instead, radiation coming from the dump must be safe for as long as 1 million years, the expected lifetime of the dump.

This will be a difficult feat for both the Environmental Protection Agency and Energy Department, and a license to open Yucca Mountain depends on it.

But there have been other signs that Yucca Mountain may be one of the nation's costliest boondoggles:

. The Energy Department has pushed back Yucca Mountain's opening from 2010 to 2012 to 2015 to 2017, all within a few months. The Bush administration cut Yucca Mountain's 2006 budget in half, to US\$651 million.

. Ted Garrish, Yucca Mountain's acting director, has said that the program will need more than US\$1.5 billion a year for the next decade in order to open.

. The National Association of Regulatory Utility commissioners recently resurrected a proposal to take

the nuclear-waste management program away from the Energy Department and turn it over to a quasi-governmental corporation.

. Some industry representatives now delink the repository at Yucca Mountain from the notion that new power plants can't go forward unless Yucca Mountain goes forward. Previously, the industry insisted that getting Yucca Mountain open was essential for building new reactors.

. And, a report by the National Commission on Energy Policy calls for interim, aboveground spent-fuel storage as a backup to Yucca Mountain.

This is a startling turn of events. As the Los Angeles Times put it recently in a news story: "The state has stunned federal officials with its tenacity, legal skill and evolving political acumen, scoring key victories in federal court and in Congress that have repeatedly stalled the project."

The U.S. Congress probably chose Yucca Mountain, 90 miles (150 km) northwest of Las Vegas, as the nation's nuclear dumping ground because it thought Nevada had neither the will

nor the clout to fight back. These days we are surprising everyone — and maybe even ourselves. From Democratic Senate Minority Leader Harry Reid, Gov. Kenny Guinn, Attorney General Brian Sandoval, and Las Vegas Mayor Oscar Goodman, who even promised to lay his body down in front of any truck carrying nuclear waste headed for Yucca Mountain, we've shown our smarts and our power.

Now, it is no longer a question of whether Yucca Mountain will crumble, but when. The project is on track to meet the same fate as other major Energy Department projects of the last few decades, such as the super-colliding superconductor and the Clinch River breeder reactor. Despite billions invested, those projects became so weighted down with mismanagement, cost overruns and political opposition that they simply became impossible. So it is with Yucca Mountain.

Contact: Bob Loux, Executive director of Nevada's Office for Nuclear Projects, based in Carson City, US; email: betsym@hcn.org

OPPOSITION TO PFS MOUNTS FROM PUBLIC INTEREST GROUPS AND TRIBES

If the radioactive waste repository at Yucca Mountain will never be realized, the PFS interim storage will become more important for the nuclear industry as the 'solution' for the waste problem. Chances are very high that the NRC will approve PFS in the coming months. But NRC approval doesn't mean that PFS will necessarily happen, although the fight against it will suffer a major blow and it would be all uphill after that.

(626.5681) **Public Citizen** - Public interest groups and spokespersons from indigenous tribes today charged that the U.S. Nuclear Regulatory Commission (NRC) is exacerbating the nation's nuclear waste problems — and endangering national security — by preliminarily approving a so-called temporary waste dump in Utah known as Private Fuel Storage (PFS).

The proposal to build the dump on the Skull Valley Goshute Reservation in

Utah, 45 miles (70 km) southwest of Salt Lake City, is led by a private consortium of eight commercial nuclear utilities, which plans to "temporarily" store 44,000 tons of irradiated fuel in dry cask containers above ground.

According to the utilities, this site will not serve as a permanent resting place for the nation's waste, but rather would be an interim storage site until Yucca Mountain is opened. Yucca

Mountain, mired in delays and lawsuits, is the U.S. Department of Energy's intended destination for the country's commercial, and a portion of its military, atomic waste.

But PFS poses a national security risk because the high-level nuclear waste would travel on railways through highly populated regions across the US with little to no preparation or training for states and cities, the groups said. Moreover, questions

about the integrity of the waste casks in a crash remain unresolved. Nuclear waste remains dangerous to human health and the environment for hundreds of thousands of years. Further, if Yucca Mountain, which is beleaguered by controversy, never opens, PFS would be poised to become a *de facto* permanent storage site.

"This plan is a fatally flawed shell game, unnecessarily risking transport of dangerous radioactive waste across the country to a *temporary* dump, only to have it moved again someday to someplace else," said Kevin Kamps, nuclear waste specialist at NIRS. "Once parked at Skull Valley, the 4,000 containers of waste would be a radioactive bull's eye for terrorists directly upwind of Salt Lake City."

"Private Fuel Storage is just another industry-driven scheme to further

energy companies' goals of a nuclear-powered future," said Wenonah Hauter, director of Public Citizen's energy program. "We urge the U.S. Nuclear Regulatory Commission to rein in this misguided plan and listen carefully to the state of Utah's legitimate concerns about why its residents should not bear the burden of hosting 44,000 tons of radioactive waste in their backyard."

Utah has been fighting the proposal since 1997. There are no nuclear power plants within Utah's borders, yet Utah's residents are being targeted to bear the burden of 80 percent of the country's commercial high-level radioactive waste.

Further, the private project is sited on a small, impoverished Indian reservation, which raises serious environmental justice concerns, an

IN BRIEF

Draft UN treaty on nuclear terrorism adopted. An ad-hoc committee, established in 1996 by the UN General Assembly, has completed work on the draft text "International Convention for the Suppression of Acts of Nuclear Terrorism" which aims to prevent nuclear terrorism by making it a crime for any person to possess radioactive materials or devices with intent to cause death or injury, damage property or the environment. Damaging a nuclear facility, threatening use of radioactive materials or devices would become crimes and persons organizing or assisting would also be covered by the convention. Agreed by consensus, the draft will now go to the full General Assembly for adoption and will open for signatures on September 14. Twenty-two countries must ratify for the treaty to come into force. Parties to the treaty would be required to make the same acts criminal under national laws "punishable by appropriate penalties which take into account the grave nature of these offenses." It also stipulates that acts designed to provoke terror in the general public or in specific groups cannot be justified under any circumstances "by considerations of a political, philosophical, ideological, racial, ethnic,

religious or other similar nature." Concerns that the convention was attempting to define terrorism, meant treaty was blocked for years but the divisive issue of defining terrorism had been left to a new overall convention on terrorism still under debate. **UN press release, 4 April 2005; AP, 13 April 2005**

Brazil: delay on decision to restart construction Angra-3. The National Energy Policy Council (CNPE) will delay a decision on whether to complete construction of the 1350 MWe Angra-3 nuclear power reactor so that it can take more time to study the issues involved with the possible restart, the Mines and Energy Ministry announced. A decision could be announced during the CNPE's meeting in May. The cost of completing the unit is estimated at US\$1.5 billion (1.12 billion Euro). So far, some US\$700 million has been spent to acquire central components for the plant. Eletronuclear currently spends some US\$20 million (15 million Euro) annually on maintenance of those components. Construction of Angra-3 started in 1983 and the reactor is likely to break the record construction time of Angra-2, which construction took

issue the NRC has been negligent in addressing in recent years.

"Yet again, like the Mescalero Apache in New Mexico that fought off PFS years ago, and dozens of other tribes before us, our sovereign reservation is being targeted by aggressive, giant energy corporations and complicit government agencies," said Margene Bullcreek, a leading Skull Valley Goshute opponent to PFS. "We do not want this radioactive waste dump on our sacred land."

Source: Public Citizens, Press release, 4 April 2005

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from 1976 to 2000.

WNA News Briefing, 13 - 19 April 2005, World Nuclear Industry Handbook 2004

Spain: Vandellos accused of withholding information. Spain's Consejo de Seguridad Nuclear (Nuclear Safety Council, CSN) accused the management of the Vandellos nuclear power plant of withholding information and giving priority to generation over safety, in a long dispute over inspection and management of seawater corrosion in the Vandellos-2 essential service water system. The charges are in a 23-page report the CSN made public April 7. The report says inappropriate safety management at the station goes back to 1993. The current incident concerns rupture of an essential service water system pipe 25 August, 2004. The incident is termed by the CSN the most important nuclear safety issue since the 1989 fire that led to the permanent closure of the Vandellos-1 gas-cooled reactor. In a statement issued on 8 April, Vandellos-2 operator ANAV said it "totally" rejected valuing production over safety and denied "hiding" information from the CSN. The CSN approved an action plan

proposed by ANAV last month to improve safety management. The unit has been down for regular refueling since March 16.

Nuclear News Flashes, 8 April 2005

UK: Military complaint rejected. The European Court of Justice has ruled in favour of the UK Government in a dispute over the regulation of military nuclear facilities. The European Commission took the UK to court over the disposal of waste from decommissioning a small reactor at the Royal Naval College in Greenwich. The Government said it did not have to inform the commission of its waste plans. Now the court has agreed that national security means military sites should be exempt from environmental regulations. In addition to the Greenwich case, the Nuclear Free Local Authorities has lodged formal complaints with the commission on the same issue involving discharge authorisations from the Aldermaston weapons factory and the commission itself has also taken action against the UK over the Devonport nuclear submarine facility.

N-BASE Briefing 450, 16 April 2005

SA Intelligence Chief: Congo had enrichment program. Claims by the new head of South African's intelligence agency about nuclear enrichment in the Democratic Republic of Congo are greeted with some incredulity. Instead, Central African experts are bemused about why Billy Masetlha, who was before his current promotion to director-general of the National Intelligence Agency, deeply engaged in the Congo, should make what appear to be sensationalist claims on issues where he should be well-informed. According to a February 27 Johannesburg Sunday Times report Masetlha said South Africa was "deeply concerned" about missing "weapons of mass destruction" in Africa, particularly weapons-grade uranium from an alleged nuclear enrichment program run by the late Zairean president Mobutu Sese Seko. Masetlha said "a Western power" had helped Mobutu to develop a nuclear program to give him "the capacity to fight in the Cold War". Nuclear

material could have fallen into the hands of terrorists or criminals, he said. However, analysts give no credence to this story - first because it would have been politically insane to entrust Mobutu with such a facility, and second because the only evidence of nuclear facilities in the DRC relate to the research center at Kinshasa university, now dilapidated but well-known to the IAEA and to the US, who supervised the center. In 2003 and 2004, IAEA experts visited Kinshasa to investigate the potential hazard of leaks because of the erosion of the reactor installation. The story of Mobutu's alleged enrichment program has been circulating for some time and in 2002 an official Congolese website mentioned that the first phase of the Inga dam project in 1972 "provided power for a uranium-enrichment facility at the site". According to Masetlha, a program for enriched "weapons-grade uranium" was established on the banks of the Congo "in the late 1970s, early 1980s". It was "discontinued by the early 1990s because of "problems with security" in Zaire.

SouthScan (UK), 25 March 2005

UK: Core cracks may force shutdown of reactors. According to the British New Scientist magazine, British Energy has found cracks in the graphite bricks at one of the two plants in Hartlepool. Cracking is now suspected in six other reactors at Heysham, Hinkley Point and Hunterston. Documents obtained by New Scientist have revealed that reactors in many UK nuclear power stations are in danger of developing cracks in their graphite cores. This could force some plants to close earlier than expected, dealing a blow to the idea that nuclear energy can become a "green" option in the fight against global warming. The documents obtained under the UK's Freedom of Information Act reveal unsuspected problems with the country's ageing advanced gas-cooled reactors (AGRs). Government nuclear inspectors say they have uncovered weaknesses in the safety analyses carried out by British Energy, the company that runs the reactors. The UK's 14 AGRs provide nearly a fifth of the country's electricity. The graphite

bricks that form part of their core help sustain the nuclear reaction by slowing down fast-moving neutrons. They also play a vital part in maintaining the core's structural integrity.

New Scientist, 25 March 2005

Lithuania repository for LLW and ILW: Old habits die hard. Lithuania is expected to name a site for the repository for low- and medium-level radioactive waste in the coming months. Two possible sites have been identified and the Environment Ministry is currently reviewing the Environmental Impact Assessment (EIA) for the sites. The repository is designed to hold 100,000 cubic meters of waste, but can be extended if Lithuania decides to build a new reactor and is planned to be operational in 2011 or 2012. It is a solid tradition to locate nuclear facilities by preference near to borders. Guess where the two preferred sites for the repository are? Yes, that's correct: close to the Belarus border. The preferred site less than a kilometer! RATA (Lithuania's Radioactive Waste Management Agency) said that the EIA shows the repository will not have any detrimental effects on neighboring countries. Janenas, director of RATA, added that the site closer to Belarus has better geology, with more natural barriers than the one further away. The Belarussions "may, for psychological or political reasons have a negative reaction," Janenas said. "But they have to understand that if we do nothing, there will really be an environmental problem". The European Bank for Reconstruction and Development (EBRD) and the European Commission will pay for the repository.

Nucleonics Week, 14 April 2005

Radiation exposure and non-cancer deaths. The French independent organization for radioactivity measurements, CRII-Rad, launched a project to open a laboratory in Minsk, the capital of Belarus. Aim of the lab would be to establish scientifically a link between contamination with Cesium-137 and non-cancer diseases, notably cardiological problems. Yuri Bandazhevsky started the research 16 years ago in the town of Gomel, which

Book Review "The most important issues..."

Dr. Conrad Miller, emergency room physician, poet, surfer, radio show host, political activist and long-time member of NIRS has written a book that reveals just how threats such as deregulation of nuclear power and weapons waste, deployment of nukes in space and the gamut of food policy issues including food irradiation, genetic alteration, factory farming and aquaculture are all part of the larger picture of international corporate takeover of control.

Dr. Miller explains how the international systems work and provides horrible-but-true examples of the World Trade Organization (WTO) and the various trade agreements including GATT (General Agreement on Tariffs and Trade), NAFTA (North American Free Trade Agreement), FTAA (Free Trade Agreement of the Americas) and the United Nations organizations using their power to overcome local rights to self determination, health and safety.

Importantly, Dr. Miller has gone to the organizations most closely challenging these threats to provide us with actions we can take. He specifically describes the way the US nuclear transportation regulations were weakened via creation and adoption of UN transport

recommendations, to set the stage for deregulating nuclear waste in the US and internationally. The past and future plans for use of plutonium in space despite the immense, irreversible dangers are explained technically and politically. Various threats to our food supply which make it harder to eat and stay healthy are described along with the impact of the corporate media and media consolidation on all the issues.

The book is entitled "*The Most Important Issues Americans Think They Know Enough About... Part 1*" and subtitled "*How the World Trade Organization and Corporations are Strengthening Their Influence Over Our Laws, Tainting Our Food, Forcing Radioactive Materials Into Our Homes, and Encouraging Our US Military to Weaponize Space Under the Cover of 'Missile Defense' to Deviously Promote Their Interests.*"

Miller approaches some pretty dismal and urgent situations in an enlightened, digestible, entertaining and motivating way. So get a copy and get moving. Copyright 2004, 266p.

Available from www.crestofthewave.com or Crest of the Wave POBox180 Watermill, NY 11976-0180 USA.

ruled judge (ret.) Vardi Zeiler late March. The workers are therefore not eligible for compensation from the state, which they are suing, said Zeiler, the arbitrator between the workers and the state. However, the judge also could not rule out a causal connection between the workers' disease and their exposure to chemicals and dangerous, cancer-causing substances during their work in the reactor. He said he did not have sufficient data to rule out the connection between the workers' morbidity and their exposure to dangerous substances. He blasted the nuclear reactor's management for failing to put together the relevant data and said the data and evidence provided by the management was "flimsy, incomplete and inaccurate." The six plaintiffs in whose case the medical experts did not rule out the causal relation between the disease and their work can take their suit to the next stage - proving the state's guilt. **Haaretz (Israel), 24 March 2005**

Marshall Islands: N-tests still causing cancer 50 years on. A study by the US National Cancer Institute (NCI) has found that the number of cancers caused by nuclear bomb testing in the Marshall Islands is set to double, more than half a century after the tests were conducted in the tiny Pacific nation. The NCI completed the study in September last year but it was only publicly released mid April after officials from the Marshall Islands noticed a reference to it in a US Congressional report and requested a copy. The study by the NCI estimated 530 cancers had already been caused by the tests, particularly the explosion of a 15 megaton hydrogen bomb codenamed Bravo on March 1, 1954. The study said another 500 cancers were likely to develop among Marshall Islanders who were exposed to radiation more than 50 years ago. "We estimate that the nuclear testing program in the Marshall Islands will cause about 500 additional cancer cases among Marshallese exposed during the years 1946-1958, about a nine percent increase over the number of cancers expected in the absence of exposure to regional fallout," the NCI study said. The study said because of the young

is heavily contaminated after the Chernobyl catastrophe. Professor of medicine Bandazhevsky, specialized in anatomical pathology, studied the impact of Cs-137 on the local population, including through autopsies that revealed the heart as a target organ for Cs-137. However, his conclusions were never published in a peer-reviewed scientific journal. Cs-137 has been linked only to cancer, though research is beginning to suggest relationships between radiation exposure and non-cancer mortality. In June 2004, Unsear (UN Scientific Committee on the Effects of Radiation) expected to publish a report within the 'next three years' on lower-dose radiation exposure and excess non-cancer deaths. Norman Gentner, the committee's secretary said that

knowledge indicates that the excess mortality from non-cancer diseases after exposure to radiation is between 50% and 100% of that from cancer. This means that -if these findings are substantiated- the total risk estimate from radiation exposure could be doubled compared to what has been assumed up to now. CRII-Rad is launching an international appeal for donations to fund the new laboratory, with an initial target of 150,000 Euro (US\$ 92,000) **Nucleonics Week, 7 April 2005 and 17 April 2004**

Judge: Reactor workers cannot blame cancer on radiation. Israel: There is no causal connection between the cancer contracted by 31 nuclear reactor workers and the level of their exposure to radioactive substances,

age of the population when exposed in the 1950s, more than 55 percent of cancers have yet to develop or be diagnosed. At the time of the Bravo test at Bikini Atoll, US officials played down the health implications for islanders. Bikini Islanders were not evacuated despite their land's being engulfed in snow-like radioactive fallout for two-to-three days after the Bravo bomb, which was equivalent to 1,000 Hiroshima bombs. Although many islanders developed severe radiation burns and had their hair fall out as their land was engulfed in fallout, US Atomic Energy Commission authorities issued a statement following the test saying "there were no burns" and the islanders were in good health. US officials later allowed islanders to return home to live in radioactive environments without performing any cleanup work on their islands. The US paid 270 million dollars (approx. 200 million Euro) in a compensation package in the mid-1980s part of which went to the Majuro-based Nuclear Claims

Tribunal. But the tribunal says only a limited amount was made available for payouts and has described the original settlement as "manifestly inadequate". (see also *WISE News Communique* 454: "Marshall Islands 1944-1996")

AFP, 17 April 2005.

Rokkasho: MOX fuel plant Okayed.

Aomori Governor Shingo Mimura on 14 April accepted Japan Nuclear Fuel Ltd.'s (JNFL) request to build MOX Fuel Fabrication plant in the village of Rokkasho. Mimura said Aomori Prefecture and Rokkasho will each receive 980 million yen (6.8 million Euro) per year in central government subsidies for two years beginning fiscal 2006 in return for hosting the facility. The subsidies are in line with electricity provision laws. JNFL said the MOX fuel plant is expected to have a maximum annual capacity of processing 130 tons heavy metal of plutonium and uranium metallic content. It will be built within the grounds of the Rokkasho reprocessing plant at an

estimated construction cost of 120 billion yen (0.8 billion Euro). The two plants will be connected underground for the delivery of plutonium and uranium. On 9 April, nearly 2,000 protesters gathered to call for shutting down the nuclear complex (including a reprocessing plant). The rally, organized by Gensuikin, and several other anti-nuclear groups, demanded officials to abandon plans for full-fledged operations scheduled of the reprocessing plant to start in 2006. The 2.1-trillion-yen (US\$19-billion; 15-billion Euro) reprocessing plant at the site, about 580 kilometers northeast of Tokyo, began tests with radioactive materials in December last year. The plant's startup has been delayed for years. The government's energy policy calls for converting as many as 18 nuclear power reactors to use MOX by the year 2010, as a transition to fast-breeder reactors, which aim is to produce more plutonium that is used as fuel. The reactors would use MOX from the Rokkasho fuel plant.

AP, 9 April 2005, Kyodo, 15 April 2005

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THE NUCLEAR MONITOR

The Nuclear Information & Resource Service was founded in 1978 and is based in Washington, DC. The World Information Service on Energy was set up the same year and is housed in Amsterdam, Netherlands. NIRS and WISE Amsterdam joined forces in 2000, creating a worldwide network of information and resource centers for citizens and environmental organizations concerned about nuclear power, radioactive waste, radiation, and sustainable energy.

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Petition

Don't forget to sign the Petition for A Sustainable Energy Future, at www.nirs.org and ask your friends and colleagues to sign too! We will be giving the petition to Senators in the summer, so there is plenty of time to gather more signatures.

The NUCLEAR MONITOR

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