

NUCLEAR MONITOR

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SOUTH KOREA'S REPUTATION TARNISHING RAPIDLY

As the international community attempts to reestablish effective non-proliferation regimes, the news that South Korea, like its Northern neighbor and Iran, could be referred to the UN Security Council following the confirmation of clandestine nuclear experiments sent shock waves around the world.

(615.5634) WISE Amsterdam -

Although it first appeared that the government of South Korea had made a 'courageous' admission of illicit experiments by a few 'rogue' scientists many years ago, it now emerges that Seoul has not been quite as candid as it would have the world believe.

Initially the story was that the South Korean government had informed the IAEA in mid-August that scientists, acting without official authorization, had enriched a tiny amount of uranium in 2000 out of 'scientific curiosity'. Seoul was quick to assert that the experiment ended 4 years ago, almost as soon as it had begun, and insisted that machinery used had been destroyed, although no precise date could be given for this.

Atomic vapor laser isotope separation (AVLIS) technology had been used to produce 0.2 grams of enriched

uranium (to about 10% u-235) at the Korea Atomic Energy Research Institute (Kaeri) in Daejeon.

Then, the world learnt that in the early 1980s other 'rogue' scientists, again working without approval, had also extracted "milligrams" of plutonium in another experiment led by 'curiosity'. This involved spent fuel from a research reactor, which operated between 1972 and 1995. There were reports that these experiments had already been subject to IAEA attention but details were sketchy.

Although South Korea did abandon its nuclear weapons program in the 1970s, it has emerged that IAEA inspectors have harbored suspicions regarding the country's nuclear program for years now.

Some diplomats and analysts have even accused Seoul of a deliberate

cover-up and question the veracity of claims that all was done for civilian purposes alone.

South Korea signed the IAEA's Additional Protocol in February but informed the agency of the illegal experiments only a few weeks ago.

International reaction

The first reaction from US officials was carefully gauged admonishment, later followed with praise for Seoul because it had volunteered the information to IAEA. Later, Under Secretary of State John Bolton said that Seoul could expect no favors from Washington in the matter.

According to the *Washington Post*, the Bush administration has independently started an investigation to discover whether the South Korean researchers were trained during the US-South Korean exchange program on nuclear technology. If the enrichment technology had been transferred from the US to South Korea, it could trigger angry responses from North Korea or Iran.

During an interview with Reuters on 14 September, Secretary of State Colin Powell said that secret experiments did not necessarily suggest "an interest in a nuclear weapons development program" – except maybe if you are *not* one of Washington's close allies.

Powell also called for the IAEA to be allowed to investigate and judge

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SOUTH KOREA FOLLOWING JAPAN?

The South Korean government's admission that uranium was illicitly enriched in South Korea is yet another serious challenge to efforts for a nuclear free north Asia. The scientists insist that the research was solely for the "domestic production of nuclear fuel." The Japanese government has said that it does not believe that South Korea had any intention to develop nuclear weapons.

Both reprocessing and uranium enrichment are clearly prohibited in the Joint Declaration for Denuclearization in Korean Peninsula of December 1991. However, Japan is actively separating enriched uranium at the Rokkashomura centrifuge plant (1050tSWU/year) in Aomori Prefecture. The Rokkasho Nuclear Fuel Facility is a huge complex that includes a reprocessing plant

expected to start operation in a few years, temporary storage for the high level radioactive waste, and the permanent storage for the low level waste.

Plutonium Action Hiroshima and other Japanese citizens' groups opposed to uranium enrichment, reprocessing and plutonium utilization have issuing warnings that Japan's enormous plutonium program, although allegedly for "peaceful use", will inevitably provoke similar programs in neighbouring countries. If Japan can declare its intention as a "peaceful" one, or energy use, why should others be forced to give up such technologies.

Plutonium Action Hiroshima (WISE Japan), 5 September 2004

whether or not further action was required. Very understanding.

North Korea, on the other hand, is not as tolerant. Pyongyang quickly warned of a renewed nuclear arms race in northeast Asia and has accused the US of double standards in its handling of the affair so far. The Northern state also alleges that South Korea is running a nuclear program for military purposes with US support and cites the curiosity experiments as proof.

Nuclear industry journal, *Nuclear Fuel*, has reported that both Russian and US laboratories have been implicated and

are thought to have assisted the Korean Atomic Energy Research Institute (Kaeri) with the experiments.

Since South Korea has proved itself capable of starting a weapons program, the North may now claim that its own is required for national security. Observers say that North Korea is now seeking to delay the restart of six-party talks on dismantling its nuclear programs after it reportedly became reluctant to set a date for the next stage of the talks.

IAEA inspections

Five IAEA inspectors are expected to arrive in Seoul on Sunday (19 Sept.) for a seven-day visit to further investigate the nuclear experiments. They will supposedly focus specifically on the 150 kilograms of uranium metal produced in the early 1980s at three facilities not declared to IAEA.

At an IAEA board meeting in Vienna on Monday (13 Sept.) the director general, Dr. Mohamed ElBaradei, revealed that some of the uranium metal used in enrichment experiments in 2000 had been produced in the 1980s. The *Washington Post* also reported that ElBaradei also informed

the board that South Korea only admitted to the plutonium experiments when forced to after being confronted with evidence amassed by inspectors over a number of years. South Korea was also found to have produced nuclear equipment in the mid-1990s. Dr. ElBaradei is expected to make recommendations as to whether or not to refer the issue to the Security Council by November.

In stark contrast, Iran was praised for its recent efforts to cooperate and ElBaradei explained that several issues regarding Iran's nuclear work had been clarified. Still, he warned Tehran not to continue any centrifuge building activities. Hoseyn Moussavian, Iran's chief negotiator at the UN, confirmed that construction of large-scale centrifuge had been halted, stating, "We have taken maximum steps for confidence-building".

It is worth noting that South Korea enriched uranium to a level four times higher than Iran and years before. All things being equal, South Korea should expect to find itself in much more trouble than Iran is in now – unless its influential friends can produce provide a get out of jail free card that is.

Even if it is proven that the scientists worked without government approval, it still bodes ill for non-proliferation regimes. Seoul, like other signatories, should be able to monitor and control the activities of its scientists otherwise curiosity could end up killing the cat.

Sources: *NuclearFuel*, 13 September 2004; *The Washington Post*, 13 September 2004; Reuters, 15 September 2004; BBC News 2, 3, 9, 13 September 2004; *The Guardian*, 14 September 2004; www.Bloomberg.com, 15 September 2004; The Korea Times, 15 September 2004; www.Asahi.com, 4 & 16 September 2004

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25 YEARS AGO

What happened 25 years ago? We go back to news from our 1979 WISE Bulletin, comparing anti-nuclear news then and now.

Then

In issue 6 of *WISE Bulletin* we reported on a demonstration against the U.S. Indian Point reactors: "An estimated 4,000 demonstrators marched on Indian Point nuclear power plant. Some protestors, wearing blue armbands, used rugs and a rope ladder to climb over the barbed wire of the front gates. Others tunneled under the gates. Supporters padlocked themselves to the gates and others distributed candles and the names of Hiroshima atomic bomb victims. 102 persons were arrested". (*WISE Bulletin* 6, October 1979)

Now

The Indian Point plant has two operating reactors, plus a third which was closed in 1974. Just 40 miles (60 kilometers) from the center of New York City, it has been the source of concern to those aware of the consequences of a possible accident. There are around 21 million people living within a 50-miles radius of Indian Point on the Hudson River. (*WISE/NIRS Nuclear Monitor* 565, 22 March 2002)

Noting the absurdity of Indian Point's vicinity to a major metropolitan area, Robert Ryan of the U.S. Nuclear Regulatory Commission, stated back in 1979: "I think it is insane to have a three-unit reactor on the Hudson River in Westchester County, 40 miles from Time Square, 20 miles from the Bronx. . . It's a nightmare from the point of view of emergency preparedness." (*WISE/NIRS Nuclear Monitor* 592, 12 September 2003)

A 1982 study carried out by Sandia Labs for the NRC, estimated that a meltdown at the Indian Point 2 reactor would cause "46,000 Peak Early Fatalities, 141,000 Peak Early Injuries, [and] 13,000 Peak Deaths from cancer." But these are conservative estimates since population has increased since within the 17.5-mile radius peak fatality zone and the 50-mile radius peak injury zone. According to the study, property damage from a reactor meltdown would be estimated conservatively between US\$500.5 and US\$573.5 billion. (*WISE/NIRS Nuclear Monitor* 565, 22 March 2002)

A 1997 Brookhaven National Lab Report, also prepared for the NRC, claims that a disaster involving a spent fuel pool fire could cause up to 143,000 cancer deaths, as much as US\$566 billion in economic damages, and could make an area up to 2,790 square miles around the plant uninhabitable. (*WISE/NIRS Nuclear Monitor* 592, 12 September 2003)

After the terrorist attacks of 11 September 2001, fears about Indian Point increased. For that reason a broad coalition of nearly 40 environmental and civic groups and elected officials petitioned the NRC to suspend the operating licenses of both reactor units 2 and 3. (*WISE/NIRS Nuclear Monitor* 565, 22 March 2002)

In 2003, the NGO Riverkeeper started an advertising campaign equating the Indian Point reactors with "weapons of mass destruction", which they would be if damaged or destroyed in a terrorist attack. (*WISE/NIRS Nuclear Monitor* 592, 12 September 2003)

A new report, called Chernobyl on the Hudson, commissioned by Riverkeeper, concludes that an attack on one of the Indian Point nuclear reactors could cause thousands of early deaths, as many as hundreds of thousands of cancer deaths, and a trillion dollars or more in property damage. (See elsewhere in this issue)

MIHAMA, JAPAN: TRACKING DOWN THE TRUTH

Since the Mihama-3 accident, which occurred on 9 August, killed five people and injured six others, the Citizens' Nuclear Information Center has been seeking out information, making as much noise as possible and generally getting up the nose of the nuclear regulators, as we try to get to the bottom of the matter.

(615.5635) CNIC - On the evening of 18 August, along with the Japan Congress Against A- and H-bombs, we held a demonstration in the middle of Tokyo. There were only about 130 of us, but the spirit was good. After two minutes silence for those who lost their lives in the accident, we wended

our way through the streets of Nagatacho and Akasaka, past the offices of the Ministry of Economy, Trade and Industry (METI) and on to Hibiya Park.

We delivered our message of protest outside METI, the ministry with responsibility for regulating the

nuclear industry, but doubt if our voices carried to the boys in charge.

Realizing that the METI moguls would not hear us from the street, we took our message inside the office of its daughter agency, the Nuclear and Industrial Safety Agency (NISA). NISA

is currently conducting its own investigations into the causes of the Mihama accident, but, skeptical that unpalatable details will be addressed, anti-nuclear groups including CNIC arranged several meetings with NISA staff and presented them with a long list of questions. We are looking for hard data, but are given marshmallow replies.

They use the fact that the Fukui police department is conducting criminal

investigations as an excuse for restricting the publication of information. They say there is no problem, however enough damning evidence has come dribbling out over the month since the accident occurred to prove that the current inspection regime and the nuclear safety system does not work.

After the accident NISA ordered operators of nuclear reactors to check their records to see if any other areas

had been missed off the list of places that should be inspected in the piping of their reactors. With regard to Pressurized Water Reactors (PWR), 'voluntary' guidelines for inspections of the secondary coolant system were implemented in 1990.

If one is to believe the responses of the power companies, fifteen locations were missing from the list that implemented these guidelines and four others that were originally missed were subsequently added to the list; the latter four were identical to the pipe that burst at Mihama-3.

However, of the over 80,000 locations that were listed, almost 20,000 had never been checked (PWR only), so even if these locations made it onto the list, there is no guarantee that they all meet the minimum standards. Besides which, we suspect that there are many other instances that have not been revealed.

NISA knows perfectly well from details that have emerged since the accident that (a) pipes other than the one that burst, including in other reactors, have thinned to below the regulatory minimum; (b) pipes that don't fall within the 1990 guidelines have thinned below the regulatory minimum; (c) pipe thinning has occurred at varying rates, even for identical pipes. Under these circumstances, how can they be sure the pipes that have not been checked are safe?

The proceedings of the official investigations, as well as our own meetings with NISA, lead us to believe that NISA's aim is to give the 1990 guidelines a clean bill of health, possibly recommending a few minor additions to the inspection list, and to keep reactors operating as long as possible.

We believe that the guidelines are fatally flawed and that the inspection regime should be made much more comprehensive. NISA should be strictly verifying companies' inspections rather than rubber-stamping the companies' reports, as has been the case till now. Old reactors should be

MIHAMA TOWN COUNCIL OUTRAGED

Mr. Teruyuki Matsushita, a member of the Mihama Town council, was holding a workshop at the ecological group he organizes when the accident occurred at Mihama nuclear power plant on 9 August. He first heard about the accident at around 16:00 when alerted by a friend who had been watching CATV and heard that something terrible happened at the NPP. The emergency alarm that should have alerted the whole town to the accident was not used.

Matsushita, a long time anti-nuclear activist, says that this accident has had a far stronger impact on residents and workers than ever before. Workers from the subcontractors were especially shocked, some so seriously that psychological treatment was required. The pipe rupture happened at 15:22 and because the accident occurred during a break, most workers narrowly escaped the disaster. Had it started one or two minutes earlier or later, more would have been injured or killed.

Matsushita expresses a special concern for the inhumane condition of NPP workers. For example, there are no rest rooms at the secondary system site, although they are provided at the primary system.

Recently the workers from subcontractors have faced tougher conditions because of the upcoming liberalization of electric power. The utilities have had to reduce costs, shorten the duration of regular inspections and cut wages. Temporary workers will no longer be able to

expect such good pay as before. Under these circumstances, the chances of hiring skilled workers will be more remote, and thus the quality of the work is threatened.

In July this year, reduction of the pipe wall was found in a coolant pipe at Ohi NPP near Mihama - Ohi is also operated by KEPCO. It was a dangerous case because the problem was found closer to the reactor itself. If KEPCO had taken it seriously and stopped to check other reactors including Mihama, the disaster could have been prevented, says Matsushita.

The residents were surprised to hear that the damaged pipe from Mihama-3 had not been checked for 28 years, since the reactor started operation. The shortening of the duration of checking angers them because aged reactors are known to need longer duration to prevent potential disaster.

The city council's anger at KEPCO's sloppy operation and controls drew KEPCO president to Mihama on 9 September to offer his apologies. Every member of the council spoke and strongly condemned KEPCO for its irresponsibility, Matsushita commented that it was more like an anti-nuclear rally. He added that KEPCO should not be entitled to operate nuclear power plants any more, and that the only way to ensure the residents' security is by decommissioning reactors.

Source and contact: Satomi Oba, WISE Japan; Email: Kota-goldencat@kfa.biglobe.ne.jp

shut down immediately and reactors under construction should be moth-balled. The Mihama-3 case proves that power companies and regulators can't be trusted to do their jobs properly, so no system of management will guarantee the safety of nuclear reactors.

One reason for this accident was that insufficient importance was placed on the secondary coolant system. Problems in the secondary system of nuclear reactors can cause problems in the primary system, which can in turn lead to major accidents. Another reason for the accident relates to the fact that liberalization of the Japanese

electricity market is proceeding, while Japan's nuclear reactors are aging.

In this context, contradictions arise between the demand for cost competitiveness and the demand for safety. In Japan economic factors have been prioritized over safety. Reactors continue to age and liberalization is proceeding, so this accident should be seen as a premonition of bigger accidents to come.

CNIC will continue to delve into this case in attempt to uncover what really happened and why. While the nuclear club does its best to cover up its

failings, we see it as our role to expose and draw attention to them. If the public takes its eye off them for a minute, even the grossly inadequate safety system that is in place will be whittled away to nothing.

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U.S.: NRC RULES AGAINST DOE YUCCA SUBMISSION

The U.S. Dept. of Energy (DOE) attempted to initiate the license application phase of the proposed Yucca Mountain dump for highly radioactive waste by "certifying" over 5 million pages of documentation on June 30. But the State of Nevada (NV), supported by briefs filed by NIRS/WISE, Public Citizen and NV Nuclear Waste Task Force, challenged DOE's rushed filings before a Nuclear Regulatory Commission (NRC) Atomic Safety Licensing Board (ASLB).

(615.5636) NIRS - NV's lead attorney, Joe Egan, argued that DOE's documents were incomplete, impossible to access effectively, and not even posted on the official NRC "Licensing Support Network" (LSN) website (www.lsnnet.gov).

ASLB ruled against DOE on August 31, concluding that "DOE did not meet its regulatory obligation to make all of its documentary material available and [thus we] grant the motion to strike DOE's certification." This compels DOE to make publicly available its documentation in full before NRC can docket its submission, representing another significant delay for the project. (1)

NRC regulations require DOE to certify "all" its documentation at least six months before it files a license application with ASLB. This serves as the "discovery" phase of the proceeding to allow those, such as NV, environmental groups, and others, to review DOE's documents and prepare contentions against the proposed dump. Once DOE successfully certifies

its complete document submission, parties intending to challenge DOE's license application have 90 days to submit their own documents which they will rely on to support their contentions during the entire 3 to 4 year proceeding.

ASLB's ruling means DOE cannot meet its "artificial or self-imposed" (2) deadline of filing its license application with NRC by the end of 2004. It also means that NV, NIRS/WISE, and others intending to file contentions do not have a submission deadline of September 30, which would have been the case if ASLB had not rejected DOE's June 30 submission.

ASLB ruled that DOE has yet to submit all its Yucca documents to the LSN. In February, DOE reported that "DOE input to LSN is projected to contain approximately 30 million pages, comprising about 3 million documents." (3)

Given that DOE submitted only 1.2 million documents comprising about 5.6 million pages on June 30, what happened to nearly 2 million

additional documents comprising of 25 million more pages? (4)

During the course of oral arguments on July 27, chief ASLB Administrative Judge Thomas Moore asked the attorney representing DOE "what is it about the word 'all' that I'm missing?" His sarcastic tone indicated that it was DOE that was missing something. (5)

DOE withheld the text of countless documents it regards as "privileged." As an example of key missing documents, Egan explained that he had searched DOE's website for "alloy-22 corrosion" [waste burial container] as "one of the most critical topics in this proceeding." The search yielded over 9,000 hits, but nearly 5,000 appeared as headers only, lacking text.

DOE claimed they were "privileged," not appropriate for public dissemination. ASLB reported that "[our] brief review of these 4,876 headers reveals that the documents are mostly technical reports, studies, minutes and data. It strains credulity to believe that any substantial number,

much less all, of the 4,876 documents can fairly be withheld as legally privileged."(6)

Egan had also entered the search term "party" into DOE's website, which yielded the headers (but not text) of dozens of documents whose title contained the term 'party,' such as 'bachelor party,' 'party for Debbie,' 'December 13 party,' 'Thanks for the party,' 'housewarming party,' and 'pool party'. All were marked "privileged." This led him to ask "What is DOE doing on government time?" ASLB responded "It is hard to imagine that such documents qualify for any legal privilege." It is also hard to imagine what those documents were doing in DOE's Yucca application submission at all, when countless documents about critical issues are missing. (7)

ASLB also ruled that DOE's withholding of broad categories of "archival" emails is unacceptable. Egan argued that "the word 'archival' is a term that DOE has contorted into Orwellian form."(8)

DOE categorizes e-mails as archival if the author is no longer at DOE, even if that person held a key position for many years. Concurring with NV's argument, ASLB noted that "DOE did not review or produce relevant e-mails by even highly significant individuals if they are not current employees or

contract personnel. For example, the e-mails of Lake Barrett, DOE's former Program Manager, appear to be part of the four million unreviewed and unproduced documents."

Of those, DOE estimated that only 10%, a "very low percentage," would be relevant. ASLB disagreed with DOE, ruling "[we] cannot conclude that the conscious exclusion of 400,000 potentially relevant e-mails, including recent ones from key project personnel, meets the good faith standard. Such e-mails are often the source of unvarnished information that can be invaluable to the parties and decision-makers."(9)

NV's attorneys also challenged DOE's posting merely to its own website rather than directly to the LSN by arguing that a fundamental principle of civil litigation and the discovery process is to not trust your adversary with their own documents. "We know what DOE does with documents," Egan concluded. (5)

ASLB concurred, ordering DOE to post all documents to the LSN, controlled by NRC, for safekeeping. Responding to DOE assurances that missing documents would be voluntarily produced in a timely manner, ASLB responded "[we] are not inclined to rely on such voluntary promises, when DOE has already failed to comply with its legal obligations."(10)

ASLB scolded DOE for having had 15 years to prepare its document submission, and yet rushing at "the eleventh hour" and bungling the job. "We cannot accept...the systematic non-production of tens of thousands of documents simply because DOE and its agents did not get their act together in time to meet DOE's own self-imposed deadline."(11)

The question that must be asked is, if DOE cannot be trusted to organize its paperwork, how can it be trusted to manage Yucca and highly radioactive waste transport, storage, and disposal?

Egan summed up Nevada's feelings about the DOE document submission saying, "This is almost a comedy for us." Chairman Moore of ASLB responded, "If it's a comedy for you, it's a tragedy for us."(5)

The August 31 ASLB ruling can be viewed at www.state.nv.us/nucwaste/news2004/nrc/nrc040831aslb.pdf or at www.nrc.gov under Electronic Reading Room, ADAMS, accessions number ML042440452.

References:

- (1) ASLB ruling, page 2.
- (2) ASLB ruling, p.18.
- (3) ASLB ruling, p.3.
- (4) DOE press release, June 30, 2004, www.ocrwm.doe.gov/newsroom/documents/lsn_pr.pdf
- (5) Kevin Kamps' personal notes from oral arguments at NRC ASLB, July 27, 2004. See also "Transcript of High Level Waste Repository Pre-License Application Matters on 07/27/2004 in Rockville, MD," at www.nrc.gov under Electronic Reading Room, ADAMS, accession number ML042110438.
- (6) ASLB ruling, p.24.
- (7) ASLB ruling, p.23.
- (8) "Transcript of High Level Waste Repository Pre-License Application Matters on 07/27/2004 in Rockville, MD," at www.nrc.gov under Electronic Reading Room, ADAMS, accession number ML042110438, p. 178.
- (9) ASLB ruling, p. 27.
- (10) ASLB ruling, p. 35.
- (11) ASLB ruling, p. 32.

Contact: NIRS

STOP FUNDS FOR YUCCA MOUNTAIN!

The US Department of Energy cannot legally submit its Yucca Mountain license application to the Nuclear Regulatory Commission in December 2004 as planned. Congress must be prevented from allocating funds for a license application that cannot be legally submitted.

Take action to block the funding for the Yucca Mountain license application. Tell your senators to oppose it by contacting them via the Capitol Switchboard at +1-202-224-3121.

It is especially important to contact members of the Energy and Water Development Subcommittee: Sens. Pete Domenici (Chairman) (R-NM), Thad Cochran (R-MS), Mitch McConnell (R-KY), Robert Bennett (R-UT), Conrad Burns (R-MT.), Larry Craig (R-ID), Christopher Bond (R-MO), Harry Reid (Ranking Member) (D-NV), Robert C. Byrd (D-W.), Ernest Hollings (D-SC), Patty Murray (D-WA), Byron Dorgan (D-ND), Diane Feinstein (D-CA)

NIRS action alert, 7 September 2004

FINLAND: DEMO AT OLKILUOTO REVIVES MOVEMENT

Hiding in the woods of western Finland, over 100 activists were brought together by the joint effort of eight organisations determined not to concede the fight against the fifth Finnish nuclear power station.

(615.5637) **WISE Amsterdam** – Early on Friday 3 September, the protestors divided into several smaller groups and by various means of transport headed for the site where the 1600 Mw experimental European Pressurised water Reactor (EPR) is to be built. The site is already host to two aged 700 Mw BWR reactors that have been in operation since 1978/80.

Although at one point it seemed as if the police had been forewarned - they followed several of the buses taking activist to the site - two different groups on bicycles and a group on foot managed to climb over the fences and spent the entire day on the construction site. Outside the main gate, 20 more activists were supported by 5 people from international anti nuclear organizations from France, Bulgaria, Czech republic, UK and The Netherlands.

The Olkiluoto peninsula was marked as an area infected by the nuclear disease. The activists, dressed in yellow T-shirts and respiratory masks, entered the area on bicycles to erect signposts and cordon off the area warning about the disease. The information centre maintained by the nuclear company TVO (Teollisuuden Voima) was also taken over by climbers equipped with a banner reading "Nuclear madness info centre - www.olkiluoto.info". The banner refers to the newly opened website set up by the anti nuclear movement to provide accurate information on the construction of the fifth nuclear reactor. The site offers information in English, Finnish and Swedish.

"The Finnish nuclear disease has developed into alarming proportions. A big proportion of the population in Finland has already been blinded by it and now it is attacking and destroying the remains of the Finnish climate policy. We isolated one of the infected

spots today, but the Ministry of Trade and Industry remains to be secluded", said Tuuli Kaskinen, one of the spokespersons at the action. Before the Finnish parliament decided to allow the construction of the fifth reactor, there had been widespread consensus and joint understanding that climate change was the most pressing environmental threat facing the world today. In May 2002, after parliament had given the go-ahead for the fifth reactor, the pro nuclear lobby suddenly began a campaign to hamper the carbon emissions trade in the EU. Some politicians have since even demanded that Finland withdraw from the Kyoto Protocol.

"When the parliament gave green light for the fifth nuclear reactor, the condition was that the government agrees to invest forcefully in renewable energy. Now two years have passed and the promises to support the renewable energy have been scrapped while tax reductions for burning peat have been given. The government is apparently also suffering from the nuclear disease", Elina Turunen from Luonto-Liitto said.

The Finnish Nuclear Energy Act passed in 1987 requires that if an energy company obtains a political permit for a new nuclear facility, it would still need to apply for a construction permit and later for an operating permit from the government. However, these decisions are considered non-political procedures. The construction work for the fifth nuclear reactor is already underway and the government is prepared to sign the construction permit despite the fact that the EPR does not meet the standards set by the Finnish Nuclear Safety Agency (STUK). In addition to that, the pressure vessel to the Finnish reactor is being produced in Japan, also without any approval from STUK.

All activists on site were arrested, but

only after spending many hours freely cycling around the site, being tracked by helicopters and police dog brigades. The TVO-spokesperson was embarrassed several times after making claims to the media that the situation was under control, and that all activists had been found and arrested. Moments later, he was forced to admit that there were more people than thought on the site and that not all had been arrested at that point. The activists were released after a few hours at the police station and said it had been very easy to gain access to the site and walk up to the two existing power stations. Since the groundwork is currently being laid down for the 5th reactor, the site was full of heavy machinery and dynamite. So despite all the endless rhetoric about increased safety measures to cope with the 'global terrorism threat', access to the reactor buildings was scarily straightforward.

The action was successfully concluded with a full day of training and seminars to encourage the young activists to increase their efforts and start organising more direct actions against the third Olkiluoto power station. The organisers are already busy planning more actions, with increased international participation.

The action was a clear sign that the Finnish anti-nuclear movement has been resurrected, and, even more importantly maybe, is prepared to work together. The organisers were the Finnish Association for Nature Conservation, Luonto-Liitto, Friends of the Earth, Greenpeace, Women for Peace, The Youth Association at the Left Alliance and the Green Youth Association.

For more information email info@olkiluoto.info, or visit olkiluoto.info/en and www.ecology.at/nni/site.php?site=Olkiluoto

Source and contact: WISE Amsterdam

U.S.: NEW REPORT PREDICTS DEATHS FROM ATTACK ON INDIAN POINT

A new report commissioned by the New York group Riverkeeper concludes that a terrorist attack on one of the Indian Point nuclear reactors could cause thousands of early deaths, as many as hundreds of thousands of cancer deaths, and a trillion dollars or more in property damage, depending on the nature of the event and local weather conditions. Indian Point is located just 35 miles from the midtown of New York City.

(615.5638) NIRS - The report, which is based on calculations using the latest Nuclear Regulatory Commission (NRC) computer models, also essentially confirms the validity of the 1982 CRAC-2 report from Sandia National Laboratories, which provided estimates for the potential casualties and property damage from severe accidents at all U.S. nuclear reactors.

In recent years, the NRC has argued that the CRAC-2 report overstates potential casualties and that new computer models would show greatly reduced consequences. But the new report, written by Dr. Edwin Lyman of the Union of Concerned Scientists, found that early deaths were similar to the CRAC-2 findings, but long-term cancer fatalities were much higher under the new computer models.

The report, titled *Chernobyl on the Hudson*, examined the impacts of a large radiation release under 140,000 different possible weather conditions and wind directions, and under a

variety of emergency response scenarios, including 100% successful evacuation within the 10-mile Emergency Planning Zone; evacuation and sheltering beyond the EPZ; and others.

Consequences under various scenarios varied widely. For the "mean" weather scenario with successful evacuation, approximately 700 early deaths could be expected, up to 5.3 miles from the reactor, and more than 28,000 cancer deaths up to 50 miles away. But under worst-case weather conditions, the same accident would cause nearly 44,000 early deaths up to 60 miles away, and some 518,000 cancer deaths.

Economic impacts ranged from US\$371 billion to more than US\$2 trillion, and from 684,000 to more than 11 million people having to be permanently relocated. It was not clear, however, whether the economic consequences considered the far-ranging impacts on the world's financial systems that a permanent evacuation of New York City would cause.

The NRC has argued that an accident under the CRAC-2 model is so improbable as to not be worthy of consideration. The report agrees that such an accident is improbable—but not impossible—on its own, but asserts that it is exactly such improbable events terrorists acting deliberately would attempt to cause, and thus such events can no longer be ignored.

The report points out that even its calculations do not represent a worst-case scenario. For example, the report did not attempt to calculate the potential consequences of a successful attack on both reactors at once and on the site's irradiated fuel pools, which contain billions of curies of additional radiation.

The full report is available on the Riverkeeper (www.riverkeeper.org) and UCS (www.ucsus.org) websites.

Contact: Michael Mariotte, NIRS

SLOVAKIA: PRIVATIZATION OF SLOVENSKE ELEKTRARNE (SE)

The privatization committee of the Slovak government recommended, on 10 September, the Italian company ENEL as best bidder to purchase 66% of Slovenske Elektrarne (SE) shares. Enel had offered the highest sum for the majority shares: SK 33.6 billion (US\$ 1.14 billion). The committee recommended Czech CEZ as second candidate with a bid of approximately SK 27.5 billion and the Russian RAO UES International was third with some SK 22 billion. Slovak industry minister Pavol Rusko will now reassess the three bidders' proposals and propose the final candidate to the Slovak cabinet in the next week.

(615.5639) Za Matku Zem (For Mother Earth) / WISE Amsterdam – 14 of the 15 committee members voted for Enel, one member from the SMER (middle-left opposition party) abstained because SMER is opposed to SE's privatization. Strangely enough, if SE will be "privatized" by the sale to Enel, it will remain a state-owned

company - the Italian government still owns 51% of Enel shares (a next round of share sales is expected in November). The two other bidders are also (still) state-owned, CEZ by 67% and RAO UES International by 53% (through its mother company). CEZ will remain in state hands for the next two years, at least.

The completion of the two unfinished Mochovce 3 and 4 reactors played an important role in the process. The Slovak government has always viewed privatization as an opportunity to complete these two reactors.

One of the conditions for potential buyers was the closure of the older

Bohunice V1 reactors by 2006/2008 and completion of Mochovce-3 and -4 (see *WISE/NIRS Nuclear Monitor* 608, 5597: "Nuclear relapse in Central Europe: Slovakia").

On 10 September, the day the privatization committee met, the Slovak parliament adopted another resolution that Mochovce should be completed. The three bidders confirmed interest in the completion. All investors must make their own study of completion profitability,

Nuclear Monitor recognized by "Censored 2005". The *WISE/NIRS Nuclear Monitor* has won a prestigious Project Censored Award for its coverage of the effort to fund nuclear reactors through the US Senate energy bill. The article was chosen as the 10th most important issue missed by the media over the past year. For more information visit www.projectcensored.org.
NIRS by email, 7 September 2004

US Plutonium shipment to France. On 16 September, Greenpeace activists protested against a planned shipment of plutonium from the US. The weapons-grade plutonium will be collected from Charleston, South Carolina, shipped across the Atlantic to Cherbourg, France and then transported to the Cadarache plant for manufacture into nuclear reactor fuel later this month. Last week a plutonium contamination accident at the Cadarache reprocessing plant left two workers contaminated when plutonium and uranium leaked from a container. "In addition to exposing workers to danger, this accident exposes risks of producing plutonium MOX fuel. It is one more reason why the US should not send its plutonium to Cadarache next week" said Shaun Bernie, Greenpeace International.
Greenpeace International press releases, 16 & 10 September 2004

AP1000 design approved. In the US, the Nuclear Regulatory Commission

according to which a decision to finish Mochovce can be made.

The whole process of SE privatisation is, in Za Matku Zem's opinion, unclear and strongly influenced by pro-nuclear lobbying groups. The push for completion of Mochovce 3 and 4 shows the strong influence of interest groups. It must also be noted that minister Rusko has previously refused to publish two studies about the profitability of Mochovce completion.

IN BRIEF

(NRC) has given final approval to Westinghouse for its advanced reactor design clearing the way for the company to sell it internationally. The AP1000 is designed for a 60-year operating life. The final step in the certification process requires that NRC conduct a rulemaking, which involves a public comment period. It is expected that NRC will issue a standard design certification by December 2005, if granted the design certification will be valid for 15 years and renewable in terms of 10-15 years.
Platts Nuclear News Flashes, 13 September 2004

Bulgaria: AECL threatens to withdraw from bidding process for Belene. Atomic Energy of Canada (AECL) will withdraw from bidding for the new Belene reactors unless the selection process is made more transparent and competitive. The Bulgarian ministry of energy apparently ceased communications with AECL and wants to work with different companies for different parts of the plant. AECL also assumes that Bulgaria prefers to complete the existing VVER-1000 reactors rather than build two new 700 MW AECL Candu reactors.
WNA News Briefing, 8-14 September 2004

Work at North Korean reactor suspended; again. The U.S., South Korea and Japan agreed to suspend the construction of an NPP in North Korea for another year, but stopped short of

Sources: Za Matku Zem, 14 September 2004; *Hospodarske Noviny* (CZ), 14 September 2004; SITA press agency, 10 September 2004; *WNA News Briefing*, 8-14 September 2004.

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scrapping the project. The project of the Korean Peninsula Development Organization (KEDO) was initiated to supply North Korea with two light water reactors in exchange for a ban on nuclear weapons development. The decision to extend the suspension leaves room for resumption in the future.
WNA News Briefing, 8-14 September 2004

Ranger closed for clean up. Energy Resources of Australia has suspended activities at the Ranger mine to address problems highlighted by a water contamination incident when workers unknowingly drank and showered with polluted water. Three teams deployed by ERA (Energy Resources of Australia) will oversee health and safety improvements, focusing on radiation control and improving safety standards at the Ranger site.
UIC Weekly Digest, 3 September 2004; NNNews, September 2004

UK in court over Sellafield safety failings. The European Commission is prosecuting the British government for dumping an unknown amount of nuclear fuel rods and other radioactive waste into a waste tank over the last 50 years. The murky waters and radioactive environment prevented European Commission inspectors from assessing the tank's contents. Loyola de Palacio, the energy commissioner, took the first court action against a member

state over nuclear safety to force the UK to comply with the NPT. It would have been "unfair", she claimed, for the newly joined countries to meet standards that other EU nations would not respect. Caroline Lucas, Green MEP for south-east England, said "inspectors seem to be in the dark over exactly what is in the B30 pond. As a result, nobody can be sure whether plutonium or uranium has been diverted for weapons use."

The Guardian, 4 September 2004

EU nuclear safety amendments. The EU has amended its nuclear safety proposal and waste management legislation to claims from Friends of the Earth that it is misleading and industry-friendly. Loyola de Palacio, considered a nuclear proponent, presented the revised proposals for unified standards on safety throughout the 25-nation community. The Commission-imposed deadline for creating plans to deal with radioactive waste has been dropped as a concession to win backing from sceptical EU governments. Another change to the original text was the withdrawal of the "peer reviews" in which one EU country's inspectors would check another country's nuclear installations. Member states would instead be required to submit national nuclear safety reports to the Commission. Friends of the Earth say the proposal is unlikely to be passed by EU governments and accuses the Commission of favouring industry with illusionary additional safety measures.

Reuters, 9 September 2004

Nuclear Black Market Update. IAEA inspectors found Japanese-made precision instruments to measure centrifuges used to enrich uranium at a Libyan plant and are now trying to determine the route used to ship the instruments to Libya. The name of the manufacturing company has been withheld while authorities in Japan investigate.

In South Africa, five days after the police arrested engineer Johan Andries Muller Meyer on nuclear proliferation

charges having found 11 crates of potential uranium enrichment gear in his office, prosecutors surprisingly dropped charges and released him from jail. Two other South-African engineers have also been arrested, Gerhard Wisser (who had already been arrested earlier in Germany suspected of helping Libya acquire nuclear weapons), and Daniel Geiges. Officials said that all concerned faced further investigation.

Arrests and raids in South Africa, Germany and Switzerland over the past couple of weeks are the result of IAEA's effort to unveil the black market network that supplied Libya.

Reuters, 9 September 2004;
www.asahi.com, 10 September 2004;
New York Times, 9 September 2004;
Cape Times, 10 September 2004

Japan's Plutonium Bay. Plutonium particles from 50-year old US nuclear tests have been found in the soil surrounding a Japanese Bay. The Japanese National Institute of Radiological Science detected the plutonium in Sagami Bay, about 50-km southwest of Tokyo and suggests ocean currents brought it there. The particles matched the fallout from US test blasts from 1946 till 1958 at Bikini Atol, halfway between Hawaii and Tokyo.

The Ecologist, September 2004

Plutonium releases recorded in British soil. The Rothamsted experiment, set up in 1843 to study the impact of different fertilizers on crop yields and soil health, has detected plutonium in British soil. Scientists conducting the worlds longest-running continuous field experiment, matched fallout in soil and crop samples to specific nuclear tests conducted in Nevada in the 1950's, confirming that Europe had also been contaminated. Nuclear fallout from Bikini Atol tests and Chernobyl were also detected.

BBC News, 6 September 2004

ALERT: 2020 Vision Campaign to ban nuclear weapons. Mayors for Peace launch their 2020 Vision Campaign, an

emergency measure to gather the support of mayors across the world, educate citizens and pressure nuclear weapons states to take part in negotiations to eliminate nuclear weapons. To see if your mayor is for peace, visit the Mayors for Peace website to find a list of current member cities at www.pcf.city.hiroshima.jp/mayors
The Sunflower, September 2004

Fathers pass on radiation effects. Comparative studies on mice and Chernobyl victims suggest that cell mutations can be inherited from radiation-exposed progenitors. Professor Yuri Dubrova of Leicester University said that radiation-induced instability could be transmitted for at least two generations. The sperm and eggs of baby mice featured mutations similar to those of their radiation-exposed fathers. Once grown up, these mice the passed the faulty genes to their own offspring. However, even though male Chernobyl victims showed mutations in their sperm, it is not yet known whether human fathers pass on the mutations to their children. Also childhood leukemia cannot yet be proved to be a direct consequence of such mutations.

BBC News, 8 September 2004

ALERT: Nuclear Power and Children's Health. The Nuclear Policy Research Institute will hold its fall symposium "Nuclear Power and Children's Health" in Chicago on 15 & 16 October. Chicago was chosen because of the threat the surrounding fourteen reactors poses to the region. All the nuclear facilities in the Chicago area have histories of safety violations caused by ageing facilities and improper maintenance that have resulted in millions of dollars in fines. Experts from around the world will gather to discuss the threats of nuclear power to children and to all people, and build collective strategies to create consensus for a nuclear-free future. To register visit www.nuclearpolicy.org/conferences.cfm
Nukewatch press release, 23 August 2004

Fissile material out of Uzbekistan. On 9 September, the IAEA helped authorities in Uzbekistan remove weapons-usable highly enriched uranium from the Institute of Nuclear Physics of the Academy of Sciences, near Tashkent (the capital). IAEA inspectors monitored and verified the fuel packing for transport, as about 10 kg of fresh reactor fuel, of which 1.75 kg was fissile uranium (235), was transported by truck and air to the Russian Federation. Russia, the original supplier of the fuel, will convert it to low-enriched uranium making it unsuitable for use in nuclear weapons. www.iaea.org, 14 September 2004

Radioactive river in Germany

Radioactive substances from the NPP of Neckarwestheim (southwest Germany) have been found in the river Neckar, an affluent of the Rhine,

according to the Regional Environment Ministry. Although assurances were given to the public claiming that it represents no harm for the population, the news was greeted with horror as two similar accidents have also occurred in the Philippsburg region over the last two years.

Agence France Presse, 30 August 2004

ALERT: Baby teeth needed for study.

New York's Radiation and Public Health Project (RPHP) is studying baby teeth for Strontium 90 and is looking for baby teeth, especially from people who donated to the original St Louis study in the 1950s and 1960s. The preliminary results of testing on children with cancer shows 60% higher Sr-90 rates than healthy kids. RPHP hopes to perform baby tooth testing and follow up on the owner's health via questionnaire. The purpose is to

compare longer-term effects of those exposed to higher rates of Sr-90 with others. All baby tooth testing is free of charge. For more information visit www.radiation.org

RPHP by email, 6 August 2004

1,000 protest HLW repository in Zurich.

Swiss and German protestors demonstrated against plans to site a high level waste repository in the Zurich vineyards area a few kilometers from the German border. Organizers demanded that an independent body scrutinize the proposal from nuclear waste management agency, Nagra, and that a study of the impact on the region be made. The review of the scheme will continue until next spring when the federal executive council will decide on it future.

Platts Nuclear New Flashes, 13 September 2004

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THE NUCLEAR MONITOR

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Nuclear Monitor Wins Project Censored Award

We're proud to announce that the Nuclear Monitor has won a prestigious Project Censored Award, for our coverage of the energy bill and related attempts to force taxpayers to foot the bill for a new generation of nuclear reactors. Thankfully, due to your efforts, those attempts so far have been stopped! Project Censored annually awards those publications which cover the Top 25 "censored" stories—the Monitor's coverage was rated the 10th most important censored story of the year. The awards ceremony will be October 23 in Berkeley, California.

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