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INDEPENDENT RADIATION SURVEYS AT NIGER URANIUM MINES OBSTRUCTED

Following a request from AGHIR IN'MAN, an NGO based in Arlit, Niger, the CRIIRAD laboratory set up a 10-day mission to undertake preliminary environmental checks on the Arlit and Akouta mining sites at the Sahara desert border. Both uranium mines and mills have been operated for 20- 30 years by Cogema subsidiaries SOMAÏR and COMINAK with present output at about 3,000 tU / year.

(602.5570) CRIIRAD – The main goal for AGHIR IN'MAN was to get preliminary radiological data in order to understand possible links between the radiological impact of uranium extraction and the worsening of the health status of the inhabitants.

Another objective was to train interested parties in radiological inspections and in radioprotection. The team included two CRIIRAD scientists, two members of SHERPA, and an independent journalist.

Although the Niger authorities approved our Visas and the Arlit local authorities signed our travel document to go from Niamey to Arlit, four days before our departure from France, the AGHIR IN'MAN president in Arlit, Mr. Almoustapha Alhacen was asked by the local directors of the companies to postpone our mission.

Nevertheless, CRIIRAD and SHERPA decided to go on and immediately upon arrival at Niamey airport, at 3 am on 2 December 2003 all CRIIRAD professional monitoring equipment was confiscated.

We spent 3 days in Niamey and met different authorities (Police, Members of the Niger Parliament, Members of the Mining Ministry, French ambassador, etc.) in order to try to get our equipment back.

At least 5 different reasons were given to us by the various authorities to justify our problems. A member of the Niger government finally told us "You are here in France, the origin of your problems has to be looked for in France".

We finally decided to go to Arlit, even without monitoring equipment, in order to get a preliminary feel for the situation and at least provide inhabitants with information about ionising radiation (CRIIRAD has been studying the radioecological impact of French uranium mines since 1992).

During the 3 days spent in Niamey, we had the opportunity to meet some Niger experts from the Ministry of Mines and the National Radioprotection Centre. These governmental bodies have in fact no adequate equipment to properly monitor the radiological impact of SOMAIR and COMINAK activities on workers, local population and the environment and are limited to doing nothing more than reading reports written by the operators themselves.

CRIIRAD team could spend only 2 days in the Arlit area (1,200 km from Niamey) but noted the near total absence of any form of waste management:

. no sign or fence along kilometres of SOMAÏR waste rock deposits,

. SOMAÏR and COMINAK uranium mill tailings dumps are exposed in open air. COMINAK official figures are 10.5 million tons of waste with typical activity of 49,000 Bq/kg (thorium 230) and 57,000 Bq/kg (radium 226) etc. Nothing seems to prevent the release of radioactive gases and dust into the environment. This exposure pathway will have to be studied more deeply because of the high radiotoxicity of some of the natural nuclides included

IN THIS ISSUE:

NATIVE RIGHTS AND ANTI-URANIUM ACTIVIST ARRESTED

John Graham was arrested in Vancouver, Canada on 1 December 2003, and now faces extradition to the U.S charged on 30 March 2003, along with Arlo Looking Cloud, with the first-degree murder of Anna Mae Aquash in 1975. On 16 January, he was released on bail, under strict conditions including house arrest. The date for his extradition hearing is expected to be set on 1 March.

Native of the Yukon, Canada and father of eight, John Graham made a European speaking tour in May and June 1984, organized by European anti-nuclear, native rights and environmental groups, focusing on native rights and the problems of uranium mining in Canada.

Some doubt that John Graham would get a fair trial if extradited to the U.S. Graham's supporters say there is evidence that the FBI is guilty of the murder, though U.S. authorities refuse to investigate this.

The John Graham Defense Committee has been formed by family and friends to promote truth and justice while advocating his release. The Committee requests that letters demanding John be treated fairly be send, with copy to the Committee, to:

Hon. Irwin Cotler, Minister of Justice
House of Commons
900 Justice Building
Ottawa, Ont.
K1A 0A6 Canada

For sample letters, background and current information, please see the Committee Website, www.grahamdefense.org.

in the waste (when inhaled, the thorium 230 radiotoxicity is close to the one of plutonium 238), their very dispersible form (fine grained material) and long half-life (75,000 years for thorium 230),

. the companies do collect domestic waste from the parts of the city where their workers live, but the waste is then spread on the ground, in the suburbs of the cities of Arlit and Akokan. Women, children and animals commonly come there looking for food or scrap material.

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The next issue (603) will be mailed out 13 February 2004.

Due to the lack of time and equipment, the evaluation of exposure pathways to ionising radiation must be postponed until a next mission. Obviously it will be necessary to study transfers through inhalation of dust, dispersion of radon gas from the mine vents, possible contamination of underground waters and food.

The only investigations possible were performed with a very simple Geiger Muller counter that the CRIIRAD laboratory had previously sent to the AGHIR IN'MAN president. It enabled us to discover contaminated scrap metal in the Arlit streets (doserate 10 times as high as the natural background level).

This seems to be a serious problem, taking into account the lack of rigorous monitoring policy and the fact that the population is used to recycling scrap material from uranium mills for domestic use including cooking or building.

CRIIRAD will send several Geiger Muller counters to the members of the NGO, so that they can organise campaigns to detect the presence of such radioactive material in cities.

A preliminary report has been released in French (see www.criirad.org) and CRIIRAD now seeks to improve national and international awareness on this matter.

France imports a lot of uranium from Niger, therefore French citizens should help the citizens of Niger defend their rights: the right to proper radiological monitoring by their own government, the right to independent monitoring, the right to an adequate waste management policy based on long term analysis of impacts, the right to receive proper information about the actual contamination of their environment and the adverse effects of ionising radiation, and the right to protect their environment and health.

Fund raising efforts need to be organised in order to help AGHIR IN'MAN pursue its tasks locally and to prepare an independent scientific evaluation of human exposure to ionising radiation from the mines and mills activities.

Additional notes:
(1) AGHIR IN'MAN was created in January 2001 and works to improve living conditions (health, education, women's rights) and environmental protection.

(2) CRIIRAD is a French NGO specialising in protection against and monitoring of radioactivity. The association was created in 1986, immediately following the accident at Chernobyl. It is registered with the local authorities and has been certified by the French Ministry of Ecology for environmental protection. The CRIIRAD Laboratory is certified by the French Ministry of Health for radioactivity measurements in the environment and the food chain.

(3) SHERPA is a French NGO whose members are lawyers. Its goals are to protect human and workers' rights (of all nationalities) against multinationals. During the mission, the SHERPA

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 *WISE Bulletin* 4, we wrote about a strike by Iranian trainees at the German Kraftwerk Union (Siemens): "In December a group of Iranians being trained at KWU factories in the Federal Republic to staff future Iranian nuclear power plants went on strike. The Iranians (130 atomic engineers and 280 technicians on a three-year course) were expressing their opposition to the treaties under which Iran was to buy a total of 8 nuclear power plants from KWU. [...] They said the treaties were corrupt, increasing the imperialist hold over Iran."
(*WISE Bulletin* 4, March 1979)

Now

The strike occurred just before the regime of the Shah of Persia lost power in 1979. After the "Islamic revolution", the Shah's nuclear program was rejected as "satanic" and all projects temporarily suspended. After some years the new Ayatollahs' government restarted the nuclear program. Iran's nuclear program started in 1967 when the U.S. supplied a 5 MW research reactor for the Tehran University. In 1970, Iran ratified the Non-Proliferation Treaty, opening the doors for the import of nuclear technology. The seemingly obvious question of why a country with vast reserves of oil and gas was keen to use nuclear power was apparently never asked.

The first contract for two Kraftwerk Union reactors (at Bushehr) was signed in 1974, followed by a contract with French Framatome in 1977 for two more reactors (at Karun). There were plans for more German reactors (between 4-6) and eight U.S. reactors. Both the French and German contracts were notorious for corruption; an estimated 20% of the contracts was spent on kickbacks and "commissions". (*WISE/NIRS Nuclear Monitor* 584, 7 March 2003)

In 1982, Iran planned to the restart of construction of the two incomplete Bushehr reactors. It began negotiations with Kraftwerk Union for the remaining equipment and some work commenced. During the Iran-Iraq war, the Bushehr reactors were bombed in November 1987 resulting in the deaths of ten Iranians and one German. By 1995, Iran had chosen Russia for the completion of Bushehr-1 and installed a VVER-1000 reactor in place of the wrecked Siemens reactor. Regardless of international protests (because of Iran's suspected weapons' program) the Russians continued work on it. (*The Nuclear Fix*, WISE 1981; *WISE/NIRS Nuclear Monitor* 584, 7 March 2003)

In February 2003, President Khatami announced that uranium mining was to commence near the city of Yazd and that a uranium enrichment facility, hosting about 200 gas centrifuges, was also being developed at Natanz. (*WISE/NIRS Nuclear Monitor* 584, 7 March 2003)

The enrichment centrifuge technology used at Natanz is said to be an "advanced supercritical gas centrifuge", which means that Iran was capable of developing an advanced design with very high productivity. Western officials believe that Iran obtained some design information on European centrifuges and intelligence sources said that during the early 1990s, centrifuge design was also received from Pakistan. (*Nucleonics Week* Special, 7 March 2003)

In turn, Pakistan's centrifuge technology is believed to originate from espionage at the Dutch company, Urenco in the 1970s. Abdul Qadar Khan worked as an engineer on centrifuge design, and took his "knowledge" back to Pakistan, where he became head of Pakistan's nuclear weapons program.

Iranian officials denied receiving help from Pakistan and said that the technology and equipment was obtained on the international black market, with help from five brokers (three unnamed Europeans and two from the region). (AFP, 14 January 2004)

In December 2003, Iran signed the "Additional Protocol" of the NPT, granting IAEA inspectors greater authority in verifying and inspecting nuclear facilities. (IAEA, 18 December 2003)

team interviewed local doctors, citizens and workers. Their mission preliminary report is also available on CRIIRAD website: www.criirad.org

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ACTION ALERT WASTE RECYCLING

The U.S. Environmental Protection Agency (EPA) has released a proposal that would allow certain nuclear wastes to go to places that are not licensed for radioactive materials. Some nuclear material would be treated as non-radioactive, exempt from radioactive control if below certain levels of radioactivity.

First, EPA would allow mixed radioactive and hazardous wastes to go to facilities permitted for hazardous waste only. Second, radioactive waste (not mixed with hazardous) could be permitted to go to places that do not have radioactive licenses or regulations, such as regular garbage dumps or incinerators or hazardous sites. EPA justifies this by claiming they will provide an acceptable level of protection from radiation risk. It seems obvious this would be a problem for communities around the waste sites, many already leaking. Third, EPA suggests that a "non-regulatory approach" to management of radioactive waste is an option and requests creative ideas for "partnering" with waste generators or other schemes to relieve the regulatory burden. EPA's proposal would help legalize releases of nuclear weapons wastes, now generally required to be regulated and controlled, to be released to waste sites never designed to take radioactive materials and either deliberately or unintentionally to the marketplace.

The planned EPA rule is in line with earlier proposals made by the U.S. Nuclear Regulatory Commission (NRC) on waste recycling (see *WISE/NIRS Nuclear Monitor* 585.5505: "U.S.: NRC seeks further input in waste recycling plans"). The NRC is considering several options for nuclear waste deregulation including continuing the current case-by-case release procedures, starting new release procedures that are based on estimated risks, sending the waste to sites that are not licensed for nuclear materials.

Suggested ACTIONS on EPA notice:

1) Alert your state and county landfill boards, unions of landfill and transport workers, recycling companies, organizations, town councils. Get on their agendas and ask them to comment at a-and-r-Docket@epa.gov by 17 March 2004. Request the proposal be withdrawn but if it is not, request a 6 months extension for public comment. The notice in the US Federal Register was under EPA on 18 November 2003 and can be found online at www.regulations.gov/fredpdfs/03-28651.pdf or www.regulations.gov/freddocs/03-28651.htm.

2) Send a letter to the new EPA Administrator Mike Leavitt telling him what you think of the EPA's proposed action, encouraging him withdraw it. Administrator Mike Leavitt, US Environmental Protection Agency, 1101A, Ariel Rios Building, 1200 Pennsylvania Avenue N.W. Washington, DC 20460; Email: leavitt.michael@epa.gov

3) Let your elected officials know how you feel about these dangers by sending them a copy of your letters, comments and resolutions.

More information: dianed@nirs.org.

U.S. WASTE TRANSPORT VIA CAPE HORN CHALLENGED

Taller Ecologista WISE-NIRS and Greenpeace Argentina have highlighted plans to transport the radioactive reactor vessel from a dismantled U.S. nuclear reactor from the West to the East Coast of the country, transiting through Cape Horn.

(602.5571) Taller Ecologista / WISE/ NIRS Argentina – On 13 January, an Argentinean federal judge issued an order stating that the ill conceived 700-ton shipment must stay out of the country's ports and exclusive economic zone (EEZ).

This judgement means that the shipment will be forced into the treacherous waters outside Cape Horn, renowned for severe weather conditions. Violation of the order will result in military interception to escort the shipment out of the nation's territorial waters.

Utility Southern California Edison plans to transport the remains of the dismantled San Onofre reactor from California to a radioactive waste dump in Barnwell, South Carolina. The utility received approval for the shipment from the U.S. Department of Transportation (DOT) last December and although the route totals approximately 20,000 kilometers, no environmental impact assessment (EIA) was carried out.

The shipments secret contingency plan includes entering different regional ports in case of emergency - in Argentina, Ushuaia (Tierra del Fuego) and Puerto Madryn (Chubut) are the ports mentioned and in Chile, the ports of

Valparaiso, Puerto Montt and Punta Arenas.

To date it appears that there has been no official communication with the Argentine government or local authorities on this plan.

Environmentalist organizations are calling for the cancellation of the shipment because of the risks involved and the legal requirements it failed to comply with.

In addition, those in charge of the shipment have reportedly stated that there are no plans to recover the shipment should it sink at a depth greater than 91 meters (approx. 300 feet).

"National authorities must enforce the national constitution, which bans the entry of radioactive waste and ratifies the preventive measure adopted by Tierra del Fuego's justice just two months ago due to the ship Fret Moselle case", said Eng. Pablo Bertinat of Taller Ecologista WISE-NIRS.

"It is unacceptable to have these plans without consulting local authorities and submitting contingency plans, especially with these ports covered by national and provincial laws that ban the entry of nuclear waste", stated Juan Carlos Villalonga, Greenpeace Argentina Campaign Director. "The remains of the reactor should stay at the reactor site, in the United States, instead of being trailed around the world, unnecessarily increasing the risks", he added.

Plans to transport the waste from California to Texas by train, and then to South Carolina by ship were rejected by rail companies because of the high risks and delays this would produce in the rail traffic. The 700 tons require special transport conditions that were not considered safe enough for rail transport.

Sources: Joint Taller Ecologista / WISE-NIRS and Greenpeace Argentina press release, 9 January 2004 (available in Spanish at www.taller.org.ar/wise/barco_nuclear.htm); *Los Angeles Times*, 16 January 2004

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NORTH KOREA WELCOMES U.S. DELEGATION

After repeating an offer to freeze its nuclear programs in return for economic aid and an end to U.S. sanctions, North Korea announced that an unofficial American delegation, made up of congressional aides, former diplomats, a nuclear scientist and an academic, had visited the country and were given a tour of Yongbyon nuclear facility.

(602.5572) WISE Amsterdam – Despite the 5-day visit, the secretive communist state has dismissed hopes that it too would emulate Libya and scrap its own WMD programs. Such suggestions were described as the "folly of imbeciles" ignorant of the country's independent policies – copying Gaddafi is not an option.

Instead the regime of Kim Jong-Il will continue to go it's own way and hope to achieve its main aims – having its cake and eating it. Unlike Libya, North Korea is not afraid of international isolation; in fact isolation is a key factor in sustaining its communist government so it cannot be persuaded to comply with the wishes of the international community on this point. (1)

Yet the invitation of the American delegation suggests that North Korea is desperate to find leverage with which to negotiate its way out of the current stalemate with the U.S. and perhaps speed up the progress of the stalled six-party talks (with Russia, China, Japan, the U.S. and South Korea). (2)

Although the delegations were given a guided tour of Yongbyon, they were of course not allowed to bring along monitoring equipment or remove any samples from the facility. The visitors were told that no clandestine program to enrich uranium existed although one member of the delegation, Jack Pritchard, former U.S. envoy to North Korea, had been present at unofficial talks in October 2002 where a senior official admitted that the country did have a program to enrich uranium. (3)

The issue of the existence of uranium enrichment has been a contentious issue and major sticking point in previous talks – China, Japan and South Korea indicated doubts in American assertions that the program exists. Some have suggested that there was a misunderstanding, that what the U.S. thought they heard was not what North Korea thought it said but there doesn't appear that either side is willing to meet half way on this point as yet.

Pritchard has subsequently called on the CIA to share its intelligence in order to convince doubters and move negotiations on at the second round of the six-party expected to take place in February. (4) Given recent proof of fallibility where intelligence reports are concerned, that might not be an inviting prospect.

The former head of U.S. Los Alamos National Laboratory, Siegried Hecker, was also among the delegates and commented after the visit that although he remained unconvinced that Pyongyang could actually convert its nuclear technology into a weapon, he was still concerned. Hecker confirmed that reprocessing plant was

in good repair and that the North Korean scientists did have the technical expertise required. The 5 MW reactor was reportedly "operating smoothly", adding to the plutonium cache by 6 kg a year.

On 20 January, at a presentation given to the U.S. Senate Foreign Relations Committee, Hecker reported that they'd been shown two glass jars (housed in a metal-lined wooden box), one said to contain 200 grams of plutonium metal and the other 150 grams of plutonium oxalate powder. Having examined and held (with gloved hands) one jar to get a feel for density and heat content, Hecker concluded that its appearance was consistent with that if plutonium metal. (5)

The message brought back was that North Korea was anxious to have some sort of international confirmation to prove to the West, the U.S. especially, that it was not bluffing about its nuclear materials or its intentions.

Pyongyang was described as uncharacteristically bustling by Jack Pritchard, further giving rise to claims that an economic revival is being nurtured. In July 2003, reforms were introduced legalizing small private markets (with food, clothes, furniture and electronic goods on sale) and increasing wages. In a recently released study by the Institute for International Economics, the North Korean expert rated the chances of regime collapse at around 3%. (6)

London-based think-tank, International Institute for Strategic Studies (IISS), launching a 120-page report on North Korea's nuclear programs on 21 January said that the window for diplomacy to rein in the country's weapons programs could close within the next few years as North Korea develops its capabilities.

It suggests that a diplomatic solution be found to halt and eliminate communist states arsenal while it still only has a handful of weapons.

It is currently believed that Pyongyang possesses enough material for up to five bombs but in a few years could have the capacity to produce a dozen bombs per year. Two new programs are proposed, one, a near-complete plutonium producing reactor and the other is suspected to be a uranium enrichment program although it is not clear how long it will take for these to go on-line – estimates range from 1-6 years. (7)

Sources:

(1) Reuters, 9 January 2004
(2) *The Christian Science Monitor*, 12 January 2004
(3) *The Washington Post*, 13 January 2004
(4) Reuters, 15 January 2004)
(5) *Taipei Times*, 23 January 2004)
(6) *USA Today*, 16 January 2004)
(7) Reuters, 21 January 2004

Contact:

WISE Amsterdam

PROLIFERATION: FOCUS ON ENRICHMENT ISSUES

Apart from the latest developments in North Korea, nuclear proliferation issues in Iran, Pakistan and Libya have a certain connection: the proliferation of uranium enrichment technology.

(602.5573) WISE Amsterdam – North Korea was suspected of having received enrichment technology from Pakistan, and Iran might have received the same technology from Pakistan researchers as well. Libya recently sent enrichment equipment to the U.S. in its effort to dismantle its nuclear weapons' program.

Iran's enrichment program not dismantled

Despite supposedly agreeing to cease its enrichment activities last December, it now appears that Iran is expecting to retain (and keep operational) its uranium enrichment program which it claims will provide low-enriched uranium for electricity generating plants. At the World Economic Forum (WEF) at Davos in Switzerland, Iranian President Mohammad Khatami stated that Iran, like other countries, had the right to use nuclear energy peacefully and that it had never sought nuclear weapons and opposed the production of such weapons. He also used the opportunity to deny claims that North Korea has provided his country with any nuclear materials.

A diplomatic row is broiling over the country's use of semantics with regards to how it has interpreted the term "enrichment-related". In Iran's view, as long as no uranium is actually enriched the accord is not breached - the fact that it continues to amass large quantities of centrifuge machinery is neither here nor there.

Unsurprisingly this is causing concern among Western diplomats and nuclear experts who had expected the suspension to encompass the whole process including halting assembly of enrichment equipment. Tehran is currently negotiating with the IAEA to resolve the matter of what constitutes a suspension and specifically which activities should be suspended.

Speaking at the WEF, Mohamed El-Baradei (director-general of IAEA) warned that not co-operating with IAEA efforts could lead to "serious implications".

Reports from unnamed diplomats are circulating that Javier Solana (EU foreign policy chief) discussed this issue with Hasan Rohani (head of Iran's Supreme National Security Council) during a visit to Iran earlier this month. Although there has yet to be any formal public comment from the EU, there are reports that the European trio of Germany, France and

Britain made an error when striking the deal in Iran last year by not strictly defining what was expected. Rohani has suggested that Iran is not willing to expand upon its interpretation of suspension and urged the EU to deliver on its promise of technological aid.

Last October, Iran acknowledged that it had, for 18 years, been undertaking clandestine atomic research and experiments (including enriching uranium and separating plutonium).

Under the Nuclear Non-Proliferation Treaty (NPT), these activities are allowed but must be reported to the IAEA – Iran breached the NPT by acting secretively. Despite demands from the U.S. to have Iran formally declared in violation of the NPT and reported to the U.N. Security Council, the IAEA gave Iran a stern warning and put the country on probation.

Iran subsequently agreed to cease uranium enrichment activities and allow additional IAEA inspections (that can include demands for data access) of its nuclear facilities. These concessions were seen by some in the Bush administration as a victory, claiming that pressure exerted on Iran, in the form of threats to report it to the Security Council, led to the admissions.

Along with the American threats, Europe's big three, Britain, Germany and France, visited Iran to persuade Iran to stop its secret programs by agreeing to *consider* helping with technology transfers, which was interpreted as an offer to help develop a civilian nuclear power program. One would now imagine that those celebrating the seemingly successful use of the good cop, bad cop tactic might now be wondering what went wrong.

The secretary-general of Iran's National Security Council, Hasan Rohani, said in December that the "uranium enrichment program is suspended voluntarily, temporarily to build trust... but the issue of ending uranium enrichment is not in question and never has been or will be". Rohani, a possible presidential candidate in 2005, said Iran had nothing to fear from tougher inspections of its nuclear facilities because the likely conclusion will be that the programs are for peaceful purposes.

He further com-mented that the program was required to provide fuel for at least 1 or the 8 planned new reactors, the first of which is a 1,000 MW reactor built with Russian help near Bushehr and expec-ted to be completed later this year.

Pakistan questioning scientists on connection with Iran

The public investigation was launched in November following information provided by the IAEA suggesting that some of Pakistan's senior scientists were involved with the sale of nuclear secrets to Iran has now concluded after the arrests, and questioning, of several high profile scientists and officials.

The New York Times reported that blueprints for Pakistani centrifuge designs were included in this information and that countries and individuals from Europe (Austria, Switzerland and Germany), Asia and North America were also named as possible sources.

It is not yet known whether charges will be made but the investigation has concluded that Dr. Abdul Qadeer Khan and Dr. Mohammad Farooq provided unauthorized technical assistance to Iran in the late 1980s.

A.Q. Khan, revered in Pakistan as the father of its nuclear bomb and currently serving as adviser to government of Prime Minister Zafarullah Khan Jamali, is reportedly being held under house arrest and is said to have been questioned following information obtained from Dr. Farooq.

Dr. Khan was sentenced to 4 years in absentia by an Amsterdam court for espionage shortly after his return to Pakistan after working for Urenco in the 1970s – the verdict was later overturned.

The probe began with the detention of Yasin Chohan and Dr. Farooq, directors of the uranium enrichment

ATOMIC BLACK MARKET

U.N. inspectors have admitted their surprise at the ease with which bomb-making equipment can be acquired on the international black market as well as the scale and the sophistication of networks supplying banned materials and equipment. Weapons designs, real-time technical advice and equipment, sometimes manufactured in special factories, are readily available to those with financial means, regardless. The IAEA and U.S. authorities are said to be investigating a possible factory site in Malaysia following the interception of a shipment of centrifuge machines bound for Libya in October.

It is thought that there are several factories dedicated to the manufacture of components specifically for the black market that produce flat-pack centrifuge kits, nicely boxed with quality control stamps no less. It is believed that these networks supplied both Libya and Iran and questions are being asked as to how such operations could remain undetected by Western intelligence sources. The recent discoveries are said to be due to Colonel Gaddafi, in an effort to show goodwill and convince doubters of Libya's commitment to withdrawing from the nuclear race.

In an interview to be published in *Der Spiegel* magazine, IAEA Director-General, Mohammed El-Baradei speaks of the new dangers of atomic war created by such trafficking. "I am afraid that nuclear arms are falling into the hands of unscrupulous dictators and terrorists." He goes on to add, "I am also afraid of the nuclear arsenals in democratic states because as long as these weapons exist, there is no certainty they won't be stolen, sabotaged or subject to accident."

AFP, 24 January 2004; *The Washington Post*, 24 January 2004; *The Guardian*, 17 January 2004

facility, Kahuta Research Laboratories (KRL), which A.Q. Khan formerly headed.

In the early stages, Foreign ministry spokesman, Masood Khan stressed that Pakistan had not shared technology with Iran, North Korea or Libya and that the detained scientists and officials were merely being detained and that there was "no presumption of guilt".

In an interview to the *Washington Post*, Pakistani President, General Pervez Musharraf stated that Pakistani governments (past and present) had never sanctioned proliferation.

Gen. Musharraf is being heavily criticized at home by Islamic hard-liners that accuse him of pandering to the Bush administration's wishes by aggressively pursuing the investigation. Washington however, is reportedly not convinced of a vigorous investigation.

Despite claims that no high-level military involvement existed with Pakistan's nuclear program during the late 80s to early 90s, former Prime Minister Benazir Bhutto has claimed that she was forced from power to stop her attempts to exert control over military activities and the nuclear program.

If the investigation leads to a public trial, many expect interesting revelations regarding the role of the military. Investigators are currently considering whether to question retired Gen. Mirza Aslam Beg, army chief of staff from 1988 to 1991. Gen. Beg openly advocated military co-operation with Iran and is alleged to have proposed the sale of nuclear technology to Tehran in 1991.

Former U.S. ambassador, Robert Oakley, has said that Beg told him, also in 1991, that an understanding had been reached with the head of Iran's Revolutionary Guard, to provide the country with help for its nuclear program in return for conventional weapons and oil. However, the then President, Ghulam Ishaq Khan and Prime Minister, Nawaz Sharif informed the Iranian President that the government of Pakistan could not go along with such an agreement. Beg says he never authorized the sale in the end.

Several low-ranking former military officers have been detained in connection with the investigation. Families of the detained claim that their relatives are being used as scapegoats by the Pakistani government and have disputed the idea that any scientists could act independently since they were closely monitors by authorities to safeguard secrecy.

President Musharraf insists that scientists were given complete "freedom of action" to develop technology which would have allowed the opportunity for wrongdoing.

The government is now said to be checking bank accounts of the 9 scientists and administrators detained in an effort to find some evidence of payments received.

Libya sends enrichment material to U.S.
British and American experts have been in Libya dismantling and removing technology and materials related to its illicit nuclear programs. 55, 000 pounds (approx. 25 tons) of equipment arrived in the U.S., from Libya, on 27 January and is being held at a "secure location" pending analysis. The weapons-related equipment is expected to be destroyed at the Oak Ridge National Laboratory in Tennessee.

Following its recent renouncement of all thing nuclear, Libya has continued it's rapid rise to respectability by ratifying the Nuclear Test Ban Treaty and filling the necessary documentation with the U.N. to join the Chemical Weapons Convention, which obligates signatories to cease development of banned weapons and destroy existing stocks.

The country has also handed over drawings of nuclear warheads, procured from foreign sources, to the IAEA. In the meantime, U.S. authorities have been butting heads with the IAEA over who should oversee the work in Libya – after all, it was the U.S. and ever loyal friend, Britain, that discovered the true extent of the country's program so they should take the lead and get the glory.

Happily, the row was resolved with the U.S. and Britain taking charge of dismantling and removals whilst the IAEA gets responsibility for taking a full inventory of materials removed and verifying their destruction.

American officials are said to be contemplating opening an office in Tripoli (in the absence of an embassy) to facilitate the work of weapons experts and create a direct diplomatic channel for contact between the two countries. A delegation of U.S. congressmen has recently visited the country for talks with Gaddafi.

Sources: Reuters, 2, 14, 20, 22 and 26 January 2004; AP, 27 December 2003, 14 and 23 January 2004; AFP, 30 December 2003 and 21 January 2004; BBC, 19 and 26 January 2004; *The Boston Globe*, 30 November 2003; *USA Today*, 21 January 2004; VOA News, 21 January 2004; *Washington Post*, 24 and 25 January 2004

Contact: WISE Amsterdam

IN BRIEF

France: demonstration against EPR plans. Between 10-15,000 demonstrators marched through the streets of Paris on 17 January in an anti-nuclear protest. The demonstration, which was also attended by groups from Germany and Holland, was to protest against the proposal by the French government to build a European Pressurized water Reactor (EPR). The decision could take place later in 2004. For the first few hundred meters, protestors walked backwards, to "symbolize the retrograde step in building the EPR". The demonstration ended near the Ministry of Finance and Economy, responsible for the EPR plans.
AFP, 17 January 2004.

Germany: interim storage spent fuel licensed. In December 2003, the Federal Radiation Protection Authority (BfS) licensed the last of 12 interim storage sites for spent fuel. At the 12 NPPs, spent fuel from the reactors will be stored in Castor casks, to be placed in small buildings. The plan for the interim storage was a consequence of the 2001 agreement between nuclear utilities and the German government. On-site storage was chosen to prevent further shipments of spent fuel to Ahaus and Gorleben (due to fierce resistance) and to the Sellafield and La Hague reprocessing plants (which is forbidden as of 1 July 2005). Presently, one storage site has been realized in Lingen while others still require building permits from concerned state governments. Many anti-nuclear groups have protested against the plans because of the increasing amount of radioactive waste at the sites. The German section of the International Physicians for Protection against Nuclear War (IPPNW) fears that the sites will house spent fuel for longer than the allowed 40 years because of the lack of perspective on a long term solution. The only protection barrier against serious accidents is in the form of the Castor casks as the storage buildings itself are described as simple and not particularly robust.
***Strahlentelex* (FRG), January 2004.**

European Parliament supports draft safety and waste directives. On 13 January, the European Parliament (EP) adopted two (non-binding) resolutions supporting future European laws (directives) on nuclear safety and waste (see *WISE/NIRS Nuclear Monitor* 596/598 special edition, November 2003, *European Nuclear Threats: Old and New*; page 10-14). The package was proposed in November 2002 by the European Commission and is currently being discussed by the concerned ministers of national governments (Council of the European Union). The Council is strongly split between countries that refuse any European law in this matter (U.K., Sweden, Belgium and Finland) and those who are in favor (the other 10). Ireland, which is presently holding presidency of the European Union, is trying to reach a solution in the coming months. In May, a number of new countries will enter the European Union and it is clear that at least Lithuania and the Czech Republic will belong to the opponents of the package. Nevertheless it is considered unlikely that the Council will reach an agreement by May, although the Council will discuss it on 22-23 March.

The EP only has a consultative function in the process and therefore the recently adopted resolutions are non-binding. Although the EP supports the proposal for European laws, it also made its own amendments to it. The EP wants responsibility for safety issues to remain under national authorities, instead of the proposal by the European Commission to create an additional supranational authority. The EP proposes a two-step approach where the proposed spent fuel and waste directive is concerned. Instead of the proposed (unrealistic) timetable for final waste repositories, the EP wants national plans for addressing waste disposal by 2006 but will leave countries free to set their own timetables. The EP also found a majority to support the possibility of setting up multinational disposal sites. In another resolution, the EP agreed with new criteria for Euratom loans, but only if they are to be used for improving safety and decommissioning of installations. These resolutions will later be followed by another vote on a proposal to raise the ceiling of Euratom loans and the extension of the scope of it to non-member states.
***Nucleonics Week*, 15 January 2004; information FOE Europe, 18 January 2004**

Chernobyl contaminated mushrooms still sold. Authorities have shut down a canning company in northern Ukraine after it discovered that the company was selling radioactive mushrooms and berries. The products were sold at regional markets and probably in the capital Kiev. Police discovered more than two tons of contaminated mushrooms and 1,800 liters of berry juice.
AFP, 28 January 2004

Czech protests against energy policy government. On 28 January, about 100 activists demonstrated at the government office to protest against new energy policy plans in the country. The demonstration was organized by environmental groups and mayors from possible nuclear waste disposal sites and coal mining areas. In the last months the government announced that it would discuss further expansion of the Temelin NPP, although Prime Minister Spidla denied such plans. The demonstration was supported by Austrian anti-nuclear NGOs.
WISE Austria, 28 January 2004

Namibia: Rössing uses decommissioning fund to keep mine operating. According to the chairperson of the Mineworkers Union of Namibia (MUN), Rössing branch, the mining company has been using money from its decommissioning fund to operate the mine. "There is only enough money left until June this year." Decommissioning funds should be used for environmental restoration, i.e. the clean up of radioactive

leftovers from operation. Managing Director David Salisbury acknowledged that the company was using some of the decommissioning fund to maintain cash flow but denied exhausting the fund.
***The Namibian*, 28 January 2004**

French money for feasibility study EPR in Lithuania. According to internal information from the French Ministry of Foreign Affairs, money is to be spent on a feasibility study for building an EPR in Lithuania. The money would come from a semi-private fund (FASEP, Fund for studies and assistance to the private sector), a government body for public aid to eastern countries (AFD, French Agency for Development) and the Export Credit Agency Coface. The idea is in line with earlier talks between the Presidents of France and Lithuania on 14 May 2003. Both countries agreed to develop nuclear cooperation and discussed the possibility of building an EPR, to replace the Ignalina NPP. Ignalina-1 and -2 are to be closed in 2005 and 2009 and are presently responsible for 80% of the country's electricity production. About half of Lithuania's electricity is exported and major investments are to be made on grid connections to Scandinavian and European grids at an expected cost of 434 million Euro (US$ 546 million), which will make it possible to increase the exports of electricity.
Information WISE-Paris, 22 January 2004

Canadian reactor for Bulgaria or just another bid? Atomic Energy of Canada Ltd. (AECL) said it has offered to build Bulgaria a new plant to replace the old Kozloduy reactors. Bulgaria is considering restarting construction of the unfinished Belene reactors, which are of an old Soviet design. However, the country could also decide to build a new plant at the Belene site and several nuclear companies are offering their designs as the most suitable, cheapest and safest. Amongst former candidates are Westinghouse (U.S.), Atomenergoexport (Russia), Skoda (Czech Republic) and Framatome ANP (France-Germany) (see WISE/NIRS Nuclear Monitor 596/598 special edition, November 2003, European Nuclear Threats: Old and New; page 27). It is still very unclear whether Bulgaria will complete the Belene reactors, build a new foreign reactor or finally decide to do neither.
Reuters, 16 January 2004

Hungary: Framatome ANP to pay for Paks-2 damage. The Paks NPP and Framatome ANP finished negotiations on compensation for the fuel damage accident in April 2003. In the accident, fuel elements were cleaned in a system hired from Framatome but due to insufficient cooling several elements were damaged (see *WISE/NIRS Nuclear Monitor* 586.5507: "Serious incident at Hungarian Paks-2 reactor"). The definitive amount of money to be paid by Framatome remains secret but should be around 40 million Euros (US$ 50 million), around 25% of total losses from the accident. With the payment, Framatome has on one hand admitted its responsibility while demanding that Paks NPP remains silent on the details.
Energy Club Hungary, 23 January 2004

Safety anomaly in French reactors. A serious safety deficiency has been found in the emergency cooling system of French reactors. The problem was found in a re-circulation system, which is used in case of a loss-of-coolant accident. If the primary cooling circuit of a reactor starts to leak (for instance because of a pipe break), water will drop to the floors of the reactor chamber to be collected in a basin (the containment sump). Re-circulation pumps are supposed to recycle the water into the reactor vessel to supply necessary cooling. The problem that has now been detected concerns the possible clogging of the re-circulation pumps by debris from the originating accident. If the pumps get blocked, insufficient cooling water is pumped into the reactor risking meltdown. The problem is not limited to France, as this safety deficiency had also been detected in U.S. reactors and in other countries. Reactor operator EdF is now studying modifications to the system to prevent it from being blocked by debris. Modifications are projected to cost about 100 million Euros (US$ 127 million) for its 58 reactors. Edf plans to modify the reactors in 2005, a date which was criticized by anti nuclear groups as irresponsible and too slow. The French Nuclear Safety Authority (ASN) has classified the findings as level 2 on the International Nuclear Event Scale (INES).

Although EdF considers the risk of clogging "very unlikely", Belgian reactors are planning for modifications this year already. Belgian safety authority AVN (Association Vincotte Nucleaire) told them in August 2002 to address the problem without delay. According to director general Van Binnebeek, the problem increases core damage frequency, "not by a hair, but by factors" of two or more.

In 2001, a similar anomaly was found in the re-circulation pumps when it appeared that insufficient cooling of valves could block the pumps and stop them from working. The problem was found in five French NPPs and was also classified as a level 2 incident (see *WISE News Communique* 548.5270: "France: regulator says fix those valves now").
Www.asn.gouv.fr, 16 January 2004; *Basler Zeitung*, 8 January 2004; *Nucleonics Week*, 15 January 2004

U.S.: Ice condenser "initiation" halted by TVA. The company has stopped a longtime tradition at Tennessee Valley Authority (TVA) NPPs after a report by its Inspector General's office (IG). As part of a workplace "initiation", new employees of the Sequoyah plant were sent into the ice condenser. The ice condensers, which ring the inside of the containment building, are filled with chips of ice. The system is used to reduce pressure in the containment building and to provide cooling water in case of an accident. Only nine U.S. plants have ice condensers. The IG observed that the practice was commonplace and known

to managers at the plant. TVA subsequently forbade the "initiation" ritual and took disciplinary actions, ranging from warnings to sacking for involved personnel.
***Nucleonics Week*, 8 January 2004**

Dutch NATO official convicted. A Haarlem court has sentenced Jan Willem Matser to a jail term of 14 months for fraud after attempting to cash forged bank securities worth 200 million Euro (US$ 250 million). (See *WISE/NIRS Nuclear Monitor* 599.5559 "Package deal on gold mine and Cernavoda-2?") The prosecution had sought a 4-year sentence but the judge decided to consider extenuating circumstances when making his verdict. The judge expressed sympathy with Matser, saying that as there were no previous convictions against him and since his actions were not solely for personal gain, a shorter sentence was more suitable. The two co-accused Piedro Fedino and Willem van Voorthuizen were sentence to 15 and 18 months respectively with 3 months of van Voorthuizen's sentence suspended. Both he and Matser were release immediately following sentencing as they had served the equivalent time while on remand. All three were found not guilty of being involved with a criminal organization and previous charges of money laundering leveled against Matser were also dropped.
Expatica News & ANP, 27 January 2004

Chernobyl documentary receives Oscar nomination. The Chernobyl Children's Project announced that the documentary "Chernobyl Heart", which features the work of the organization, has been shortlisted for the Acadamy Awards in the Best Short Documentary category. "Chernobyl Heart" is produced and directed by independent U.S. filmmaker Maryann DeLeo.
Www.chernobyl-ireland.com, 27 January 2004

European Commission to fund study on regional waste disposal. The Ec is to fund a pilot study examining the feasibility of multinational waste repositores in Europe. It will be managed by Slovakia's DECOM and ARIUS (www.arius-world.org), which is based in Switzerland but has memberships from organizations in several countries. Th einitial phase will look at technical and legal requirements for a regional repository and will involve a dozen European countries.
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