

A Publication of World Information Service on Energy (WISE) and the Nuclear Information

& Resource Service (NIRS), incorporating the former WISE News Communique

#627--North American Edition

May 13, 2005

# NAMIBIA: OPPOSITION TO LANGER HEINRICH MOUNTING

Paladin Resources Ltd has decided to proceed with the development of the Langer Heinrich uranium project in Namibia at the cost of some \$92 million. Paladin expects to complete engineering and design work on the project by November with the aim of commissioning the mine in September 2006, subject to approval by Namibian authorities.

(627.5682) WISE-Amsterdam - The recently completed Bankable Feasibility Study (BFS) issued by Australian mining company Paladin concluded that the Langer Heinrich project could be developed into a profitable mining operation. Langer Heinrich is expected to produce 1180 tons U3O8 (1000 tU) annually from 1.5 million tons per annum.

Gradually, more and more organizations in Namibia are raising their voices in opposition to the project.

On April 20, 2005, Namibian environmental organization Earthlife appealed to government, politicians and all Namibian political parties to stop mining operations. Earthlife Namibia's chairperson, Bertchen Kohrs, said in a press release that mining uranium in the park not only poses health hazards but also environmental concerns such as water contamination - one of the serious issues that have not been addressed properly. Late in October 2004 at a public meeting organized by Paladin in Windhoek, the Desert Research Foundation voiced criticism against the project.

On 10 May the National Society for Human Rights issued a press release calling upon the government "not to allow the Langer Heinrich uranium mine become reality". "As an environmental rights watchdog fully committed to the UN's Agenda 21, we are aggrieved at another very serious human-driven threat to the Namib Desert's biodiversity which is likely to become a fait accompli if the proposed

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Langer Heinrich uranium mine were to become a reality", said NSHR executive director Phil ya Nangoloh. Agenda 21 is a comprehensive plan of action to be taken globally, nationally and locally by bodies within the United Nations system, Governments and civil society in order to protect and make the environment sustainable for the sake of humanity.

The fact that the mine borders the Namib Naukluft Park and that travel to the coast, to and from the mine, would be via the existing C28 gravel road running through the park, gave rise to many questions from residents.

According to Paladin, the tenement containing a 12 km stretch of ore body had been excised from the park when exploration first started in the 1970s. However, it is disputed that the land holding the uranium deposit had been cut off from the rest of the park or that it had been deproclaimed.

"One of our reasons for vehement opposition to the Langer Heinrich mining project" says NSHR in its 10 May press release, "is the fact that if radioactive waste were to be stored there on the site it might leak into the underground water finding its way into aquatic ecosystems, mound springs and the terrestrial food chain of the Desert." Apart from the indigenous minority of Topnaar peoples, the Namib Desert is home to a host of rare species. At least 42 plant species in and around the Namib Naukluft Park are on the red list of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, commonly known as CITES Convention. "The Namib [Desert] houses rare species of plants and insects. The Nara and the monotypic welwitschia mirabilis are typical rare treasures of the Namib. The so-called Hartmann's zebras and gemsboks are some of highly adapted animal species surviving the harsh Namib. Reptiles such as the desert lizards, the wedgesnouted sand lizards and barking

gecko are endemic to the Namib ecoregion".

The issue of the availability of water for the mine is also raised. While the draft environmental assessment states that the mine's water needs could not yet be calculated, Paladin declared it at the October 2004 meeting as one million cubic meters per year.

According to Paladin, water supplier NamWater had confirmed that there is sufficient water available in the groundwater supplies of the Kuiseb and Omdel deltas. However, interested parties have said that the current annual supply of 7 million cubic meters to the coastal areas was already under severe strain, and the mine would increase consumption by 15%.

**Sources:** *WNA News Briefing*, 5-10 May 2005, wise uranium website, NSHR Press release, 10 May 2005

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# AUSTRALIAN NUCLEAR WASTE ILLEGAL IN FRANCE

A shipment of Australian radioactive waste in the form of 360 nuclear fuel rods from Australia's Lucas Heights reactor is being stored illegally in France, according to a new ruling by a French Court of Appeal.

(627.5683) WISE Amsterdam - The April 12, court decision "proves that ANSTO (Australia Nuclear Science and Technology Organization, the operator of Lucas Heights) are incompetent and can't sort out their own regulatory arrangements with the French authorities," said Greenpeace Nuclear Campaigner James Courtney. "The truth is that the nuclear agencies can't be trusted, and there is no solution to the insoluble problem of radioactive waste."

The Court of Appeal (Cour d'appel) in Caen pronounced that Cogema illegally imported and stored the Australian nuclear waste for the last 4 years. Cogema was ordered to pay 10,000 Euros in damages to

## WISE Amsterdam/NIRS ISSN: 1570-4629

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**The next issue** (628) will be mailed out on 27 May 2005

Greenpeace, who took Cogema to court in 2001 because of the environmental risks associated with nuclear waste storage and reprocessing.

The Court based its judgment on the conclusion that the material qualified as "waste" and on Cogema's failure to justify the long pre-reprocessing storage period in France for technical reasons related to the reprocessing process, as French law requires.

"This is a major victory for the environment movement," explains Yannick Rousselet, nuclear campaigner for Greenpeace France. "This judicial decision today confirms what we have always said: Cogema is illegally importing nuclear waste into France." Greenpeace also said that the decision will have 'major repercussions on the overall issue of nuclear waste". The ruling opened the door for further challenges of the legality of storage of other materials now in the storage pools at La Hague.

The importance in the court decision is the definition of nuclear waste. Cogema claims it is spent fuel that contains recoverable energy materials and therefor cannot be considered 'waste'. The Court argues that international legal texts, notably European Union directives and jurisprudence, consider that 'waste' is something for which its owner has no further use. The fact that usable substances may be extracted does not change its initial character. In this case, spent fuel from the Lucas Heights HIFAR reactor, ANSTO foresees no recycling of the contained uranium or plutonium. Cogema claims it will sell the uranium, but the judges said that further use of the uranium was not stipulated in the 22 January 1999, fuel contract, which refers only to "terminal" treatment of the material.

Article 3 of the French 1991 waste management act prohibits the storage of foreign "waste" on French territory beyond the "technical period required by reprocessing". Cogema has long claimed that this does not apply to its business, which is reprocessing of energy materials and not of "waste".

The court's decision casts doubt on the fate, not just of the 360 rods in question, but also on all the nuclear waste stored by Areva's subsidiary Cogema. According to Alexandre Faro, attorney for Greenpeace in this case, said: "If foreign fuel is reprocessed at La Hague in the future, it will have to be stored for cooling in its country of origin"

# 25 YEARS AGO

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

# Then

In *WISE Bulletin* vol. 2 nr. 5 we wrote about the occupation of the German test drilling site in Gorleben: "activists built and lived in an alternative village built on a test drilling site in Gorleben. They stayed throughout May, until heavy police and army forces cleared away the village and protestors. [...] An estimated 10.000 police and army forces obliterated the 'Republic of Free Wendland'." (*WISE Bulletin*, July/September 1980)

The site was occupied on 3 May by thousands of demonstrators and named "hut village 1004" (the site was officially named deep drilling site "1004"). The village was built of wooden huts and grew to a remarkable small village, including a sauna, piggery, windmills, solar energy heating system and even small tourist attractions. For many people, the Republic was not only symbol of the struggle against nuclear energy but also an alternative way of living. On 4 June the village was cleared by using severe police force, for instance by flying helicopters very low above the people.

# Now

The exclamation of the Republic of Free Wendland is a famous moment in the German anti-nuclear movement and an important moment in the resistance against the Gorleben waste repository site. German media and anti-nuclear groups looked back to the events 25 years ago.

The events were remembered at a meeting on 8 May near the site. The request to organize a lecture at the site itself was denied by the owner, the German Association for Reprocessing (DWK), although the site is not in an enclosed area. A walk to the place in the woods however was allowed. (*Elbe Jeetzel Zeitung*, 7 and 9 May 2005)

The plan for an underground waste repository by 2000 was not realized and as of today a moratorium on research in the salt dome is still in place. High level waste from reprocessing and fuel from German reactors has nevertheless been stored at the Gorleben intermediate storage site since April 1995. (*WISE/NIRS Nuclear Monitor* 617, 25 years ago, 22 October 2004)

The Court of appeal also ordered Areva to produce an operating authorization for the reprocessing of the Australian waste within three months. After this deadline, Cogema will be given two months to remove the waste from France, or pay Greenpeace 1,500 Euros penalty per day. "If Cogema can't provide the proper authorization to reprocess the Australian waste by July, there is a possibility the rods will be returned to Australia untreated," said Courtney.

The Australian nuclear waste issue came to light in March 2001. The

Summary court in Cherbourg had forbidden Cogema to proceed with the unloading and/or the storage of the Australian spent fuel following an appeal by Greenpeace. The court decided that Cogema did not have a license to reprocess the Australian fuel and ruled also that storage of the waste on French soil is illegal under the 1991 French Radioactive Waste Management Act. This decision was then quashed on appeal on 3 April 2001, making unloading of a cargo of spent fuel from the container ship Le Bouguenais possible. A new proceeding was then filed by Greenpeace,

focusing on the substance of the case. Meanwhile, Cogema announced that the company would appeal the Caen Court decision to the country's supreme appeals court (Cour de Cassation) but it is unclear how long the appeal might take.

**Sources:** Greenpeace press release, 14 April 2005 & 16 March 2001; *Nuclear Fuel*, 25 April 2005

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# DAVIS-BESSE FINE TOO LITTLE TOO LATE

The U.S. Nuclear Regulatory Commission's (NRC) proposed \$5.45 million fine, announced on April 21, against FirstEnergy Nuclear Operating Company for safety violations at its Davis-Besse nuclear plant in Oak Harbor, Ohio, is too little too late, and it does not excuse the NRC for failing to properly enforce its own regulations initially.

(627.5684) WISE Amsterdam - The proposed fine of \$5.45 million (Euro 4.07 million) is for FirstEnergy's failure to address boric acid leakage from vessel head penetration nozzles. Davis-Besse restarted after a refueling outage in May 2000 "without fully

characterizing and eliminating" the leakage. According to the April 21 notice of violation the leakage was "evidenced by significant boric acid deposits on the reactor pressure vessel head at the start and end of the outage and by development of new and extensive boric acid deposits on reactor containment equipment during the operation cycle".

According to Public Citizen, both the NRC and FirstEnergy are at fault in the mismanagement that allowed severe

degradation of the nuclear reactor vessel head to go unnoticed for years until it was finally discovered in March 2002 that a mere three-eighths of an inch of metal cladding was all that contained the hot reactor core, a dire situation that could have easily led to a reactor breach and potential meltdown. (See *WISE/NIRS Nuclear Monitor 565.5385* "Millimeters from disaster").

The fine against FirstEnergy is deserved, to be sure, but it does not correct the NRC's troubling emphasis on plant performance and profitability, which inhibited an earlier shutdown and inspection of the troubled plant. In early March 2002, FirstEnergy, true to its name, revealed a policy to drive electricity production ahead of federal safety requirements. This official policy of mismanagement pushed the Davis-Besse nuclear plant to the brink of disaster.

Moreover, senior engineers at NRC realized a "high likelihood" that the reactor was so damaged that the risk of a nuclear accident grew greater with continued operation. Yet, federal officials were unable to issue an order to immediately shut the reactor for the necessary inspection and repair. Instead, the agency chose to ignore safety regulations and gamble with disaster to accommodate the financial interest of yet another corporate delinquent. (See *WISE/NIRS Nuclear Monitor* 575.5448 "Davis-Besse: gambling safety for profits")

A December 2002 report by the NRC's inspector general (IG) found that the NRC's decision to allow the continued operation of Davis-Besse "was driven in large part by a desire to lessen the financial impact on FENOC [FirstEnergy] that would result from an early shutdown." The IG further concluded that the "NRC appears to have informally established an unreasonably high burden of requiring absolute proof of a safety problem, versus lack of reasonable assurance of maintaining public health and safety, before it will act to shut down a power plant."

While the proposed fine is significant — the largest ever proposed by the NRC — it does not correct a heavily pro-industry bias that has compromised the agency's capacity for effective regulatory oversight and discipline. The NRC allowed the Davis-Besse plant to restart in March 2004, and it has recently approved a slew of power uprates (increases in power generation) and license renewals for operators of stressed, aging nuclear plants, indicating a preference for performance over robust and thorough regulation. FirstEnergy has 90 days to respond to the proposed violation. FirstEnergy said it is reviewing the 'notice of violation'.

According to the NRC, the maximum possible fine for the principal violation was about US\$75 million. Answering why the amounts the NRC imposed was so far below that, one NRC official stated that fines are not intended to 'put a company out of business" but to 'get a utility's attention".

In addition to this civil enforcement action, there is an ongoing criminal investigation by a grand jury about FirstEnergy's false statements about Davis-Besse. But no one at FirstEnergy is really concerned about the criminal case, analysts believe, even if it results in convictions. The NRC's decision in March 2004 to allow restart of the reactor while the grand jury case was still pending "alleviated concerns".

**Source:** Public Citizen Energy Project, Press release 21 April 2005: Nucleonics Week, 28 April 2005; Nuclear Monitor, 18 October 2002

**Contact:** Paul Gunter, at Reactor Watchdog Project, NIRS

# CHERNOBYL'S DESTRUCTIVE INFLUENCE CONTINUES

Nineteen years have now elapsed since the nuclear disaster at Chernobyl and yet, despite much evidence to the contrary, the global nuclear lobby maintains its stance, refusing to acknowledge the real extent of the destruction and its far-reaching effects. Denial, however, can never erase the truth of the devastation caused to thousands of lives and the continued damage inflicted on the environment.

(627.5685) WISE Amsterdam- The hollow reassurances of nuclear proponents, that the danger has passed and that much danger was averted, cannot negate the balance of scientific evidence, which continues to support the view that Chernobyl remains a danger to both health and the environment. High levels of radiation are still being measured both in the vicinity of the disaster zone and further afield. **EC: High rad levels in food** In responding to a question from German Green MEP Rebecca Harms, the European Commission has confirmed that restrictions remain in force, 'for numerous cattle breeding enterprises especially in the North of Wales', on the transport, sale and slaughtering of sheep in the UK while monitoring continues to be conducted in Ireland and certain Scandinavian regions. The Commission further explained that certain game, wild grown berries, and mushrooms and in carnivorous fish (from regions in Germany, Austria, Italy, Sweden, Finland, Lithuania and Poland) the levels of Caesium 137 radiation detected still vastly exceeds normal levels.

The Commission also said that in regions worst hit by fall-out from

Chernobyl, contamination levels would remain high and relatively unchanged for decades to come, as would the restrictions on certain foods from certain member states.

## Protestors detained in Belarus

Following a peaceful demonstration in Minsk to commemorate the nineteenth anniversary of the nuclear meltdown in neighbouring Ukraine, 32 people were arrested and later sentenced to between eight and fifteen days imprisonment.

Protest organizers had scaled down the event from the usual tradition of large demonstrations to mark the disaster because over the past months the police routinely dispersed even the smallest rallies in the country. Instead they decided to present President Lukashenko with a petition demanding an end to Belarussian government efforts to persuade villagers to resettle areas severely contaminated by the 1986 disaster and calling for Belarussian children to be allowed to travel abroad for medical treatment.

During the small protest, banners and posters reading "Ukraine Now, Belarus Tomorrow" (referring to Ukraine's "orange revolution" which led to the election of liberal president Viktor Yushchenko) were unfurled and it is this act that is believed to have prompted the arrests. Of the 32, 14 Russians were released on April 30 prompting an appeal to the Belarus Supreme Court from Ukraine for the release of its own citizens arrested on the same charges to be released. Ukrainian president Yushchenko has reportedly condemned the Minsk judiciary for alleged bias – Belarus' president had strongly supported Yushchenko's pro-Russian opponent Viktor Yanukovich during Ukraine's contested 2004 elections.

# Cancer detection programme at risk

Dwindling donor funds are putting a programme for the detection of thyroid cancer in areas contaminated by Chernobyl at risk just as cancer rates themselves rise. In a statement marking the anniversary of the disaster, the International Federation of Red Cross and Red Crescent Societies has called for thyroid screening to continue in Belarus, Russian and Ukraine until 2020.

Some 7 million people in those three countries live in remote, highly contaminated areas where mobile diagnostic laboratories are vital to the detection of thyroid abnormalities found in nearly half of the 90,000 people screened in 2004. Experts forecast that thyroid cancer rates would peak between 2006 and 2020 but the federation fears that funding trends over the next years will not allow for screening to continue.

# Chernobyl reforestation

The State Forestry Committee of Ukraine is to finance and develop a new project to reforest around 15.000 hectares of abandoned agricultural lands in territory of Zhitomir and Kiev oblasts near Chernobyl with the aid of a Japanese PHRD (Population and Human Resources Development) Grant, The plan is to re-establish forestry as the most economically viable use of land in the region, isolate Kyotocompliant carbon from the atmosphere (projected at around 1,150,000 t CO2e by 2012) and prevent grass fires that could lead to the dispersal of radioactive materials to previously uncontaminated areas. The project would reconstruct natural forests on abandoned agricultural fields where the prevailing levels of contamination are such that the land is unsuitable for the production of crops, milk or meat for human consumption until approximately 2020. www.carbonfinance.org

**Sources:** The Greens/EFA in the European Parliament, press release 25 April 2005; Reuters, 27 April 2005; AFP, 5 May 2005.

Contact: WISE Amsterdam

# NAVAJOS "CHOP THE LEGS OFF URANIUM MONSTER"

Diné Bidzii, Diné Citizens Against Ruining our Environment (Diné CARE), Eastern Navajo Diné Against Uranium Mining (ENDAUM), and allied groups have achieved a hard-won, long-awaited victory: a ban on uranium mining, milling, and processing on the vast Navajo lands in Arizona and New Mexico.

(627.5686) NIRS Washington - On April 19, the Navajo Nation Council passed the Dine Natural Resources Protection Act of 2005 (DNRPA), which bans uranium mining and processing anywhere in Navajo Indian Country, by a vote of 63-19 (1) and on April 29 the uranium moratorium was signed by Navajo Nation President Joe Shirley Jr. (2)

As amended by the Council during

floor debate, the act states, "No person shall engage in uranium mining and processing on any sites within Navajo Indian Country." The law is based on the Fundamental Laws of the Diné, which are already codified in Navajo statutes.

The act finds that based on those fundamental laws, "certain substances in the Earth (known as doo nal yee dah) that are harmful to the people should not be disturbed, and that the people now know that uranium is one such substance, and therefore, that its extraction should be avoided as traditional practice and prohibited by Navajo law." (3)

"This legislation just chopped the legs off the uranium monster," said Norman Brown, president of Dine Bidzill. Traditional Navajo stories speak of monsters sleeping beneath the Earth that should not be awakened, for if they are, they will unleash destruction. (4)

The Navajos have 65 years of experience of just how monstrously destructive uranium is. Uranium mining, milling and processing began on Navajo and Pueblo Indian lands in the 1940s and 1950s as part of the "Manhattan Project" to create the atomic bomb and to fuel the nuclear arms race, and continued for many decades. Large numbers of Native Americans were hired as underground and aboveground miners.

"Though the toxic effects of radiation were known to government officials, no one did anything to protect the Navajo miners," said Cora Maxx-Phillips of the Office of the President and Vice President of the Navajo Nation. "Our people toiled day and night in the mines without face masks, ventilation or clean drinking water. They breathed the radioactive dust and drank contaminated water, and later paid with their lives and their land." (5)

Radioactive and toxic, uranium mine and mill wastes have been carelessly dumped across the Navajo Nation by the nuclear industry and the U.S. federal government. As on other Indigenous lands such as at Serpent River First Nation in Ontario, Canada and Laguna Pueblo, New Mexico (site of the world's largest open-pit uranium mine, in the midst of a community), these uranium wastes blow with the wind and flow with the water, contaminating the air, ground and surface waters, and soil.

In the late 1970's, one of North America's worst ever radiologic disasters occurred when a uranium waste settling pond earthen dam burst, spilling vast amounts of radiation and toxins into the Rio Puerco, the sole source of drinking water for Navajo shepherds in a region of western New Mexico. Not only miners, but also local Navajo residents, have suffered the inevitable health consequences from uranium extraction and processing. "It's very simple, uranium kills," said Navajo Nation Council delegate Mark Maryboy during the debate on the measure.

"The Dine Natural Resources Protection Act evolved from former [Navajo Nation] President Zah's 1992 uranium mining moratorium and President Shirley's public statements opposing new mining," said ENDAUM spokeswoman Lynnea Smith. "It reflects the overwhelming sentiment of the Navajo people to resist new uranium mining and address the lingering effects of past mining, as reflected in a resolution adopted by nearly 350 people at the July 19, 2003, citizens' uranium conference in Shiprock [New Mexico]."

President Shirley signed the law in front of the Crownpoint Chapter House water station, from which thousands of people haul water every year. ENDAUM members and supporters held a banner reading "Water Is Life."

President Shirley said "As long as there are no answers to cancer, we shouldn't have uranium mining on the Navajo Nation. I believe the-powers-that-be committed genocide on Navajoland by allowing uranium mining. I don't want to subject any more of my people to exposure, to uranium and the cancers that it causes. I believe we reinforced our sovereignty today."(2)

Mitchell Capitan, president of ENDAUM, began his work against uranium mining a decade ago to protect the precious water of Navajo country against the harmful health effects of uranium and radiation exposure that were already so well known and documented. "I feel like the eyes and ears of the people have been opened," Capitan said. "There are many people who are suffering from the effects of uranium mining. I don't know if the federal government will ever be able to compensate us."(2)

Expressing his joy at the signing of DNRPA, Capitan added, "I can always tell my grandchildren that I did something to protect them, something that I am proud of." In addition to its gratitude to the Navajo President and National Council, ENDAUM gave special praise to the Southwest Research and Information Center and its long-time representative, Chris Shuey.

Norman Brown of Dine Bidzill said thousands of Navajos are still affected by uranium-caused cancers and need help through the federal Radiation Exposure Compensation Act (RECA) amendments now before the U.S. Congress. "Hundreds of mines still sit open to the wind and air," Brown said. "I have witnessed our elders crying and families pleading for some type of relief from the many cancer deaths that continue daily across our great Navajoland."(2)

Navajo President Shirley is working with U.S. Congressman Tom Udall, a Democrat of New Mexico, to block a provision in the U.S. House of Representatives energy bill for US\$30 million in federal taxpayer subsidies for "in-situ leach mining" of uranium in New Mexico. Udall's amendment to block the subsidy was defeated recently on by a 225 to 204 vote, but President Shirley has vowed to continue fighting. (6)

"The Diné will not tolerate the risk of being exposed to uranium again," Shirley said. (6) Udall believes the controversial subsidy is not currently included in the Senate version of the energy bill, but it could be added during the House-Senate conference committee. New Mexico's two U.S. Senators, Pete Domenici and Jeff Bingaman, will both serve on the conference committee, so phone calls and letters to their offices urging opposition to in-situ leach mining of uranium would be very valuable.

Grace Thorpe (known as "Woman of the Power of the Wind that Blows Up Before a Storm" or "No Ten O Quah" in the Sac & Fox Indian language), an emeritus board member of NIRS and founder National Environmental Coalition of Native Americans which led the national effort to stop radioactive waste dumps targeted at Indigenous lands, related a Navajo story. The Creator gave the Navajo the choice between two yellow powders, corn pollen and uranium yellow cake. The Navajo chose to live with corn pollen. The Creator then warned the Navajo that the uranium would unleash destruction if disturbed beneath the Earth. The Navajo have yet again rejected uranium, and reasserted the sacredness of their traditional ways. (7)

## Sources

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Daily Times, April 20, 2005
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(4) Navajo Community College museum tour, 1992.
(5) "Navajos take part in global forum," The Gallup (New Mexico) Independent, May 6, 2005

(6) "Shirley will ink uranium mining ban," *The Gallup Independent*, April 30,

2005 (7) http://www.nuclear-free.com/english/ res.htm

**Contact**: Dine CARE (Citizens Against Ruining Our Environment) at http:// dinecare.indigenousnative.org/ or: ENDAUM (Eastern Navajo Dine Against Uranium Mining) at http:// www.endaum.org/

# **NIGER: RADIATION EXPOSURE FEARED**

In a follow up to investigative work carried out in 2004, CRIIRAD, an independent French laboratory specializing in the monitoring of and protection against radiation, has collected new data which suggests that areas surrounding two uranium mines exploited by subsidiaries of French company Areva-Cogema were contaminated by dangerously high levels of radioactivity.

# (627.5687) WISE Amsterdam -

Residents of Arlit, one of two desert towns in the North of Niger specifically constructed to accommodate mine workers, had long been aware of the various mysterious illnesses affecting some of their neighbours but when more people began to get increasingly sick, residents turned to French NGOs to investigate.

The mines at Arlit and Akokan have been operated for some 40 years by the Areva-Cogema subsidiaries, Somaïr and Cominak. When constructing the towns deep boreholes were sunk to supply the 70,000 residents with drinking water but according to CRIIRAD, not enough measures were taken to contain the radioactive gases when the infrastructure was built. The exploitation of uranium, a dense metal, generates the release of radioactive gases and dust into the environment, which should be carefully controlled.

Aghir In'Man, a local NGO led by Almoustapha Alhacen, a former mine worker of 27 years who fell ill with tuberculosis 10 years ago, already suspected a link between the worsening health of the town's folk and the uranium mines and was determined to discover what was responsible for all the illnesses.

"...We have noticed...a lot of diseases such as respiratory problems, tuberculosis, hypertension, difficult deliveries, impotence, hair falling out, cataracts, and that people died with inflated stomach," he told IRIN news agency.

CRIIRAD analysed samples of water, air, soil and scrap metals and found that water samples contained from between 10 to 110 times higher levels of contamination than considered acceptable by the World Health Organization. Bruno Chareyon, the nuclear physicist who carried out the analysis, told IRIN that "The French multinational Areva-Cogema and its subsidiaries ... released contaminated metal scrap from their site, distributed water contaminated with uranium to the populations. left radioactive waste in the open while desert winds may disperse them far away, disregarded internationally recognised international norms for the protection against radioactivity".

Chareyon also said that a spill caused by a collision involving a truck carrying uranium ore last year was not properly cleaned up resulting in radiation levels ten times higher than normal even one month afterwards.

SHERPA, an NGO working to protect human and workers' rights against multinationals, found that Arlit residents are suffering from a wide range of illnesses - including lung cancer, tuberculosis, and various skin diseases - that could be attributed to the mining activities but admitted that proving the uranium mine as the definitive source of the contamination would be difficult without further research.

Unsurprisingly, the French multinational operating the mine has consistently denied the allegations, and has attributed the high number of illnesses to the harsh desert climate. "The most frequently observed maladies are allergic reactions that are characteristic of desert zones because of the abundance of sand and dust," said Areva in a statement issued on 25 April.

## No protection for workers

After interviewing residents, workers and doctors in Arlit, SHERPA discovered that international norms for the protection of workers had not been applied at the mines. No protective measures were taken and no protective equipment or masks were made available to stop workers being exposed to deadly gases.

The organisation is considering suing on behalf of the workers, many of which have suffered or died of pulmonary or skin disorders, but knows this would be very difficult because medical doctors, paid by the mining companies, were extremely reluctant to identify patients' symptoms that could potentially be linked to mining.

"No cancer caused by exposure to ionising radiation has ever been found in the hospitals in the region," according to the Areva statement though it did promise to carry out independent research into the allegations.

The French NGOs and the local population all agree that more research is needed, but do not trust Areva to be impartial. Almoustapha Alhacen, who has set up the NGO Aghir In'Man to increase environmental awareness in Niger, remains worried for the future.

**Source:** IRIN news agency, 28 April 2005; *WISE/NIRS Nuclear Monitor* 30 January 2004 (602.5570 "Independent Radiation Surveys at Niger Uranium Mines Obstructed")

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# **NUCLEAR REACTOR HAZARDS**

On April 26, 19 years after the accident at Chernobyl, Greenpeace International published a report that gives a comprehensive assessment of the hazards of operational reactors, new 'evolutionary' designs and future reactor concepts. It also addresses the risks associated with the management of spent nuclear fuel. A 'must-read' in these times as nuclear energy attempts to make a comeback.

(627.5688) WISE Amsterdam - The report entitled "Nuclear Reactor Hazards: Ongoing Dangers of Operating Nuclear Technology in the 21<sup>st</sup> Century", written by Helmut Hirsch, Oda Becker, Mycle Schneider and Antony Frogatt, identifies the significant decrease in safety at 'Western' reactors and warns for a major accident.

It concludes that, due to a combination of the ageing of reactors, electricity market de-regulation and inherent reactor flaws, the risks from 'Western' reactors have been significantly increasing over the last years and the likelihood of accidents is now greater than ever. A major accident in such reactor could be far more severe than the 1986 Chernobyl accident.

The main conclusions of the report are:

• All operational reactors have very serious inherent safety flaws that cannot be eliminated by safety upgrading:

• A major accident in a light-water reactor – the large majority of the reactors – can lead to radioactive releases equivalent to several times the release at Chernobyl and about 1000 times that released by a fission weapon. Relocation of the population can become necessary for large areas (up to 100.000 km 2). The number of cancer deaths could exceed 1 million;

• New reactor lines are envisaged which are heralded as fundamentally safe. However, apart from having their own specific safety problems, those new reactors would require enormous sums for their development, with uncertain outcome;

• The average age of the world's reactors is 21 years and many countries are planning to extend the lifetime of their reactors beyond the original design lifetime. This leads to the degradation of critical components and the increase of severe incidents. The age-related degradation mechanisms are not well understood and difficult to predict;

• De-regulation (liberalization) of electricity markets has pushed nuclear utilities to decrease safety-related investments and limit staff. Utilities are also upgrading their reactors by increasing reactor pressure and operational temperature and the burnup of the fuel. This accelerates ageing and decreases safety margins. Nuclear regulators are not always able to fully cope with this new regime;

• Highly radioactive spent fuel mostly is stored employing active cooling. If this fails, this could lead to a major release of radioactivity, far more important than the 1986 Chernobyl accident;

• Reactors cannot be sufficiently protected against a terrorist threat. There are several scenarios' – aside from a crash of an airliner on the reactor building – that could lead to a major accident;

• Climate change impacts, such as

flooding, sea level rises and extreme droughts, seriously increase nuclear risks.

The first part of the report describes the characteristics and inherent flaws of the main reactor designs in operation today: the PWR, BWR, PHWR, GCR, VVER, RMBK, the AGR and the Magnox. It is important to stress that not only the 'inferior' Russian reactor-types, but also the 'superior' western designed reactors have serious and inherent safety problems. It is also useful to mention that until the accident at Chernobyl, western safety experts published articles in which the Russian reactor design was hailed as safe and reliable.

So, this report is an essential tool in fighting nuclear power. Download it at http://www.greenpeace.org/ international/press/reports/ nuclearreactorhazards

**Source**: "Nuclear Reactor Hazards: Ongoing Dangers of Operating Nuclear Technology in the 21<sup>st</sup> Century" Greenpeace International, April 2005

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# UK: Radioactive leak shuts down

**Thorp.** A leak of highly radioactive nuclear fuel dissolved in concentrated nitric acid, enough to half fill an Olympic-size swimming pool, has forced the closure of Sellafield's Thorp reprocessing plant. The highly dangerous mixture, containing about 20 tons of uranium and some 200kg plutonium, leaked through a fractured pipe into a huge stainless steel chamber that is so radioactive, entry is prohibited. Recovering the liquids and fixing the pipes will take months. A problem at the Head-End section of the plant, where fuel is sheared and dissolved in nitric acid, was first noticed on April 19 when operators could not account for all the spent fuel. It was supposed to be travelling through the plant to be measured and separated into uranium, plutonium and waste products in a series of centrifuges. Remote cameras scanning the interior of the plant found the leak. Guardian, 9 May 2005; CORE Briefing, 26 April 2005

## US: Closure of Irradiation Plant a Victory for Community, Consumers.

The announcement by CFC Logistics of plans to shut down its controversial Milford Township, Pa., food irradiation facility is great news, not only for the surrounding community but also for consumers who do not want their food to be irradiated. The closure serves as an example of how empowered citizens can triumph in the end. CFC Logistics joins SureBeam, formerly the largest irradiation company in the U.S., which went bankrupt and closed its facilities in 2003, in demonstrating that despite aggressive promotion by both industry and government, there is no consumer demand for irradiated food. CFC was planning to provide irradiation for ground beef for the National School Lunch Program - a plan that did not materialize because schools questioned health impacts on children and did not want to pay for the higherpriced irradiated meat. Instead, school systems across the country have

# **IN BRIEF**

adopted policies banning irradiated food from their cafeterias, and school administrators in countless other districts have decided that proper cooking of ground beef is a better alternative to serving children irradiated food whose long-term health impacts are not yet known.

Despite this plant's closure, CFC still must live up to the responsibility it took on when the company opened this plant and safely remove the radioactive cobalt 60 inside this facility. It is also vital that the U.S. Nuclear Regulatory Commission, which licensed the plant in the face of overwhelming community opposition in 2003, fully discloses to the public how much radioactive material is present at the site and work with the public to develop an adequate removal and cleanup plan. Irradiation exposes food to a high dose of ionizing radiation, which results in the formation of chemical byproducts, some of which have been found to promote cancer development and cause cellular damage in rats, and cause genetic and cellular damage to human cells. Public Citizen's Food Program, Press release, 25 April 2005

US: residents near uranium mill tailings and RECA. A National Academy of Science (NAS) Committee has published a study investigating the scientific background for the criteria to be used to determine eligibility of persons who contracted cancer for compensation under the Radiation Exposure Compensation Act (RECA). So far, the program had been applicable to uranium workers and downwinders of nuclear weapon tests only. In the study, the committee recommends among others, that "the appropriate agency" should review whether residents who lived in dwellings constructed from mill and mine tailings and/or lived near uranium mill tailings piles and uranium mills used to produce uranium for the US nuclear weapons program may have received radiation

doses that meet or exceed the RECA compensation criteria. "If so, the agency should take the necessary steps to have these populations included in RECA."

Assessment of the Scientific Information for the Radiation Exposure Screening and Education Program, Committee to Assess the Scientific Information for the Radiation Exposure Screening and Education Program, National Research Council, ISBN: 0-309-09610-3, 500 pages, 2005 A summary of the report can be found at:http://www.nap.edu/ execsumm\_pdf/11279.pdf (505k PDF)

Joint venture for EPR? French Electricite de France (EdF) reportedly intends to offer other European utilities the chance to take a stake of 5-10% in the EUR3 billion (US\$3.9 billion) project to construct a 1600 MWe European Pressurized Reactor (EPR), EdF would retain a controlling interest in the project. German utility E.On, Belgian utility Electrabel, and Italian utility Enel are considering investment in EdF's planned unit, according to the French journal l'Expansion. Construction of France's first EPR is scheduled to begin in 2007 in Flamanville, with completion due sometime around 2010 to 2012. EdF and other interested utilities could form a joint venture within the next few weeks. WNA News Briefing 05.16; 20-26 April 2005

Zambia uranium mining exploration: Australian company Equinox Minerals Ltd has 'discovered' uranium at its Lumwana copper and cobalt mine in northwestern Zambia. The company said it would start uranium production at Lumwana, where it plans to begin copper production in 2007. No timetable has been given for the start of U3O8 production. A Bankable Feasibility Study (BFS) on the Lumwana project indicated that 97% of the uranium ore to be mined could yield concentrate. The mineral deposits contain estimated uranium resources of 12.1 million tons at 0.082% U3O8. Equinox said that 'in addition to the uranium resources defined at Malundwe and Chimiwungo, there exists considerable additional exploration potential for uranium within the 1355 square kilometre Lumwana Mining Licence'. Uranium within the Malundwe and Chimiwungo copper deposits occurs as discrete uranium-enriched zones that will be separately mined during the copper mining operation and as such, processing of the copper ore does not produce any uranium "contamination" of resultant copper concentrate, according to the company's press release. Equinox Resources press release, 2 May 2005, WNA News Briefing, 5-10 May 2005

Uranium exploration in Finland: On

May 10, Agricola Resources plc announced its acquisition of uranium exploration rights in Finland. The Finnish State Mining Authority of the Ministry of Trade and Industry has granted claims Kauhee No.'s 1 -10, located in the Joensuu District of Eastern Finland. The claims cover 90 square kilometers, and include the only previously operated uranium mine in Finland, called Paukkajanvaara. Agricola is awaiting further approvals for uranium rights by the Finnish Ministry of Trade and Industry in Northern Finland.

The Paukkajanvaara deposit produced 30 tons of uranium in yellow cake (solid uranium oxide) during a test mining operation in 1960-61 by the Finnish company Atomienergia Oy. The mill throughput was 30,700 tons of ore assaying 0.12% U. The project area is located in the Joensuu magistrate in Eastern Finland. Joensuu is a major town with about 65.000 inhabitants. It is located about 450 kilometers northeast of Helsinki. The area is sparsely populated, with flat lying forestry areas intersected by numerous lakes. Nuclear power presently accounts for 27% of the total electricity supply in Finland.

The country presently imports its entire uranium requirement. In 2003, 549 tons of uranium was required for its four nuclear power reactors. Cogema, a major French nuclear player, has been granted uranium licenses adjacent to the Agricola licenses in Finland. Agricola Resources plc, Press release, 10 May 2005

US: Conflict of interest for NEI president. Frank Bowman, President of the NEI (Nuclear Energy Institute- a nuclear industry lobby group) has been forbidden to talk to NRC. DOE or White House officials about Yucca Mountain, the high level waste repository. Under federal statute, Bowman is forbidden from such contact because of his involvement with the Yucca Mountain project several years ago as a high level official in the Department of Energy's National Nuclear Security Administration. In that position he signed DOE's 1998 viability assessment, important in the Yucca Mountain site characterization process. The statute containing the restrictions on oral and written communications and appearances before executive branch officials was enacted some 40 years ago to prevent a conflict of interest. The lifetime ban begins immediately after the employee leaves the government. According to NRC rules and NEI's interpretations, Bowman, working for the NEI since mid-February, is allowed to do 'behind the scenes' work and can still testify before Congress and meet with lawmakers and their staffers on repository issues.

Nuclear Fuel, 9 May 2005

Vanunu's travel ban extended one

year. On April 21, the Israeli Interior Ministry extended the order forbidding nuclear whistle-blower Mordechai Vanunu from leaving country by another year. After 18 years imprisonment for divulging intelligence about Israel's nuclear capacity to the British press, Vanunu was released last year under severe restrictions. He is not allowed to leave Israel and his movements within the country are very limited. As the ban was extended, over 50 activists from Israel and around the world gathered at the Dimona nuclear facility in the Negev Desert, where Vanunu worked more than 20 years ago. With the Dimona reactor dome visible in the distance, the group held signs calling for worldwide nuclear abolition and complete freedom for Vanunu. Demonstrators scattered ashes across the sand, symbolizing the destruction of a nuclear explosion.

In March, the state indicted Vanunu for violating the order 21 times since his release. Preventing Vanunu from leaving the country is "a preventative measure," Interior Minister Paz-Pines stressed, since Vanunu has said that he would continue speaking to foreign press to disclose any information he knows. Paz-Pines also noted that security officials had approached him warning that it is likely that Vanunu knows even more intelligence information than he has divulged thus far, and that it would be dangerous to allow him the opportunity to reveal it.

Amnesty International strongly condemns the Israeli authorities' decision to renew the restrictions. The organization, which recently arranged for the Israeli to speak to Amnesty International UK members via live telephone link at its National Conference in Lancaster, reiterates its call on Israel to allow Vanunu to leave the country if he wishes, and to exercise his rights to freedom of movement, association and expression in Israel. Jerusalem Post, 19 April 2005; Amnesty International press release, 21 April 2005; Press release International Campaign to Free Vanunu, 22 April 2005

New French proposals for Koongarra u-mine. Australia's leading NGOs have written to the French Ambassador to Australia to draw attention to concerns regarding the proposed development of the Koongarra uranium deposit near the renowned Aboriginal art site (and major tourist attraction) of Nourlangie Rock in the World Heritage-listed Kakadu National Park and to mark the expiration of the five year moratorium on negotiations between the mining company and the Traditional Owners. A protest was also held outside the Northern Territory parliament. French government-owned AREVA is renewing efforts to gain approval for development of the site prompting NGOs to appeal to the French government to reconsider its involvement in the highly controversial project. The campaign coordinator for the Environment Centre of the Northern Territory (ECNT) appealed to the France as a country known for its cultural awareness, "...to push ahead with this mine would be equivalent to an Australian company going to Paris and bulldozing the Louvre for the recovery of picture frames". Greenpeace Australia's spokesperson warned the French government not to involve itself in "another nuclearrelated PR disaster" given its past

history at Muroroa. Joint NGO letter and press release, 26 April 2005; www.ecnt.org

#### Australia: Ranger operator pleads

guilty. Energy Resources Australia (ERA) has pleaded guilty to three charges related to a water contamination incident which led to 28 workers falling sick after drinking and showering in water containing 400 times the allowable limit of uranium at Ranger mine inside Kakadu National Park in March 2004. Prosecutor Jon Tippett insisted that the incident could easily have been avoided and said that the water system at the mine was in poor condition with a "serious contamination just waiting to happen". ERA faces fines of A\$300,000 (US\$230,000) and has insisted that the workers involved would not suffer any long-term effects. BBC News Online, 6 May 2005

#### Germany's phase out: Obrigheim shut

**down**. Germany has shut down its oldest nuclear reactor as part of the country's plan to phase out nuclear power by 2020. The 36-year-old 340megawatt plant in the southwestern town of Obrigheim was turned off at 0758 (0558 GMT) on May 12, said energy firm EnBW. It is the second of Germany's 19 reactors to be closed down. To replace the energy supply, the government is proposing investment in other sources such as wind power. Chancellor Gerhard Schroeder's Social Democrats and their environmentalist Green partners in the ruling coalition reached agreement with Germany's main energy providers in 2001 to phase out nuclear power. Reuters says the Biblis A nuclear reactor, which has been used since 1975, will be the next one to close in February 2007.

no-nukes@foeeurope.org on 12 May 2005

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

The Nuclear Monitor publishes international information in English 20 times a year. A Spanish translation of this newsletter is available on the WISE Amsterdam website (www.antenna.nl/wise/esp). A Russian version is published by WISE Russia, a Ukrainian version is published by WISE Ukraine and a Japanese edition is published by WISE Japan (latter two available at www.nirs.org). The Nuclear Monitor can be obtained both on paper and in an email version (pdf format). Back issues are available through the WISE Amsterdam homepage: www.antenna.nl/wise and at www.nirs.org.

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