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U.S.: NRC ADOPTS "JIM CROW" POLICY FOR NUCLEAR LICENSING

On August 6, 2004, the U.S. Nuclear Regulatory Commission (NRC) again raised the issue of racial discrimination in denying the Claiborne County NAACP, NIRS, Public Citizen and the Mississippi Chapter of the Sierra Club a legal hearing on contentions that a lingering policy of racism and adverse impacts on the county residents' health and safety was not fairly evaluated in an application to expand the Grand Gulf nuclear power station site for new reactor construction. The coalition has appealed to the Commission.

(616.5640) NIRS - Grand Gulf nuclear power station sits in a bend on the red banks of the Mississippi River just outside of Port Gibson, Mississippi. Its white steam cloud billowing from its cooling tower can be seen far and wide over the flat miles of cotton, soybean and kudzu-laden fields of Claiborne County, an area steeped in the civil rights struggle of the 1960's.

Claiborne County was the site of a National Association for the Advancement of Colored People (NAACP) boycott of the local white segregationist merchants that prevailed in a U.S. Supreme Court decision successfully challenging the "Jim Crow" era in American history when southern states systematically codified laws and state constitutional provisions that demeaned and subordinated African Americans into a society of legalized segregation and poverty.

Today, this community, of 84% African Americans from one of the poorest

areas of the United States, is once again caught up in a controversial power struggle – the nuclear power struggle. It is a struggle illustrated by deep-seated discrimination and by the callous mistreatment of a poor minority community at one of the NRC and nuclear industry's carefully orchestrated staging grounds for a so-called "Nuclear Revival" of "advanced" reactor construction.

Central to the controversy was the publication, in the 24 August, 2004 Federal Register, of the NRC's final policy statement on "environmental justice" (EJ), the all-too-familiar occurrence where poor minority communities are systematically singled out to suffer disproportionately at the hands of industrial polluters with little to no benefits, such as jobs, from their ordeal. (See also *WISE/NIRS Nuclear Monitor* 599.5558: "U.S. NRC issues proposed and weakened environmental justice policy").

Taking its lead from a letter written by the Nuclear Energy Institute, NRC set a course to declare its sovereignty, and that of its licensees, from an Executive Order issued by President Bill Clinton in 1994 that called on all federal agencies to incorporate environmental justice considerations into their respective mission statements and licensing procedures.

The Executive Order was the result of a decade of civil rights and environmental activism supported by a host of published reports documenting that poor, rural and minority communities are the most vulnerable and favored targets for new hazardous and polluting industry sites. NRC Chairman Nils Diaz along with Commissioners Edward McGaffigan and Jeffrey Merrifield took it upon themselves to revoke the agency's pledge to support the Clinton Executive Order made under the watch of then-Chairman Dr. Ivan Selin.

NRC now claims it will no longer separately consider legal challenges that are based in statements of fact that a community is being discriminated against and disproportionately impacted by nuclear industry development in its licensing proceedings.

In October 2003, New Orleans-based Energy Nuclear submitted an

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application under the new Early Site Permit (ESP) licensing procedure to expand the Grand Gulf site for the construction of more than 2000 megawatts of electricity.

Crafted earlier by NRC and the industry, the ESP was set up as a speedy conveyer over environmental impediments to site selection and expansion for new reactor construction. The nuclear power industry is now preparing to "bank" selected sites at Grand Gulf as well as North Anna in Virginia and Clinton nuclear power station in Illinois to await the submittal of a Combined Operating License application where NRC and operator would seek to simultaneously grant both the construction and operating license for new reactors before the first shovel of dirt is thrown at the groundbreaking ceremony.

The facts pertaining to the environmental justice complaint at Grand Gulf are a classic textbook case of racial discrimination compounded by the hazards of nuclear power development.

At the root of the complaint, the City of Port Gibson and Claiborne County had been promised a renaissance when the first unit came online in 1985; new fire stations, new schools, miles of paved roads and tens of millions of dollars in annual taxes on the nuclear property assessment to enliven the depressed rural and agriculture economy.

However, an exorbitantly expensive "Grand Goof" plugged into the rate base threatened Mississippi electricity

customers with very large utility bills. Claiborne County activists have charged that Entergy management quietly lobbied the Mississippi State Legislature to introduce legislation allowing the State to seize county tax assessments on any nuclear reactors operating in Mississippi in 1986.

The newly opened Grand Gulf nuclear power station was the only nuke in the State and a county legal battle to reclaim the revenue failed to prevail all the way to the State Supreme Court. No other electricity generator in Mississippi shares its property tax assessment outside the county where the generator is located.

Ultimately, the State seized 70% of the county tax assessment and redistributed it over the 44 counties hardest hit by Grand Gulf's electricity rate shock. Each county's share of nuke tax assessment is based on their kilowatt hour usage from the nuclear power station.

As a result, Claiborne County gets only a 30% share of the nuclear revenue to manage not only all its county services, schools, police and fire departments but nearly the entire 10-mile radius radiological emergency plan for the nuclear power station, save a small portion which extends over the river into Louisiana.

The petition to intervene in the NRC licensing hearing for the expansion of Grand Gulf filed by Claiborne County NAACP, NIRS, Public Citizen and the MS Sierra Club clearly contended that there was a legitimate dispute with the utility's Environmental Assessment which ignored the presence of a minority community in the immediate vicinity of the proposed site expansion.

The EA failed as well to recognize any additional adverse impact disproportionately impacting that minority population as the result of siting additional nuclear units. According to declarations submitted by the coalition, the Claiborne County Sheriff's Department has but a single patrol officer on night duty to cover

the 487 square miles of county's territory around the nuclear power station. The declaration identifies that "additional man power is needed to fully fill the required needs of our emergency evacuation plan and provide additional service at Grand Gulf Nuclear Power Plant since the 9/11 disaster."

The Claiborne County Hospital Administrator submitted a declaration that the hospital, which is designated as the first responder site, is an antiquated and deteriorating facility and is "ill prepared, at present, to respond to any large scale medical emergency or act of terror."

Moreover, NIRS identified an emergency evacuation route relied upon in the Grand Gulf 2004 Emergency Plan that is impassable due to a large section of the road and a bridge that has been washed out for three years.

The NRC denial of a licensing hearing for the residents of Claiborne County not only ignores addressing any of the factual disputes raised in local declarations but squarely falls back on the NRC environmental justice policy statement that "EJ per se is not a litigable issue in our proceeding." What that says to civil rights and environmental justice activists engaged in the Mississippi struggle is tantamount to hanging a sign on the NRC hearing room door that reads "WHITES ONLY."

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25 YEARS AGO

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

Then

In issue 6 of *WISE Bulletin* we wrote about plans for a Canadian nuclear fusion research center: "The governments of Canada and the province of Alberta are in the process of deciding whether or not to allocate some \$40 to 50 millions over the next five years to support a nuclear fusion research laboratory in or near Edmonton, Alberta". (*WISE Bulletin*, October 1979)

Now

The University of Alberta presently has a plasma physics institute researching fusion-related technology. Canada has been involved in international fusion projects for decades. Fusion is often presented as the "clean" nuclear energy of the future, but in fact has similar disadvantages to nuclear energy from uranium.

Many countries have studied the technology of nuclear fusion by building small fusion reactors at research centers. As early as the 1950s, some physicists already began to think about nuclear fusion as a source of energy, even claiming that by the year 2000 most of the world's energy would be generated through nuclear fusion. In 1985, U.S. president Reagan and Soviet president Gorbachev launched the idea for a big international project: the International Thermonuclear Experimental Reactor (ITER). The year 1996 was assumed as date when the partners would decide about the location of ITER, but even today no location has been chosen. (*WISE News Communique* 446, 12 February 1996)

But after almost 20 years, there is still no ITER reactor built. Fusion energy faces a lot of problems, varying from technological and economic to the risk of nuclear weapons proliferation. The biggest technological problem is the high temperature that is needed to fuse the elements hydrogen, deuterium or tritium (millions of degrees). This requires lots of energy and complex structures in the design of a reactor. Also a fusion reactor produces, like any nuclear reactor, radioactive waste and the reactor itself becomes highly radioactive. (*WISE News Communique* 446, 12 February 1996)

The proliferation risks of ITER concern the use of tritium, which is usable in modern nuclear weapons. The reactor could also be used for breeding plutonium due to its high flow of neutrons and the use of super-conductive magnets that can be used in other military technologies. (*WISE/NIRS Nuclear Monitor* 603, 13 February 2004)

Canada was partner in the ITER project until late 2003 and undertook much lobby work to locate ITER in Canada. It offered to contribute US\$ 2.3 billion for the construction costs (totaling US\$ 5.7 billion) if the reactor would be built in Canada. In December 2003 Canada withdrew due to a lack of federal government support. (*WISE/NIRS Nuclear Monitor* 600, 19 December 2003)

Present partners are the U.S., the European Union, Japan, South Korea, Russia and China. Regularly it is announced that a location will be selected "soon", but the decisions are often postponed for political and financial reasons. The two locations under consideration are Cadarache in France and Rokkasho-mura in Japan. The six ITER partners will meet again in mid-October in Vienna. (AFP, 24 September 2004)

IRAN TESTS THE WEST

The continuing debate over Iran's alleged ambitions to produce nuclear weapons is threatening to extend well beyond the IAEA's recently imposed deadline of 25 November when the board of governors will again meet to review the Iranian nuclear program, and by which time Iran is meant to have ceased all its uranium enrichment activities and ratified the additional protocol to the Nuclear Nonproliferation Treaty (NPT).

(616.5641) **WISE Amsterdam** – In February 2003, Iran announced to the world that it had discovered uranium reserves within the country and was exploiting them. By October 2003, Iran was forced to admit that it had carried out some clandestine experiments, enriching uranium and separating plutonium, without informing IAEA, which as a party to the NPT it is required to do before carrying out such

experiments. Instead of being reported to the UN Security Council as the U.S. had hoped, Iran was instead issued a stern warning by IAEA and put under probation. (See also *WISE/NIRS Nuclear Monitor* 602.5573: "Proliferation: focus on enrichment issues")

The IAEA resolution issued on 18 September appears to have already been breached by a defiant Iran which

declared that it had recently began to convert large amounts of uranium oxide (or yellowcake) into uranium hexafluoride gas (or UF₆), the feedstock for uranium enrichment. (1) (2)

This latest news has caused frustration and annoyance amongst diplomats that have been working to find a solution to this standoff over the past year. Iranian President Khatami's

insistence that nuclear weapons are against Islamic religion and culture and is opposed to nuclear weapons has done little to ease concerns.

Iran has made no secret of its wish to have 7000 MW of nuclear power online by 2020 and, in order to achieve those aims, will need to build at least six more nuclear power plants, in addition to the Bushehr plant currently being completed by Russia. The contract was initially estimated to be worth around US\$800 million to Russia but escalating costs mean the project is now expected to reach US\$1 billion.

In yet another twist, Tehran re-issued an open invitation, first issued in May 2003, to the world to invest and participate in nuclear power plant construction in Iran. Mohammad Hossein Mousavian, secretary of the political department of Iran's Supreme Council on National Security (SCNS) declared on 23 September that the invitation was particularly open to France and Germany but that the UK and U.S. would also be welcome if they were interested in investing in Iran. It

IRANIAN SOIL SAMPLES CLEAN

UN inspectors have given soil samples taken from Lavizan, a Tehran site that U.S. officials claimed was linked to Iran's supposed atomic weapons program, a clean bill of health following analysis. No traces of nuclear material were found and Western diplomats say this indicates an absence of nuclear activity.

Satellite photographs of Lavizan taken between August 2003 and May 2004 showed that the site had been completely razed. The U.S. accused Iran of removing substantial amounts of topsoil and rubble and replacing it with a new layer of soil to avoid detection. Diplomatic sources close to IAEA however told Reuters that on-site inspections yielded no evidence that any soil had been removed at all.

Reuters, 28 September 2004

would also include a "golden package" that would include full cooperation with the fight against international terrorism, the restoration of peace and security to the Middle East region as well as trade and investment. (3)

An unnamed Iranian analyst reportedly told Asia Times Online that Iran was unhappy with Russian nuclear technology, considering it aged and dangerous, which explains the recent overtures to Western countries. If, however, the West fails to respond, it is expected that Russia will further consolidate its position since Tehran has no intention of scaling back its ambitious plans.

Trading partners

That all of Washington's dreams would come true if Iran were to be referred to the UN Security Council is already well known and illustrated. Current large-scale global military actions by the U.S. suggest that its armed forces are well stretched and it is not expected to undertake any sustained military action against Iran in the near future, therefore the U.S. has been pushing hard and lobbying to have Iran brought before the UN Security Council and for financial sanctions to be imposed on the Islamic Republic.

Key to the attempts of the U.S. is the European Union's so-called Big Three, Germany, France and the United Kingdom. Although the U.S. has spent the past year strongly condemning Iran for its alleged illicit nuclear weapons program, it had been unable to garner support from three European countries, which have favored a more diplomatic solution.

The EU-3 strongly advocated constructive engagement and had, in October 2003, entered into an agreement with Tehran that should have seen it suspend enrichment activities in return for the promise of technological assistance for its civilian nuclear power programs. (See also *WISE/NIRS Nuclear Monitor* 602.5573: "Proliferation: focus on enrichment issues")

The terms of the agreement were not

COALITION CRITICIZES WEAPONS STATES

Foreign ministers from Brazil, Egypt, Ireland, Mexico, New Zealand, South Africa and Sweden have, in a commentary published in the *International Herald Tribune*, condemned the world's nuclear powers for failing to honor international disarmament and nonproliferation agreements.

The coalition urged all parties to the NPT to comply with their commitments, called for the treaty to be made "universal" and for the Comprehensive Nuclear Test-Ban Treaty (CTBT) to come into force with restraints imposed on India, Pakistan and Israel. The group also criticized the U.S. and Russia for storing nuclear warheads instead of destroying them, the U.S. for withdrawing support for the CTBT and China for failing to ratify it. They also expressed concern that some countries "entertain the notion that nuclear weapons may be used preemptively against non-nuclear weapons states".

AFP, 22 September 2004

publicized but it was assumed to be a similar deal to that which the U.S. made with North Korea to assist it with a civilian nuclear power program and in return for Pyongyang remaining within the NPT and allowing international inspectors access to nuclear facilities amongst other things.

Unfortunately Iran did not adhere to its part of the bargain and having 'voluntarily' suspended the activities for a short while, resumed them again, much to the despair of the Europeans. Iran accused the European trio of renegeing on the deal when the much-desired technology was not as forthcoming as it had envisaged.

Despite continued efforts, no further agreement has yet been reached between the countries, commercial considerations and attempts at reaching an amicable resolution, the UK is reportedly losing patience with

Tehran and is said to be on the verge of siding with Washington. (AFP, 28 September 2004) And although German nuclear supply companies would benefit greatly from renewed acquaintance with Iran, the German government is said to be wary of involvement because it believes such a deal could lose it power. (4)

Iran is currently the EU's third largest trading partner in the Middle East with annual exports to Iran from the EU at some 12 billion Euro (US\$ 14.7 billion). (5)

Past collaboration

France and Germany share some history with Iran's nuclear program. Although it was the U.S. that first introduced Iran to nuclear power when it supplied Tehran with a 5 MW research reactor in 1967, it was West German Kraftwerk Union AG (KWU), a Siemens subsidiary, that won the first contract to build two 1200 MW reactors in 1974. At the same time, France was also to supply reactors but the deal turned sour only to be later revived in 1977 when Framatome was contracted to build two 900 MW reactors. (See also *WISE/NIRS Nuclear Monitor* 602, "25 years ago")

In 1975, the Shah even extended a loan of US\$1 billion to France in order to secure a supply of enriched uranium for the planned nuclear program. Iran in return received a 10% share in French EURODIF and the Tricastin enrichment plant in France. Despite decades of disputes and legal wrangling (because Iran never received the promised reactors), Iran still retains these shares. (6)

The revolution in 1979 put an end to the West German at Bushehr, leaving one unit 80% complete and the other 50%. Iran's attempts to persuade the Germans to resume work on the reactors after the Bushehr site had been devastated by Iraqi air strikes during the Iran-Iraq war was thwarted by U.S. pressure and ended in another legal dispute.

Both Siemens and Framatome have unresolved business with Iran. The two

companies have been promoting their joint project, the European Pressurized water Reactor (EPR), around the world and one could speculate that Iran might be interested in buying...

Regional power struggles

The suspicion and open hatred that Iran and Israel have shown towards each other over the years is again gaining impetus as this current crisis ensues. Israeli newspaper *Ha'aretz* reported that Israel is to buy 500 bunker buster bombs from the U.S., at the cost of some US\$139 million, speculating that they could be used in a preemptive attack against Iran's nuclear facilities. Israel has long expressed concerns about Iran's supposed nuclear weapons program and has claimed that Iran could have a nuclear warhead by 2007.

Iran on the other hand has never been shy about expressing its feelings towards Tel Aviv. During a recent military parade, ballistic missiles were draped in banners vowing to "crush America" and "wipe Israel off the map". Several government officials have also been quoted as saying that should Israel choose to attack Bushehr then Dimona, Israel's own nuclear facility, would be destroyed in response.

To further stoke the flames, Iranian Defense Minister Ali Shamkhani told state television that the army had taken delivery of new "strategic missiles" which had been successfully tested but declined to name them. Some observers have suggested that he could have been referring to the Shahab-3 medium-range missiles said to be based on a North Korean design and thought capable of carrying a one-ton warhead at least 1,300 kilometers, well within range of Israel and US bases in the region. (7)

That Israel should wish to destroy Bushehr is not surprising but many doubt whether it would actually act on this. Given that Israel is the only country in the region known to possess nuclear weapons, it has assumed the position of most powerful state. Should U.S. suspicions (that Iran is

developing nuclear weapons) prove correct, Israel would find itself having to share this role or perhaps even being overtaken in the power stakes. (8)

During a weeklong general IAEA conference in Vienna last week, Egypt presented a second draft resolution calling for a nuclear free zone in the Middle East. Arab countries are known to traditionally favor the annual event as a vehicle to vent frustrations the double standards in the treatment of Iran and Israel. The resolution clearly refers to Israel as it "affirms the urgent need for all states in the Middle East to forthwith accept the application of full scope agency safeguards to all their nuclear activities". (9)

Next moves

Although no one can be certain of Tehran's true plans, some of its leading politicians have made statements regarding a possible withdrawal from the NPT, although

IAEA AND BRAZIL

Last December, Brazil declared that it was to start enriching uranium with the aim of exporting it in the future. (See also *WISE/NIRS Nuclear Monitor* 601, "In brief") It also voiced its reluctance to allow international inspectors access to the nuclear facility that would produce the enriched uranium claiming that it feared that technological secrets could be revealed. Since then, Brazil has been in negotiations with the IAEA over how to resolve the dispute. AFP has reported that both parties are close to securing an agreement that would allow inspectors access to some parts of the uranium enrichment facility while safeguarding the country's technological and commercial secrets.

Brazil is not thought to be seeking to nuclear weapons, it is a signatory of the NPT, and the U.S. government has been quick to express its confidence in this.

AFP and AP, 29 September 2004

Foreign Minister Kamal Kharrazi denied this was an option being considered when questioned recently. Iran's official news agency IRNA reported, on 29 September, that hard-line lawmakers could force the Khatami government to withdraw from the treaty.

Conservative parliamentarian Hassan Kamran, a member of the Iranian Parliament's Foreign Affairs and National Security Commission, has

reportedly prepared a bill for submission to parliament that would force the government to set a tit-for-tat November deadline for the IAEA to remove Iran from its agenda. Although this smells of political posturing, the bill could be submitted with the backing of just 15 out of 290 lawmakers. (10)

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Contact: WISE Amsterdam

GABON: UNREGULATED MINING ENDANGERS LIVES

During decades of uranium mining in the jungle of Gabon, French government-owned enterprise Cogéma neglected environmental protection and exposed mine workers to high doses of radiation. Following the closure of the uranium mines, the horrific legacy of nuclear colonialism has slowly begun to surface.

(616.5642) **Res Gehriger** - Porcupine, gazelle and antelope are listed on the menu of the pub in the center of the village but, once again, there are no guests. Since Comuf (Compagnie des Mines d'Uranium de Franceville) halted its uranium mining operations in Mounana, unemployment in the village has been rife. The near-bankrupt logging company offers the last hope of work - all those who were able to, have left town.

For forty years, France mined for uranium in Gabon. Once extracted, the uranium was used in the production of French nuclear weapons, and at nuclear power plants for electricity production in France and much of Europe.

One former mine worker, Christian Oyoumi, half-joked that it was thanks to Gabon's miners that France's high-speed TGV trains could operate. Today, however, the uranium deposits are exhausted, and Mounana is no longer of value to Cogéma.

Gabon was a French colony when prospectors from the French nuclear energy commissariat (which later became the Compagnie Générale des Matières Nucléaires or Cogéma) discovered uranium in the remote region in 1956. France immediately opened Comuf in Mounana in order to

exploit the vast mineral resources and the State of Gabon was given a minority share in the company

By 1961, the first uranium concentrates from Mounana had arrived in France for enrichment and from there, the Force de Frappe (strike force) was born. Military strategists have noted that Gabon was at the time indispensable to the build-up of France's nuclear weapons arsenal.

France's engagement made Gabon one of the world's ten largest uranium producers and until the 1980s, Mounana's jungle village had become a town of approximately 10,000 inhabitants - 1500 of whom were employed by Comuf.

Comuf erected schools, churches, sports grounds, as well as a hospital, town hall, police station, bus terminal, and a covered market. A visit to the hospital was free for all residents and included medication as well. Bernard Keiffer, chairman of Mounana's Cogéma branch for the past four years, complains that this was one of the many unreported positive contributions made to the village by the French company. Keiffer has lived in Gabon for 20 years and is overseeing the liquidation of the enterprise as his final task.

Nowadays, Mounana is no longer indispensable to France. Uranium prices had already begun to slide before the collapse of the Soviet Union and then rich uranium deposits were discovered at Cogéma's Canadian mines. Even with low payroll costs, mining in Gabon was no longer a lucrative prospect for Cogéma and in 1999, its Gabon branch ceased to operate after having produced 28,000 metric tons of uranium.

Workers at risk

Thousands of uranium mining workers worldwide have contracted lung cancer from exposure to excessive concentrations of radon gas (a decay product of uranium) in the mines' air. A labyrinth of tunnels stretched out for a total length of over 30 kilometers and depth of 400 meters under Mounana.

Most of the miners who inhaled the ore dust are already dead, according to Gilbert Ngana. Ngana worked in the mines for more than twenty years, most of the time without a respiratory mask and now complains of difficulty breathing. Dust masks were introduced far too late for Ngana and many of his former co-workers.

In Europe, mining workers must be informed about the doses of radiation they are being exposed to, according to

an Euratom directive. There was no such protection for those mining at Mounana. Cogéma's subsidiary, Algade evaluated the personal dose meters of Gabonese miners in France.

"At no time did any of our employees receive a radiation dose above the limits", assured Comuf chairman Keiffer. And although he did go on to concede that there are no regulations in Gabon, he did claim that internationally accepted standards had been used as terms of reference.

The most stringent radiation dose limits for nuclear workers are found in the US, 5 Millisieverts per year. The Gabonese miners received many times this amount. In 1996, Member of Parliament Claude Birraux of the conservative UMP party wrote a report on the involvement of the state-owned company Cogéma in Gabon, on behalf of the French parliament. According to his report, the workers at Mounana were exposed to an average annual dose of nearly 30 Millisieverts.

The International Commission on Radiological Protection (ICRP) had, in 1990, recommended that the nuclear industry limit the maximum radiation dose to 20 Millisieverts per year. The old 50 Millisievert standard could no longer be maintained based on long-term studies from Hiroshima.

Denials and Facts

Comuf chairman Bernard Keiffer maintains that conditions at Mounana did not cause *any* illnesses among the workforce and that the hospital could support this assertion. This same hospital had been operated as a department of the mining company, and the doctors its employees. "There is not a single case of an occupationally caused disease related to the uranium mining declared in our archives", said hospital superintendent Angélique Kombila.

Not a single work related illness after nearly forty years of uranium mining – an incredibly fortuitous outcome or did somebody cook the books? No independent studies on the health of the miners or the residents of

Mounana have ever been made and the miners' medical files are no longer continued by the hospital.

With the closure of the mines, Comuf also ceased the occupational medical health checks for its workers and since Comuf transferred the hospital to the state four years ago, former miners are now forced to pay for each visit themselves. Many cannot afford this and therefore, cannot seek medical assistance.

Approximately 4000 people are still living in Mounana and were simply told that there would exist no hazard for them at all

François Mindou has been coughing up blood and claims to have sustained internal injuries. His troubles begun while working in the uranium mill. Shadows are visible on the X-rays of his lungs but medical treatment is costly and thus impossible to obtain.

Benoît Bobata had operated the mine elevator and now complains of feeling permanently tired, is frequently sick and has lost a lot of weight. Bobata is furious; "...after slaving away for years for Comuf, they simply let us die a miserable death". He enumerates a series of colleagues who have died, and for him it is clear, from what. "Because of the uranium. The uranium has killed them, what else?"

Workers protests

The man referred to as Monsieur le maire (the mayor), is Dieudonné Bokoko, officially the deputy mayor but promoted by the villagers since the incumbent resides in the capital city of Libreville, 700 kilometers from Mounana. Bokoko accuses Cogéma of leaving the town completely in the lurch, with even the new jobs promised failing to materialize.

After the mine closure, Dieudonné Bokoko led a vociferous protest march to Comuf's management headquarters. The protestors were justifiably angry and emotions ran so high that ever

since, both the chairman and the mayor have avoided each other even more.

Comuf transferred Euro 150,000 (US\$184,000) to the Gabonese government as a single gift to the people of Mounana. Gabon president Omar Bongo is said to have personally added another Euro 30,000 (US\$36,000) in cash, according to Comuf's chairman Keiffer. Euro 180,000 (US\$220,000) was handed over to the regional prefect, who was responsible for distributing the cash in Mounana.

"It was absolutely chaotic", recalls mayor Bokoko (who was not yet in office then), "some got a lot, others nothing, resulting in people fighting in the street. The prefect was forced into hiding, returning one month later. Anyway, the money is gone."

Radiation exposure

In 1996, Comuf established a dozen monitoring stations in Mounana to determine the levels of radiation contamination in the air and water. Chairman Keiffer claims that Comuf's board of directors decided not to make the results public because they feared biased analysis of the data and polemics.

"We are not being informed by Comuf. We don't hear anything about their data and calculations", says mayor Bokoko. "Approximately 4000 people are still living in Mounana and were simply told that there would exist no hazard for them at all". Bokoko is suspicious. "Comuf is a concerned party and the judge at the same time", he says. The mayor himself had previously worked as a radiation protection inspector at Comuf.

The radiation exposure from the uranium mining is an abstract topic but is brought to life at the central covered market, one of Comuf's 'gifts' to the town. The market building has a double floor; both layers made from concrete. The concrete Comuf used for the first floor, layer one, had been mixed with sand from uranium production and upon inspection by a radiation official using a Geiger

counter, was found to contain excess radiation.

Comuf was thus forced to put down a second layer of concrete on top to isolate the radiation and limit the release of radon gas. But mayor Bokoko is not convinced by the effectiveness of the measure. "The floor is covered though, but the walls are not". No monitoring results were ever presented to the local authorities.

Tailings

Uranium mining produces enormous amounts of so-called low-level radioactive waste, approximately 7 million metric tonnes in Mounana alone. These tailings represent the largest environmental problem from uranium mining. Cogéma in Mounana released these wastes into the village creek, Ngamabougou, for years.

The creek eventually washed the slurry kilometers away from the mill, downstream to the confluence with the river Mitembe. Gabonese authorities are said to have been informed and to have consented.

Between 1961 and 1975, and from 1990 until the mines' closure, Comuf released more than two million tonnes of tailings into the Ngamabougou valley. During the period in between, it filled the first open pit mine with four million tonnes of tailings, which was left open for a long time, without access restrictions. "During dry periods, the children played soccer in the dust of the tailings", recalls former miner Christian Oyoumi. Nobody had known that there was a hazard.

At the occasion of an IAEA specialist conference in Vienna in October 2000, Comuf presented a short study on the situation in Gabon. This is virtually the only publicly accessible reference on environmental data at Mounana. According to the study, those most in danger of exposure are those living near the mill site and those that travel across the vast tailings dumps, left by Cogéma, en route to their plantations.

According to Comuf's rough calculations, this "critical group" has

received annual doses between 2.3 and 2.9 Millisieverts in excess of natural background.

For comparison, the international guidelines for non-occupationally exposure are set at 1 Millisievert per year. In Cogéma's Canadian McClean Lake uranium mine, the annual dose is 1.5 Millisievert - for the workers. In Mounana, some parts of the population have unknowingly been exposed to higher levels.

It is international practice to discharge tailings into enclosed impoundment where they are (intermediately) stored below a layer of water. The water shields the radiation and impedes the release of radon gas. Any water overflowing must be treated in a water treatment plant before it can be released into the environment.

"...the material will resurface in five or ten years already [...] None of the Frenchmen will then be here, still"

Only in 1990 did Cogéma finally decide to construct some kind of a retention basin also for the tailings in Gabon. It was to be an economy 'no frills' version though - Comuf simply made the Ngamabougou dam up with an embankment. The tailings were pumped into the artificial pond but the creek still flowed across the dam. Today, the overflow from the dam still flows untreated downstream towards river Mitembe.

This is particularly problematic, since the tailings were mixed with the acidic mill effluent. Acid enhances the dissolution of radionuclides into the environment. It is, therefore, worldwide practice to neutralize the mill effluents with lime. Cogéma did construct such a neutralization plant in Gabon but it never went into operation.

In the aforementioned study of October 2000, Comuf wrote that food from the region would not contain elevated radiation levels, "the intake

of radionuclides via the food chain is negligible". As proof, the company presented some not particularly detailed results of monitoring done on fish. However, this fish was not caught in the Ngamabougou where the tailings were dumped, nor the Mitembe, but in the next larger river downstream, the Lekedi.

Restoration

Currently, reclamation work is ongoing at Mounana. Comuf first started reclamation works in 1997 and covered several contaminated areas with a layer of soil. The sulfuric acid plant and the uranium mill were demolished and the mines flooded. In the Oklo mine, a light green lake of groundwater has formed - this is the lake where the contaminated production plants were sunk. The reclamation work was terminated in July 2004. A reclamation of the tailings dam is not planned.

Cogéma benefited greatly from uranium mining in Gabon and for decades showed not care for the protection of the environment. Even, the reclamation work in Mounana was funded by European Union taxpayers and not by the responsible company.

Under the cover titles of combating poverty and promoting the economy, the EU has, since 1997, paid more than Euro 50 million (US\$61 million) to Gabon for the development of its mining industry. Gabon is rich in mineral resources but, at present, only manganese is being mined on an industrial scale. To reduce the country's dependency on oil and timber exports, the government plans to exploit its resources in diamonds, gold, and niobium instead.

From more than Euro 50 million in EU aid money, the mining ministry has appropriated Euro 7 million (US\$8.5 million) for reclamation work and radiation monitoring at Mounana. The incumbent Gabonese mining minister, Richard Onouviet, is also a former employee of Comuf.

In an area of 40 hectares, a construction firm has covered the

tailings dumps at the Ngamabougou and the former ore transfer and storage areas with a soil layer of red laterite.

It is questionable, however, whether this can withstand erosion in the long term. Such a cover layer should be effective for at least 100 years, according to IAEA requirements.

Right Livelihood Honorary Award 2004. The "alternative Nobel Prize" has been awarded to two Indian peace and social justice activists. The Right Livelihood "cash award" (totaling US\$ 270,000) goes to three recipients: a Russian human rights organization (Memorialis Work) for the protection of civil liberties, Bianca Jagger from Nicaragua for her work for exploited and disadvantaged people and

Argentine environmental activist Raul Montenegro for raising environmental awareness. Montenegro was in 1982 founder of FUNAM (Environment Defense Foundation) and he has been involved in many environmental activities, mostly anti-nuclear. He worked on a successful campaign for the closure of a uranium mine, waste dumps, waste transports, a reprocessing plant and an irradiation plant. The Right Livelihood Award was founded in 1980 and has previously been awarded to several anti-nuclear activists.

Press release Right Livelihood Award, 22 September 2004

Nigeria launches first reactor. Nigeria has launched its first nuclear reactor on 29 September, News Agency of Nigeria reported. The so-called NIRR-1 is located at the Center for Energy Research and Training on the Ahmadu Bello University Campus, in Nigeria's northern state of Kaduna. A Nigerian Ministry of Science and Technology official anonymously declared that the reactor was acquired installed and inaugurated through a technical cooperation between Nigeria and IAEA.

China View, 29 September 2004

Overall, the radiating wastes should be monitored for several thousand years. "With the high precipitation we have in our area, the material will resurface in five or ten years already", fears mayor Bokoko. "None of the Frenchmen will then be here, still".

This article was originally written in German and has been translated and

IN BRIEF

Kyrgyzstan: man tried to sell plutonium. A Kyrgyz man was arrested near Bishkek, the capital, trying to sell a large quantity of plutonium on the black market. Sixty small containers with plutonium were confiscated, but no information about the exact quantity of plutonium has been released. Security officials say that the material does not come from Kyrgyzstan, but probably from the neighboring republics or Russia. **BBC News, 27 September 2004**

Forty countries can go atomic. More than forty nations have the capacity to make military use of their nuclear programs, according to general director Mohammed EL Baradei of the IAEA. Without naming any countries, he says that these have the knowledge to produce nuclear weapons and that it is time to reinforce non-proliferation rules. He added "the relative ease with which an illicit international network can be built and function clearly shows the inadequate control measures of radioactive materials export". Worldwide, thirty countries are running nuclear power plants and many others have research reactors. **Associated Press, 20 September, 2004**

Japan: Kansai under scrutiny. A small amount of radioactive water leaked from a heat exchanger at a Mihama reactor owned by Kansai Electric Power, which had been shut down for cooling system checks since 5 September, following the August accident that killed five workers. Kansai itself is being investigated by the authorities under suspicion of professional negligence at the Mihama

edited by WISE. Additional information can be found at <http://www.antenna.nl/wise/uranium/udmoun.html>

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power station. About 120 officials raided a branch of Kansai following a police investigation into the company's role in the accident. Police had already raided the utility company's office at the Mihama plant and its affiliate, Nihon Arm Co, earlier this month but nobody has been arrested so far.

The Hindu, 18 September 2004; Nucleonics Week, 23 September 2004; Taipei Times, 29 September 2004

Czech Republic: investigation at Temelin. The Czech State Office of Nuclear Safety (SUJB) will conduct a further investigation into problems at the Temelin NPP. On 26 September, incident #70 occurred when a leak occurred in the cooling circuit of reactor 1. Even the SUJB now has recognized that Temelin has faced a "abnormal" number of technical problems. The Temelin reactors have been plagued by many incidents since the start up dates (see also WISE/NIRS Nuclear Monitor 573, 13 September 2002).

OÖ Nachrichten (Austria), 28 September 2004

EU new nuclear directives. Two months before ending her term, Loyola de Palacio, European Energy and Transport Commissioner has presented an amended version of the new directives on nuclear safety and radioactive waste management. The Commissioner says that the new version takes account of the council's opinion and earlier amendments suggested by the European Parliament and hopes it will be adopted by the

end of her term by 31 October. The timeframe deadlines for the realization of underground waste dumps have been removed from the proposal. European Parliament Greens find the proposal a "poisoned cup" for the next European Commissioner taking office in early November. Friends of the Earth says that the proposal "does not differ from earlier Council drafts and is unlikely to move any of the delegations... Her pro-nuclear public relations has run out of fizz".

In another extremely strange move, Loyola de Palacio said that she would sue the U.K. government over the dangerous situation at a Sellafield fuel storage pond (B-30) if the U.K. would block the new directives. According to *Nucleonics Week*, she left the door open for withdrawing such a complaint if London cooperated on the new directive proposal.

***Nucleonics Week*, 16 September 2004**

Bulgaria: EIA hearings Belene manipulated. An investigation based on first hand accounts into the hearing procedures led by the EIA for the planned Belene nuclear power plant concludes that the hearings were suspected of manipulation practices. The authors of a report based upon first hand witness statements declare that the result of the hearings cannot be seen as representative of the opinion of involved stakeholders.

During the hearings, critical remarks, suggestions and opinions have been continuously obstructed. This was achieved by including biased statements and factual untruths in the available EIA documentation, presenting doubtful 'facts' to an uneducated audience, bringing a large number of people from outside to prevent the locals from attending, reduction of speaking time, intimidating presence of authorities and inadequate translation.

Co-authors WISE and Greenpeace have called upon the Bulgarian Environmental Ministry to demand either new hearings or not accept the final EIA report until additional

information and critical opinions are allowed in the text.

WISE Czech Republic press release, 16 September 2004

Greenpeace ahead of U.S. plutonium transport. The Greenpeace ship MV Esperanza has arrived at the French port of Cherbourg, where it will await the arrival of the weapons-grade plutonium shipment coming from the U.S. The Esperanza will support the Atlantic Nuclear Flotilla yachts in their demonstration against the nuclear shipment. The cargo of 140 kg of plutonium oxide will arrive soon and be transported over land in poorly protected trucks for about 1,000 km to the Cadarache nuclear complex, near Aix en Provence, where it will be transformed into MOX fuel before being shipped back to the US. Greenpeace International Tom Clements said: "It is the height of arrogance to conduct a shipment like this while demanding other nations refrain from proliferating nuclear weapons materials and technologies". Several manifestations were held in French cities on 25 September.

Reuters, 23 September 2004; Press Release Greenpeace International, 27 September 2004

Netherlands: first shipment of vitrified waste. The first shipment of vitrified high-level waste from reprocessing arrived at the Dutch storage facility COVRA on 29 September. The waste, which is very radioactive and dangerous for millions of years, comes from the reprocessing of Borssele NPP fuel at the French La Hague plant. The 28 glass canisters will be stored in a concrete bunker at the COVRA facility in Borssele. Greenpeace protested the ongoing reprocessing activities of Borssele by occupying the roof of the highly secured COVRA bunker.

Omroep Zeeland (NL), 29 September 2004

Cross-border protest against Urenco. On 5 September a hundred activists from Germany and Holland protested

at the Urenco enrichment plants at Gronau and Almelo. Both plants are planning an extension of their capacity and legal objections have been made in both countries. Speakers at the demonstration emphasized the phase out policy of both countries and the contradicting involvement in Urenco's worldwide business. On Saturday 9 October (12.30h) a demonstration will be held in the center of Gronau, Germany.

NENO (NL), 5 September 2004

Finland: import nuclear electricity from Leningrad? Plans for a high-voltage 1,000 MW undersea transmission cable from Russia's Leningrad NPP to Finland are being scrutinized by Finnish authorities. The Finnish registered company United Power Oy submitted an application in May to build the cable. Russian company Baltenegro owns majority shares in United Power. Finnish authorities fear that the grid could not handle so much additional power. Environmental groups object the cross-border trade in nuclear electricity and that the plan will help to prolong the lifetime of the aging and dangerous Leningrad reactors.

***Nucleonics Week*, 16 September 2004**

IAEA measures radioactivity in Jordan. Experts from the IAEA are paying a visit to Jordan to verify the levels of radioactivity emitted by the ageing Israeli plant Dimona, located just across the border in the Negev desert. "We have received a request from the Jordanian government to assist them in monitoring the radiological situation. We agreed to send a fact-finding mission in the coming weeks to help them determine whether there is any radiological incident" declared an IAEA spokesman.

***Hindustan Times*, 29 September 2004**

European Commission approved state aid for U.K. nukes. The EC has approved state aid worth GBP 3.4 billion (US\$ 6.5 billion) to British Energy (BE) for the decommissioning

and dismantling of its nuclear reactors. It is part of the plan to restructure BE to prevent bankruptcy, but leaving the UK government financially responsible for the costs of reactor dismantling. Green groups reacted furiously. "this decision allows for billions of euros of taxpayers' money to be squandered on an unsafe energy system, run by a company which is not capable of making itself viable without a massive financial prop", said Jan Vande Putte of Greenpeace.

The Independent, 23 September 2004

Scandinavian green groups demand environmental study on new research facility. The Swedish government has asked a former minister to conduct a study on the construction of a new nuclear facility in the city of Lund. The European Spallation Source (ESS)

facility will be the biggest neutron scattering facility in the world and will cost Euro 1.5 billion (US\$ 1.9 billion). Former minister Allon Larsson has to clarify the interest from the scientific community and industry. He also has to analyze interest from other possible European partners. His results should be ready by July 2005 after which the Swedish government will decide whether it will submit a formal bid for the ESS. Several environmental groups are concerned because no environmental issues are included in the minister's project. "This is in reality a nuclear facility, containing large quantities of radioactive material and explosives and toxic substances", said a press release of four organizations. No safety zones are foreseen for the facility. They demanded an extensive risk assessment, overview of radioactive waste risks, accident scenarios and

economic costs. In 2002 a conference was held by environmental NGOs on the ESS (see *WISE/NIRS Nuclear Monitor* 578,5470: "Scientists boycott seminar over transmutation claims")
Press release NGOs, 24 September 2004

Wanna have nuclear fuel? Who's not used to spam mail, offering money from Nigeria to new computer programs. But ever had spam where a Chinese company is offering "various nuclear fuels" like tritium, uranium and plutonium applicable for several types of reactors? We did. We knew the nuclear industry is desperately seeking for new markets, but spam mail offering nuclear materials... that's new for us!

Email Kanling Commercial, 22 September 2004

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THE NUCLEAR MONITOR

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