# NUCLEAR MONITOR

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# POPULAR RESISTANCE STOPS SITE PREPARATIONS FOR NPP IN INDIA

The Government of India and the Government of Gujarat have proposed the construction of a 6-8000 MW nuclear power plant in Mithi Virdi-Jaspara villages of Bhavnagar district of Gujarat. National Alliance of People's Movements, Anu Abhyas Group, Bhavnagar District Gram Bachao Samiti, Paryavaran Suraksha Samiti, Gujarat Lok Samiti have been spearheading the awareness campaign in 40 villages in the area for the last three years.

(712.6056) Nuclear Power Corporation Ltd. and various Gujarat Government agencies have intensified efforts to set up shop in the area and people have steadfastly resisted all such attempts. A public meeting attended by over 7000 people was held on 25 April 2010 to impress upon the Government that it should drop any idea of forcing nuclear power on the people of the area.

Various Government agencies have yet persisted with their efforts. Most recently, police officers visited Mithi Virdi and Jaspara villages on 9 June to persuade people to let officials undertake soil testing but they were firmly told to go back. The Gram Sabha (village assembly) gave them the same message that night. Police again went to the villages on 10 June warning that Government officials would carry out soil testing under police protection on 'Government lands' 11 June morning onwards. The villagers decided to resist this nonviolently at the site (directly next to the infamous Alang ship breaking yard).

Government contractors along with a posse of policemen turned up at the site before dawn at 5 am. As soon as

villagers heard police and other vehicles drive into the area an alert (drum beats in each village) was sounded in the 5 villages likely to lose lands. Regular morning chores such as water supply, animal-grazing, cooking & breakfast preparation etc. were suspended and over 3000 people rushed to the site.

Government officials at first continued to try to force through the soil testing by unloading drilling equipment but people surrounded the site and refused to allow them to start work. After frantic phone calls to higher ups and everyone who mattered they finally relented and announced withdrawal and started reloading their equipment. So, that was round two to the nonviolent struggle where unarmed nonviolent men, women and children turned back State power (round one of course being the awakening).

An impromptu meeting was held after the police and Government officials left the site to announce that people's resolve is only firmer now.

Source and contact: WISE India

# 'URANIUM IS THE NEW ASBESTOS': UNION BAN ON NUCLEAR WORK

"We are sending a clear message to the industry and the wider community that vested interests in the uranium and nuclear industries are trying to hoodwink us about this dangerous product and industry,". Strong wording in a press release of the Australian Electrical Trades Union (ETU), which has banned its members from working in uranium mines, nuclear power stations or any other part of the nuclear fuel cycle.

(712.6057) WISE Amsterdam - The Australian Electrical Trades Union says uranium is the new asbestos in the workplace. "Corporate interests, and their political supporters in the Labor and Coalition parties, are also trying to buy working families off with high

wages, while denying the true short-term and long-term health risks of such jobs". Australia has about 20 per cent of the world's known uranium deposits and the largest known deposits of highgrade uranium ore. The ban will apply to ETU members in Queensland and the Northern Territory and, according to ETU's Queensland secretary Peter Simpson, other unions will follow its lead and join the campaign against the uranium and nuclear industries.

The Australian Uranium Association says it is "puzzled about the ETU position. Uranium mines are safe workplaces. Mine operators and mine employees work together, using the right equipment and designated procedures, to ensure that radiation exposure is kept to the minimum. That is standard practice in our industry".

But the ETU seems to be passionate about their move. Simpson; "We are campaigning to have a national antiuranium policy re-introduced, as in the past. We will take this to the union's National Council and beyond. We don't want nuclear waste, nuclear power or any part of the nuclear cycle."

The campaign against the nuclear industry is an important renewal of support for the Australian anti-uranium movement by the Australian unions. During the 1970s and 1980s Australian unions were heavily involved actions against uranium mining including the

refusal by Australian Railways Union (now the Rail, Tram and Bus Union), Transport Workers Union and the Waterside Workers Federation (now the Maritime Union of Australia) to transport uranium ore.

# Radiation unsafe at BHP's Olympic Dam.

Workers at BHP Billiton's Olympic Dam are being exposed to unsafe levels of radiation, according to a company whistleblower. The whistleblower produced documents that show BHP uses manipulated averages and distorted sampling to ensure the figures are below the maximum exposure levels set by government. The company had managed to manipulate the sampling by transferring workers, whose exposures were escalating, to a different area, according to South Australian Upper House Greens MP Mark Parnell.

Although he's been aware of the situation for some years, Mr Parnell said until the whistleblower, who works in the plant, came forward late last year there was no evidence of the practices. When BHP released its environmental impact statement for its planned expansion, Mr Parnell said it showed it was "business as usual" and the company was not proposing any improvements to occupational health and safety standards.

Sydney Morning Herald, 4 June 2010

However this campaign was undermined by the decision by the Hawke Labor government to sharply increase the penalties for unions engaging in industrial activities around social issues. In this context the ETU's move to ban members working in the uranium industry is both a significant strengthening of the movement and an innovative approach to taking action to support a social movement. It remains to be seen if the move has any practical consequences for the mining industry. The union has 14.000 members in Queensland and the Northern Territory. The later is home to the Ranger mine,

operated by Energy Resources of Australia (ERA), owned by Rio Tinto.

The mine has recently been plagued by several incidents an accidents. Millions of liters of radioactive water from the Ranger uranium mine have flowed into

> internationally acclaimed and World Heritage-listed wetlands in Kakadu National Park. Traditional owners say they will oppose plans for a huge expansion of the 30-year-old mine by ERA, unless the company upgrades outdated environmental protection procedures. ERA has tried to play down an alarming and unexplained spike in contamination in water flowing from the mine into Kakadu's Magela Creek between April 9 and 11, 2010

About 40 Aborigines live downstream from a site where a measure probe recorded up to five times the warning level of electrical conductivity, which is a measure of contaminants including uranium, sulphate and radium. Environmental group **Environment Centre Northern** Territory has been shown evidence showing the spike, which ERA representatives said

had originated upstream from the mine and was not ERA's fault. But, asked about the contamination, ERA admitted the source "could not be determined and investigations are continuing". "It is possible that these have come from the Ranger operations," it said. ERA's handling of the spike and other environmental concerns about the mine have strained its relations with the Gundjeihmi Aboriginal Corporation, which represents the Mirrar traditional owners.

In another unreported mishap at the mine, in December 2009 a poorly

engineered dam collapsed, spilling 6 million litres of radioactive water into the Gulungul Creek, which flows into Kakadu.

Justin O'Brien, the Gundjeihmi corporation's executive officer, said unless the company changes its environmental procedures, the Mirarr will not support any expansion of the mine that includes a heap leaching plant, a tunnel under flood-plains, a 1000-person accommodation village, 650 evaporation ponds and a one-square-kilometre tailings dam. The expansion, costing hundreds of millions of dollars, would extend the mine's operation to at least

2021.

How much members of the ETU actually do work in the Ranger mine is un-known. But at least the Unions move has sparked a new debate over health issues connected to uranium mining. The campaign of ETU was welcomed by many environmental organisations all over Australia but also by the Northern Territory Branch of the Public Health Association of Australia (NT PHAA) who endorsed the call by the Electrical Trades Union for workers to shun uranium mining. "The ETU Queensland/ Northern Territory Branch's advice to its members that this is an inherently

dangerous industry to work in is an honest and correct call. From a health and safety point of view the ETU Branch is doing the right thing by its members."

Sources: www.wise-uranium.org / Brisbane Times, 31 May 2010 / www. greenleft.org.au / revitalisinglabour. blogspot.com/2010/06/electrical-tradesunion-bans-members.html / www. safetysolutions.net.au / The Age, 24 May 2010

Contact: Nat Wasley, Arid Lands Environment Centre (ALEC). Email: natwasley@alec.org.au

# UPRATING NUCLEAR REACTORS REDUCES SAFETY

The process of increasing the licensed power level of a commercial nuclear power plant is called a "power uprate." Power uprates are generally categorized based on the magnitude of the power increase and the methods used to achieve the increase. Currently a significant number of the nuclear power plants have plans for power uprate by larger or smaller amounts.

(712.6058) CNIC - The increase in the electricity produced in a nuclear power plant can be achieved in two ways. One way of increasing the thermal output from a reactor is to increase the amount of fissile material in use. The amount of fissile material is increased either by increasing the degree of enrichment, or the density of the fuel. In boiling water reactors, the increased core power is achieved by increasing the core feed water flows and steam flows. In pressurized water reactors, the increased power outputs call for an increase either in the core coolant flows or in the main coolant temperature rise across the cores, or both.

In Japan, in February 2009 a working group on uprating was established within the Nuclear and Industrial Safety Subcommittee of the Advisory Committee for Natural Resources and Energy. The working group met on six occasions and released a report on March 2 this year.

The first reactor slated for uprating is Tokai No. 2 (BWR, 1100MW), owned by Japan Atomic Power Company (JAPCO). The company is likely to apply in 2011. According to JAPCO's management policy for the 2010 fiscal

year, the plant will be uprated during a periodic inspection in the latter half of 2012. However, the other nuclear power companies do not appear to be very enthusiastic. Plans were supposed to be released during the 2009 fiscal year, but they have not appeared yet.

# Method of uprating

Both the thermal and electrical output of Tokai No. 2 will be uprated by 5%. When completed the plant will have an electrical output of 1150MWe.

A 5% increase in electrical output will be produced by a 5% increase in the flow of steam to the turbines. The rate of revolution of the high-pressure turbine will be increased by replacing the stationary blades with blades with a wider flow-path surface area. It is said that this is the only change required.

To increase the flow of steam to the turbines by 5% it is necessary to raise the flow of water to the reactor core by 5%. To produce extra steam it is also necessary to increase the thermal output of the core. So as to avoid the need to make adjustments to the core, more new fuel assemblies will be loaded during periodic inspections. The average uranium-235 enrichment of the fuel

assemblies is 3.7%. Although the output of individual fuel assemblies will not change, the total amount of fissile material in the core will increase, thus increasing thermal output overall.

It is said that this approach will raise output with the minimum of changes. There will be no need to make major modifications, or to increase the uranium enrichment. Nevertheless, many safety issues arise as a result of the increased supply of feedwater and steam generation.

# Problems arising as a result of uprating

Safety-related problems include the following:

- \* The increased number of fission reactions will produce more radiation within the reactor building. Embrittlement of the pressure vessel due to neutron irradiation will proceed at a faster rate. This will reduce safety, especially if nuclear power plants are to be operated for 50 or 60 years.
- \* Replacing fuel at a faster rate will increase the amount of spent fuel. This will put extra stress on the cooling equipment of the spent fuel pools and will affect future treatment and disposal.

- \* Increased fission reactions will reduce the effectiveness of the control rods and reduce their life. They will have to be replaced more frequently. This will increase the volume of waste produced.
- \* The increased flow of steam will cause more wear and tear and hence exacerbate wall thinning of the steam tubes. There will also be more wear and tear on the turbine blades.
- \* The increased feedwater flow will place extra stress on the feedwater pump.

Another problem relates to cost. Although JAPCO has not said anything so far, it can be expected that costs will rise as a result of uprating. In the first place, a 7% increase in the rate of replacement of fuel assemblies results in only a 5% increase in electrical output.

Add to this the increased rate of replacement of control rods and the increased wear and tear on pipes and turbine blades and one would expect costs to rise.

The Nuclear and Industrial Safety Subcommittee's report claims that there are "basically no safety problems", but it can be seen from the problems listed above that uprating reduces the safety margin. The chair of the working group tried to defend the uprating program on the grounds of "the needs of the people".

Uprating is one of many fronts on which Japan's nuclear safety is being whittled away. Others include extended operation cycles, life extensions for aging reactors

and the use of MOX fuel in light water reactors. There is little sign so far that the Democratic Party led government will fulfil the pledge in its 2009 election Manifesto to place safety first in Japan's nuclear administration.

Source: Nuke Info Tokyo, May/June 2010 / IAEA; http://www.iaea.org/ NuclearPower/PLIM-LTO/plim\_DTG\_ power\_uprating.html

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# TURKEY: HARD TIMES AHEAD

In Turkey the ruling AK-Party government struck a deal with the Russians on international level in order to circumvent a national verdict against the available nuclear act shaped by this AKP government. This intergovernmental agreement will surpass and nullify the national court decision against the current nuclear law and regulation.

(712.6059) WISE Amsterdam - Russian and Turkish heads of state have signed an intergovernmental agreement for Rosatom to build Turkey's first nuclear power plant of four 1200 MWe VVER reactors, at Akkuyu, on the eastern Mediterranean coast. Rosatom, through Atomstroyexport and Inter RAO UES, will finance the project and start off with 100% equity. Longer-term they intend to retain at least 51% of the company which will build, own and operate the plant. This will be Russia's first foreign plant built on that basis. The Turkish firm Park Teknik and state generation company Elektrik Uretim AS (EUAS) are expected to take up significant shares in the US\$ 20 billion project. Meanwhile, EUAS will provide the site. Earlier plans faltered on guaranteeing the cost of power. Under the agreement the Turkish Electricity Trade & Contract Corporation (TETAS) will buy a fixed proportion of the power at US\$ 12.35 cents/kWh for 15 years, or to 2030. The remainder of the power will be sold on the open market. The Atomstroyexport-led consortium was allowed to resubmit its bid after its initial bid of an offtake guarantee of euro-cents 21.16/kWh was rejected as too high. The current price on Turkey's nascent power market is

around 4 to 14 euro-cents per kWh. (5-17 dollarcents) The consortium's revised bid of euro-cent 15.35/kWh was still under negotiation when a Turkish court ruling forced the tender to be scrapped.

Sofar the technical details of the deal. We wrote to several people in Turkey for an article analyzing the deal and the political situation. This is one of the replies:

"I am not really very enthusiastic to write yet another "black and blue" article on the ultra liberal approach of the Turkish government to implement nuclear energy among all the other gloom and doom concerning other political issues.

That is to say, we as a country are going through political dark ride, and nuclear plants' ghostly facade is just another one of horror scenes among the many stomach churning road bends we keep on taking, each and every new day.

After about 10 years of AK-Party majority rule with no restraint from opposition parties or strong citizen checks "the ride" is unrelentingly building up social pressure. And it is for

sure that we will not get off anywhere near where we boarded the AKP ultra ride initially, but when and where it stops, a totally different terrain will have taken shape beneath our shaky knees.

The twists and turns of every day politics, the developments on very diverse topics as homeland security, foreign relations, economic crisis, urban development, plunder of natural resources, future health of secularity the threat of tearing down of constitutional judiciary structure... all add up to a general sickening nausea for citizens concerned not with their immediate benefits and profits but with the well being of the society and of future generations..

We can definitely talk about an authoritarian regime being molded out of the per se democratic parliamentary structure.... the approach of the state and the citizens alike have shifted towards a "laissez-faire" state of mind and this already takes its toll on the environment and socio-cultural, sociopolitical structures.

This might explain the stubborn advances of the AK-Party government which went out of its way to struck a deal with the Russians on international level in order to circumvent a national verdict against the available nuclear act shaped by this AKP government. This intergovernmental agreement will surpass and nullify the national court decision against the current nuclear law and regulation.

As NGO's we have exhausted our strategies. This international deal will be proposed in the coming weeks to the

Turkish parliament and most probably will be passed and accepted without even due discussion, with majority vote.

Our hands are tied and for what are they tied? To give a nicely packed military souvenir in the Mediterranean to Mr. President Putin. The Russians give out cheerful interviews as it is their very first nuclear power plant enterprise on foreign soil . The whole thing will be built and owned by our northern neighbor .The very same Russia who provides for more than 60% of our natural gas imports. Just crazy! So crazy that one cannot even draw upon any logical thinking process and make logical comments to write up an article..."

Source: WNA Weekly Digest, 13 May 2010 / Nucleonics Week, 27 May 2010 / and personal email 14 June

# BANKTRACK EXPOSES NUCLEAR SECRETS OF COMMERCIAL BANKS

On May 26, BankTrack, in cooperation with a number of working partners, launched www. nuclearbanks.org, a new website mapping the involvement of 45 leading commercial banks in funding nuclear power projects and companies active in the nuclear sector. BankTrack considers nuclear energy a grave danger for people and planet. The renewed interest in nuclear energy also poses a severe obstacle to achieving a sustainable solution to the climate crisis.

(712.6060) BankTrack - The website is a joint project of BankTrack, Greenpeace International, Urgewald (Germany), Les Amis de la Terre (France), Antiatom Szene (Austria), WISE (the Netherlands) and CRBM (Italy). The site provides information on 867 transactions, involving a total of 124 banks providing finance to over 70 nuclear companies. Between 2000 and 2009, these banks provided a total amount of 175 billion euro (US\$ 215 billion) to the nuclear sector.

The website identifies the top ten of nuclear banks as BNP Paribas (France), Barclays (UK), Citi (US), Societe Generale (France), Credit Agricole/ Calyon (France), RBS (UK), Deutsche Bank (Germany), HSBC (UK/ HongKong), JPMorgan (US), and the Bank of China. Together, these ten banks provided 92 billion euro (US\$ 113 billion) to the nuclear industry in the period 2000-2009, over half of the total amount identified by the research.

BankTrack and partners have pledged to confront all financiers of upcoming nuclear

projects, twenty of which are presented at the website. The website will serve as a platform to inform the public as well as clients and stakeholders on the involvement of banks in the nuclear

sector and to mobilize massive opposition to this support. Key targets are any banks considering financing the Mochovce nuclear reactors in Slovakia, the planned Angra III plant in Brazil, the Jaitapur nuclear plant in India, or the Koeberg plant in South Africa.

"Nuclear power covers only a few percent of world energy needs, but it poses massive environmental, health and security hazards. Building more reactors would also be a dangerous waste of time in global efforts to combat climate change: emissions of greenhouse gases have to peak and then significantly decrease in the next ten years, while reactors take a decade or longer to build. Time and resources must instead be used for implementation of renewable energy and energy efficiency measures. In many countries, nuclear policy has become an obstacle to finding effective solutions to the climate crisis and achieving energy security" said Jan Beranek, nuclear energy project leader of Greenpeace International.

"Too many well known banks that otherwise have taken laudable steps towards sustainability, are still investing heavily in the nuclear industry, putting the world on the wrong energy track. Sustainable banking and financing

nuclear energy are simply incompatible" said Johan Frijns, BankTrack coordinator.

"Banks need to wake up to the fact that nuclear energy is extremely unpopular

the wider public. For example, a March 2010 European Commission survey found that 52 percent of Europeans consider nuclear power to be a risk for themselves and their families, with only 17 % in favor of increasing the use of nuclear energy. This shows that bank support for this dangerous and dirty form of energy will in the long run alienate many of their customers", said Heffa Schuecking of Urgewald in Germany.

Source: Press release BankTrack. 26

May 2010

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# SELLAFIELD CANCER STATISTICS WILL REMAIN A SECRET

Scotland's first, longest and most disputed Freedom of Information case has ended up keeping vital cancer statistics secret. After two investigations by the Scottish information commissioner, Kevin Dunion, plus appeals to the Court of Session in Edinburgh and the House of Lords in London, numbers that might shed light on the links between children's blood cancer and radioactive pollution have been kept under wraps.

(712.6061) WISE Amsterdam - Back at the start of 2005, Michael Collie, a researcher for the then Green member of Scottish Parliament (MSP), Chris Ballance, asked the Scottish Health Service for the annual incidence of childhood leukaemia in every census ward in Dumfries and Galloway from 1990 to 2003. They wanted to test widespread suspicions that the debilitating and potentially fatal cancer could be caused by radioactive contamination. Plutonium from the Sellafield nuclear plant in Cumbria washes up on the Solway coast, and has been detected around the shoreline.

The health service, however, refused to release the information on the grounds that the small numbers of cases in particular areas might enable individual patients still alive to be identified. So Collie lodged Scotland's first Freedom of Information appeal with Mr Dunion's office in St Andrews on 27 January 2005. After a six-month investigation, Mr Dunion concluded that the information could be released in a way that would not identify individuals. But the health service appealed to the Court of Session.

The Scottish court upheld Mr Dunion's findings, but the health service then

appealed again to the House of Lords in England. In July 2008, five law lords concluded that Mr Dunion was wrong in law, and ordered him to rethink his decision. They argued that the form in which the information would be released amounted to sensitive personal data, that should be kept confidential under the 1998 Data Protection Act.

As a result Mr Dunion has conducted a second investigation, the results of which were sent to those involved last week. This time he agreed with the House of Lords, and ruled that the information as requested should not be released. He did, however, order the health service to provide aggregated statistics for the whole Dumfries and Galloway Health Board area. But they will not show the very local effects that are suspected.

"I regret that it has taken so long to finalise this decision, particularly when your application was the first to be made," wrote Mr Dunion to Mr Collie. "I appreciate how frustrating the whole process must have been for you." The saga had helped resolve some issues over the form in which information had to be provided, but there were still problems. "Confusion over the definition of personal data is likely to remain for

some time," said Mr Dunion.

"I don't think there is anything at all for us in this," commented former MSP Mr Ballance. "We wanted to test the hypothesis that childhood leukaemia rates are higher by the coast than inland, because of radiation from Sellafield blown in on sea spray. "An aggregated set of statistics for the area will tell us nothing except that they are about in line with national statistics. I think we know that already."

NHS National Services Scotland's medical director, Dr Marion Bain, accepted this had been a difficult request. "We are fully supportive of the fundamental principles underpinning Freedom of Information," she said. "At the same time, we have a clear duty to respect and preserve patients's right to confidentiality." The information in the form now requested by Mr Dunion would be released.

Source: Sunday Herald (Scotland), 30 May 2010

Contact: Scottish Green Party, The Scottish Parliament, Edinburgh EH99

1SP, Scotland, U.K.

# AUSTRALIAN WASTE DUMP CHALLENGED IN COURT

Aboriginal Traditional Owners of Muckaty Station in the Northern Territory of Australia have launched a federal court challenge over a proposed nuclear waste dump on their traditional land. In mid 2005, the former Howard government began targeting Aboriginal land in the Northern Territory for a federal radioactive waste dump.

(712.6062) Beyond Nuclear Initiative -The government worked closely with the Northern Land Council (NLC), one of four Aboriginal land councils in the Northern Territory, to secure the

nomination of a site in the Muckaty Land Trust, 120km north of Tennant Creek in the Northern Territory. This occurred despite strong opposition from many Traditional Owners of the Land Trust

who had requested the NLC not pursue the nomination process.

Though a small group of Traditional Owners signed a deal for Aus\$ 12

million (US\$ 10.3 million or 8.4 million euro) in exchange for roads, housing and infrastructure, senior Elders from all five of the clan groups that comprise Muckaty maintain that they did not consent to the waste dump proposal. The NLC has continued to publicly support the group in favor of the dump but has failed to provide similar legal and media support to their other constituents who are opposed. Accordingly, Traditional Owners from all of the five groups requested external legal assistance to challenge the nomination process.

A team of lawyers from around the country visited the small town of Tennant Creek to meet with Muckaty people, and have subsequently launched the federal court action. The Commonwealth government and the NLC are listed as defendents.

Human Rights Lawyer George Newhouse, says "The Northern Land Council and the Commonwealth have a moral and legal duty to look after and protect the interests of the Indigenous people affected by the proposed dump. The most basic principles of justice and fairness do not appear to have been applied in this case."

Mark Lane Jangala has been campaigning for many years against the proposed site because of its cultural significance.

"I am senior Ngapa man for Muckaty and I did not agree to the nomination of the site, along with other senior Ngapa elders for Muckaty Station who did not agree. We don't want it. There was not even a meeting in town to consult all of the traditional owners."

"I want to look after my Country and Dreaming, look after the Sacred Sites I am responsible for and to make sure my children are raised properly in their Country."

Pursuit of the contentious Muckaty nomination and refusal to release important documents, including the key anthropological report and site nomination, lends little credibility to the promise of Australian Labor Party (ALP) before general elections, of a process that would "restore transparency, accountability and procedural fairness" in siting a nuclear waste facility.

New laws before Parliament in June give Resources Minister Ferguson extraordinary power to make unilateral decisions about site selection, and the power to acquire land in any State or

Territory with regard to building, servicing or transporting radioactive material to the facility.

The Muckaty campaign has recently been launched to an international audience, with the release of a short film on You-tube, "Muckaty Voices". This film was also screened at a conference in the Unites States in early June, America's Nuclear Waste Future. The gathering was a national summit in Chicago and included papers and participation from academics, public health experts, environmentalists and Indigenous and community organizations from across the USA. Muckaty Voices can be viewed at http:// www.youtube.com/ watch?v=xcuNpT84Ovo (see also: Nuclear Monitor 708, 29 April 2010: Australia: Aboriginal landowners oppose radwaste storage)

Source and contact: Natalie Wasley, Beyond Nuclear Initiative coordinator, Alice Springs www.beyondnuclearinitiative.wordpress.

# NDA ANNOUNCE JAPANESE MOX WITH THE SELLAFIELD MOX PLANT

Over a decade after British Nuclear Fuels plc (BNFL) had persuaded the UK Government that they should be allowed to build and operate Sellafield Mox Plant (SMP) to satisfy the then currently perceived demand by Japan for Mixed Oxide (MOX) fuel, the Nuclear Decommissioning Authority (NDA who took ownership of Sellafield from BNFL in 2005) has announced that contracts with SMP from 10 Japanese power companies have now been secured.

(712.6063) CORE - Whilst the news throws a lifeline to the struggling SMP a plant originally designed to produce 120 tons of MOX fuel per year, but which has managed a total of little over 10 tons in 8 years of operation - the deal is far from being 'done and dusted' and will be entirely dependent on the installation of new equipment and extensive modifications to the plant, all of which will be paid for by the Japanese.

Whilst the timescales for the work has not been divulged by the NDA, it is likely to extend over many, many months and

can only begin once SMP's current order has been completed. This is for a German utility and could be expected to be completed this summer. Once finished, SMP must be closed to undergo a full clean-out, followed by modification and installation of new equipment, and then be re-commissioned – a process that will require the necessary approvals of the Nuclear Installations Inspectorate (NII). Such approvals are likely to be required in separate stages as different parts of the plant are worked on.

Once SMP is re-commissioned and has

secured consent from the Japanese companies that it is 'fit for purpose', a test run of plutonium fuel production will be carried out by SMP on behalf of Japan's Chubu Electric - one of a number of Japanese customers who placed reprocessing business with Sellafield's Thermal Oxide Reprocessing Plant (THORP) thirty years ago. THORP secured orders from Japan amounting to 2864 tons of spent fuel for reprocessing (including 162 tons from Chubu Electric). From the reprocessing of this fuel, some 12 tons of plutonium have been recovered and stockpiled at Sellafield and on May 13, the NDA

confirmed to CORE that it is the intention of the Japanese companies to convert all 12 tons of plutonium into MOX fuel at SMP.

THORP's reprocessing of the Chubu Electric fuel sourced from its Hamaoka 1, 2 and 3 power stations (Boiling Water Reactors, BWR), which are located on Japan's eastern coast south of Tokyo, will have recovered 1 ton of plutonium sufficient to make some 100 BWR MOX fuel assemblies for Hamaoka. It remains unknown whether this, or a smaller number of assemblies, will form SMP's test-run once the plant has been re-commissioned.

It also remains unknown what will happen to the bulk of the Japanese orders if SMP's test-run for Chubu Electric fails to live up to NDA's optimistic expectation, and it is unclear how the newly secured business from Japan will be dovetailed with the plant's few remaining European contracts (Germany, Sweden and Switzerland).

German utilities, facing the possibility of the phase-out of their nuclear power stations, will be particularly concerned

that the apparent preference now given by the NDA to SMP's use for Japanese business, could see their orders fail to materialise in time for reactor use.

SMP began production in 2002 when the first plutonium was introduced into the plant. Though BNFL originally applied to build the plant in 1992, and sought approval to operate it in 1996, the planning process was delayed by 5 periods of public consultation and legal challenges. Government approval to operate SMP was finally secured in 2001, but only after any hopes of winning MOX orders from Japan had been scuppered when, in 1999, bored Sellafield workers admitted falsifying the quality assurance data for a small consignment of Japanese MOX fuel which had been produced in Sellafield's MOX Demonstration Facility (MDF) - the forerunner to SMP.

With a number of orders having to be sub-contracted to its rival fabricators in Europe because of its poor performance, SMP's future has remained under constant review by the NDA and Government, with threat of closure if performance failed to improve and no new business was secured. In its current state, with production bottlenecks and little hope of working automatically, the plant's annual production rate has been downgraded from 120 to 40 tons. Given recent operational evidence, even this target appears unachievable. In early 2007 for example, work was started on a German order for 8 MOX fuel assemblies (around 4 tons). These were finally completed over 2 years later in August 2009. A second batch of 8 assemblies, also for Germany's Grohnde power station, is currently underway in SMP and is likely to be the last order before the plant is closed for modification in advance of the Japanese business.

Source: CORE Briefing, 13 May 2010 Contact: Martin Forwood at Cumbrians Opposed to a Radioactive Environment, (CORE) Dry Hall, Broughton Mills, Broughton-in-Furness, Cumbria LA20 6AZ, U.K..

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# OBAMA BRINGS BACK SPACE NUCLEAR POWER

The Obama administration is seeking to renew the use of nuclear power in space. It is calling for revived production by the US of plutonium-238 for use in space devices -despite solar energy having become a substitute for plutonium power in space. And the Obama administration appears to also want to revive the decade-sold and long-discredited scheme of nuclear-powered rockets -despite strides made in new ways of propelling spacecraft.

(712.6064) Karl Grossman - In May, Japan launched what it called its space yacht which is now heading to Venus propelled by solar sails utilizing ionized particles emitted by the sun. "Because of the frictionless environment, such a craft should be able to speed up until it is traveling many times faster than a conventional rocket-powered craft," wrote Agence France-Presse about this spacecraft launched May 21.

But the Obama administration would return to using nuclear power in space despite its enormous dangers.

A cheerleader for this is the space

industry publication Space News. "Going Nuclear" was the headline of its editorial on March 1 praising the administration for its space nuclear thrust. Space News declared that "for the second year in a row, the Obama administration is asking Congress for at least US\$30 million to begin a multiyear effort to restart domestic production of plutonium-238, the essential ingredient in long-lasting spacecraft batteries."

The Space News editorial also noted "President Obama's NASA budget [for 2011] also includes support for nuclear thermal propulsion and nuclear electric propulsion research under a US\$650

million Exploration Technology and Demonstration funding line projected to triple by 2013."

Space News declared: "Nuclear propulsion research experienced a brief revival seven years ago when then-NASA administrator Sean O'Keefe established Project Prometheus to design reactorpowered spacecraft. Mr. O'Keefe's successor, Mike Griffin, wasted little time pulling the plug on NASA's nuclear ambitions."

Being referred to by Space News, as "spacecraft batteries" are what are called radioisotope thermoelectric generators

or RTGs, power systems using plutonium- 238 to provide on board electricity on various space devices including, originally, on satellites.

But this came to an end when in 1964 a U.S. Navy navigational satellite with a SNAP-9A (SNAP for Systems Nuclear Auxiliary Power) RTG on-board failed to achieve orbit and fell to the Earth, disintegrating upon hitting the atmosphere. The 2.1 pounds (1 pound is 453.6 grams) of plutonium fuel dispersed widely. A study by a group of European health and radiation protection agencies subsequently reported that "a worldwide soil sampling program carried out in 1970 showed SNAP-9A debris present at all continents and at all latitudes." Long linking the SNAP-9A accident to an increase of lung cancer in people on Earth was Dr. John Gofman, professor of medical physics at the University of

California at Berkeley, who was involved in isolating plutonium for the Manhattan Project.

The SNAP-9A accident caused NASA to turn to using solar photovoltaic panels on satellites. All U.S. satellites are now solar-powered.

But NASA persisted in using RTGs on space probes -claiming there was no choice. This was a false claim. Although NASA, for instance, insisted -including in sworn court depositions- that it had no alternative but to use RTGs on its 1989, documents I subsequently obtained through the Freedom of Information Act from NASA included a study done by its Jet Propulsion Laboratory stating that solar photovoltaic panels could have substituted for plutonium-fueled RTGs.

And right now, the Juno space probe

which will get its on board electricity only from solar photovoltaic panels is being readied by NASA for a launch next year to Jupiter. It's to make 32 orbits around Jupiter and perform a variety of scientific missions.

Meanwhile, in recent years facilities in the U.S. to produce plutonium-238 -hotspots for worker contamination and environmental pollution- have been closed and the US has been obtaining the radionuclide from Russia. Under the Obama 2011 budget, US production would be restarted. Last year, Congress refused to go along with this Obama request.

**Source and contact**: Karl Grossman Email: kgrossman@hamptons.com

# IN BRIFF

Russia to invest heavily in Namibia. Russia is ready to invest US\$1-billion in uranium exploration in Namibia. "We're ready to start investing already this year," the head of state corporation Rosatom, Sergei Kiriyenko, told journalists. Rosatom seeks to compete for projects with global miner Rio Tinto in the African country. Earlier in May, Russia and Turkey signed a US\$20-billion project for Moscow to build and own a controlling stake in Turkey's first nuclear power plant.

Namibia, the world's fourth-largest uranium producer, is home to the Rossing mine operated by Rio Tinto, which together with Paladin Energy's Langer Heinrich mine accounts for about 10% of global output. Other firms have been joining the exploration drive, with several new mines due to come on stream in the next five years.

Although Russia plans to spent a lot of money on foreign nuclear projects, it is clear that there is not enough money to realize its domestic nuclear program. As described in Nuclear Monitor 707 the number of reactors planned to be built by 2015 will be cut by 60%. And even that number will be hard to build.

Reuters, 20 May 2010

**UK:** Decommissioning black hole. The new U.K. Government will have to find an extra £4 billion for decommissioning and waste management at the UK civil nuclear. Energy minister Chris Huhne said: "as you can imagine, this is a fairly existential problem. The costs are such that my department is not so much the department of energy and climate change, as the department of nuclear legacy and bits of other things." He added that there were "genuine safety issues" so the costs could not be avoided. As a result, the Government is considering extending the life of some of the UK's oldest reactors as a way of raising extra income for decommissioning. Extending the life of the reactors owned by the NDA would raise extra income. The Wylfa reactor on Anglesey, for example, is due to close at the end of the year, but extending its operating life for another two years would mean £ 500 million (US\$ 736 million or 598 million euro) in new revenue. The NDA is also considering extending the life of the Oldbury reactor, first opened in 1968. Any application to extend the life of reactors would have to be approved by safety regulators.

N-Base Briefing, 9 and 16 June 2010

**France:** Subcontractors not in epidemiological surveys. French antinuclear network 'Sortir du nucléaire' supports nuclear industry subcontractor and whistleblower Philippe Billard. As a spokesperson of the organisation 'Santé / Sous-traitance' ("Health and Subcontracting"), he has undergone some retaliation measures after having denounced workers' exposure to radiation. As a whistleblower, he's now treated as persona non grata in nuclear power plants. His employer refuses to re-instate him at his previous job, in contradiction with the Labour Inspectorate's recommendations.

The French antinuclear network "Sortir du nucléaire", considers Philippe Billard's ousting as a means to put pressure on whistleblower workers. "Sortir du nucléaire" decided to bring its support to the workers who, just like Philippe Billard, suffer from the unbearable working conditions imposed by the nuclear industry and undergo irradiation without even receiving appropriate health care.

To protect its corporate image, EDF chose to give subcontractors the most dangerous tasks. These people working in the shadows have insecure jobs and are mostly temporary and/or nomad workers. Every year, 25,000 to 30,000 of them are made to

carry out tasks where they are exposed to radiations. This system allows EDF to cover up a huge health scandal, since these subcontractors, who get 80% of the annual collective dose from the whole French nuclear park, are not taken into account in epidemiological surveys! (See: Annie Thébaud-Mony, « L'industrie nucléaire organise le non-suivi médical des travailleurs les plus exposés », Imagine, May-June 2007)

EDF is shamelessly multiplying talks on transparency while hushing up workers whistle blowing about the imminent catastrophe. In the ageing French nuclear park, the accident risk is increasing, all the more since maintenance periods are shortened in order to save time and money. However, the official motto remains "Nothing to report" and short-term profits are more important than common safety and security.

Press release 'Sortir du nucleaire', 31 May 2010

Switzerland: Thousands march against nuclear power. More than 5,000 people gathered in Goesgen, canton Solothurn, in northern Switzerland on May 24, for a peaceful protest against the continuing development of nuclear energy in the country. The protest had participants from 83 groups in Switzerland, France, Germany and Austria. One of their key points was that Switzerland's nuclear power plans are preventing the rapid development of alternative energy programs. The demonstration was one of the largest in years.

#### www.menschenstrom.ch

Another subsidy for Areva in the U.S. "As part of a broad effort to expand the use of nuclear power in the United States and reduce carbon pollution," the U.S. Department of Energy has approved a US\$2 billion loan guarantee for French nuclear power developer Areva S.A. (owned for about 93 percent by the French State). The loan guarantee will support Areva's Eagle Rock Enrichment Facility near Idaho Falls, Idaho, which will supply uranium enrichment services for the U.S. nuclear power industry. Areva's US\$3.3 billion nuclear enrichment facility will use centrifuge technology instead of gaseous diffusion technology that is more common in the U.S. but uses more energy. Areva had filed its application for the guarantee with the Department of Energy in September 2008.

The group can tap the guarantee once its Idaho Falls project has received full approval by the authorities. The Nuclear Regulatory Commission is expected to decide sometime next year on a license for the facility. Areva plans to have the plant in

Т he United Stated Enrichment Corporation (USEC) is also seeking a loan guarantee for its American Centrifuge Project under development at Piketon, Ohio. Following DOE's announcement the consensus would seem to be that 'd be bad news for USEC. But according to USEC spokesman Paul Jacobson that is not the case. Jacobson said USEC was encouraged that DOE recognizes the need for more enrichment services to supply the nuclear needs of the future. He also noted that DOE, as noted in the federal agency's press release, still has another US\$2 billion in loan authority available. At one time, USEC was going head to head with Areva for the loan guarantees, and USEC played up the foreign-owned company versus domestic company, etc., but now the company -- on the public front at least -- seems to be focused on the nuclear renaissance and the idea that there's enough demand in the U.S. and abroad to support multiple new ventures in the enrichment arena.

U.S. DOE, 20 May 2010 / Reuters, 20 May 2010 / Atomic City Underground, 21 May 2010

EC: investigation non-compete clauses Areva, Siemens. The European Commission has opened an antitrust case to determine whether non-compete clauses in civil nuclear technology arrangements between Areva of France and Germany's Siemens violate EU competition rules. The opening of antitrust proceedings on June 2, means that the EC thinks the case merits investigation. EC competition spokeswoman Amelia Torres said an investigation was triggered by a complaint from Siemens after Areva took full control last year of reactor construction and services company Areva NP, a joint venture originally set up by Framatome (which later became Areva) and Siemens in 2001. But non-compete clauses between the two companies remain, even though Siemens sold its 34% stake to Areva last year.

The shareholders' pact between Areva and Siemens for Areva NP is not public, but a French official familiar with it confirmed that it forbids either party from competing with the other in businesses covered by Areva NP for eight years after a potential divorce.

Siemens said in January 2009 that it intended to exercise its option, to sell its 34% stake in Areva NP to Areva and leave the joint venture. A few weeks later, Siemens said it had signed a memorandum of understanding on a nuclear power business partnership with Rosatom, a Russian state-owned nuclear conglomerate. After bilateral discussions failed to produce an agreement on the price at which Areva would buy the 34% stake in Areva NP, the erstwhile partners last year asked an arbitration court to decide the matter.

EC competition spokeswoman Amelia Torres said the investigation would be carried out by the EC at EU-level, rather than by national governments. There is no timescale for the investigation as this depends on the complexity of the case and the extent to which the parties cooperate. Torres said she was not able to prejudge whether a fine would be imposed if the arrangement were found to be in breach of competition rules.

Platts, 2 June 2010

# WISE/NIRS NUCLEAR MONITOR

The Nuclear Information & Resource Service was founded in 1978 and is based in Washington, US. The World Information Service on Energy was set up in the same year and houses 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 issues.

The WISE/NIRS 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 and a Ukrainian version is published by WISE Ukraine. The WISE/NIRS Nuclear Monitor can be obtained both on paper and in an email version (pdf format). Old issues are (after two months) available through the WISE Amsterdam homepage: www.antenna.nl/wise.

## **NEW ON NIRS WEBSITE**

New Analyses by PSR on the nuclear provisions of the Kerry-Lieberman American Power Act.

And coming soon: a new study by EarthTrack for FoE on still more nuclear subsidies in the American Power Act.

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