NUCLEAR MONITOR

A PUBLICATION OF WORLD INFORMATION SERVICE ON ENERGY (WISE)
AND THE NUCLEAR INFORMATION & RESOURCE SERVICE (NIRS)

wise
World Information Service on Energy
founded in 1978

NUCLEAR INFORMATION & RESOURCE SERVICE
www.nirs.org

FEBRUARI 3, 2012 | No. 741

NETHERLANDS: BORSSELE-2 POSTPONED

Not completely surprising came the announcement of Dutch utility Delta about postponing plans to build a second nuclear power plant in the Netherlands because of the poor investment climate and low electricity prices. Although Delta states it remains committed to the project, not many believe in its resurrection.

(741.6217) WISE Amsterdam - Delta had plans to build a nuclear power plant with a maximum capacity of 2,500 megawatts in the Zeeland province in the southwest of the country, next to an existing plant near the town of Borssele, but said on January 23, 2012 it was delaying these for two to three years. "The last half-year the investment climate has worsened due to the financial crisis. In addition, overcapacity of electricity production has increased further due to the recession," Delta said in a statement.

In December it became clear that French EDF, the preferred partner for the project had decided not to participate and when the newly appointed CEO of German utility RWE in an January 21, interview stated that RWE would not invest in a second reactor in Borssele 'under current economical and political circumstances', it was clear that Delta would postpone or cancel the whole project.

RWE owns 30 percent of the existing Borssele plant, while Delta, which is owned by Dutch municipalities and province of Zeeland, owns the remainder. However there was no agreement on cooperation in the construction of the second reactor. Both Delta and RWE (the Dutch subsidiary company ERH Essent) had started a procedure in the past few years to obtain a license for a nuclear power plant.

Delta says it remains 'committed to nuclear power', and stated the decision had nothing to do with the accident at Fukushima or dwindling support for nuclear in Zeeland province… The decision to put the plan on hold is based solely on economic grounds (low energy prices, no investors) and uncertainty about carbon dioxide (CO2) prices, spokeswoman Mirjam van Zuilen said.

On a stakeholders meeting last December, much criticism and skepticism about the project was visible for the first time. A lot had to do with the passionate but clumsy CEO Boerma, who then left the company. Stakeholders decided not to invest 100 million in obtaining a licence but only 10 million to increase support for the project and come up with interested partners in the coming months.

It is the third time plans for a second reactor at Borssele fail. The first time was in the mid 1970's when a rapid growing anti-nuclear sentiment in the Netherlands resulted in a fundamental choice against new nuclear reactors by the smallest coalition partner at the time. The threat of the collapse of the government was enough to first postpone and later cancel the construction of three reactors.
The second attempt was 10 years later and ended with the explosion at Chernobyl, on April 26, 1986.

Source and contact: WISE Amsterdam

MONITORED THIS ISSUE:

LEGAL BID TO HALT NUCLEAR CONSTRUCTION

A formal complaint about subsidies for nuclear power has been sent to the European Commission (DG Competition). If it is upheld, it unlikely that any new nuclear power stations will be built in the UK or elsewhere in the EU. The complaint may be followed by legal action in the courts or actions by politicians to reduce or remove subsidies for nuclear power

(741.6218) Energy Fair - The complaint to the European Commission about subsidies for nuclear power has been prepared by lawyers for the Energy Fair group, with several other environmental groups and environmentalists.

Research by the Energy Fair group has identified 7 existing subsidies for nuclear power and at least 2 potential subsidies. They are summarised in "Forms of support for nuclear power"(*1). One of the largest subsidies in the complaint is the low cap on liabilities for nuclear accidents. "Like car drivers, the operators of nuclear plants should be properly insured" says Energy Fair. A report by the Insurance Forum, Leipzig ("Calculating a risk-appropriate insurance premium to cover third-party liability risks that result from operation of nuclear power plants")(*2), a company that specializes in actuarial calculations, shows that full insurance against nuclear disasters would increase the price of nuclear electricity by a range of values -- Euro 0.14 per kWh up to Euro 2.36 per kWh -- depending on assumptions made. Even with the minimum increase, nuclear electricity would become quite uncompetitive. Without the other subsidies for nuclear power, it would be even more expensive. Counting only the Three Mile Island disaster in 1979, Chernobyl in 1986 and Fukushima in 2011 -- and excluding the near-disasters at the Narora nuclear plant in India in 1993, the Davis-Besse plant in Ohio in 2002, and the Forsmark plant in Sweden in 2006 -- we are averaging one nuclear disaster every 11 years

In summary, the "grounds of complaint" are:
* That the so-called "carbon price floor", introduced in the Finance Act 2011, is a de facto tax on fuels used for the generation of electricity and that the exemption of uranium from that tax is incompatible with EU state aid rules, Articles 107 and 108 of the Treaty on the Functioning of the European Union (TFEU).
* That the cap on liabilities for nuclear accidents of the Paris/Brussels Conventions constitutes state aid in the sense of Article 107 of the TFEU. Since Article 351 of the TFEU requires EU Member States to adapt and align their pre-existing Treaty obligations to be compliant with EU law, since relevant UK laws have not been amended in the light of that requirement, and since the cap on liabilities has not been notified to the European Commission, it is, technically, illegal under EU law.
* That the proposed cap on liabilities of nuclear operators for the disposal of nuclear waste falls under the definition of state aid in Article 107(1) of the TFEU; that, unless or until it is notified to the Commission, it is illegal under EU law; and that, since the measure cannot be justified (Article 107(3) of the TFEU), it should not be approved by the Commission and should not enter into force.
* That the proposed "feed-in tariff with contracts for difference", as applied to nuclear power, is, under Article 34 of the TFEU, a measure having an effect that is equivalent to "quantitative restrictions on imports" and is thus contrary to EU law.

Caroline Lucas, MP for Brighton Pavilion and leader of the Green party of England and Wales, said: "The Government's planned Electricity Market Reform is set to rig the energy market in favor of nuclear -- with the introduction of a carbon price floor likely to result in huge windfall handouts of around £50m (US$ 78,5 mln or 60 mln euro) a year to existing nuclear generators. Despite persistent denials by Ministers, it's clear that this is a subsidy by another name, which makes a mockery of the Coalition pledge not to gift public money to this already established industry. If these subsidies are found to be unlawful, I trust the European Commission will take action and prevent the UK's nuclear plans from seriously undermining the shift towards new green energy."

Dr Dörte Fouquet, the lawyer who has been leading the preparation of the complaint, said: "The European Union has opted for opening up the energy market and is vigilant about creating a level playing field. In this regard, the Commission over the last years repeatedly underlined that distortion of the market is to a large extent caused by subsidies to the incumbents in the energy sector. This complaint aims to shed some light on the recent shift in the energy policy of the United Kingdom where strong signals point to yet another set of subsidies to the nuclear power plant operators."

"There is no justification of any kind for subsidising nuclear power" says Dr Gerry Wolff of Energy Fair. "It is a mature technology that should be commercially viable without support. Renewables have clear advantages in cost, speed of construction, security of energy supplies, and effectiveness in cutting emissions of CO2. There are more than enough to meet our needs now and for the foreseeable future, they provide diversity in energy supplies, and they have none of the headaches of nuclear power."

*1: The Energy Fair group report "Forms of support for nuclear power" is available at: www.mng.org.uk/ns
*2: The report by the Insurance Forum, Leipzig is available at: www.mng.org.uk/gh/private/20111006_NPP_Insurance_Study_Versicherungsforen.pdf.

Source: Energy Fair, News release, 19 January 2012
Contact: Energy Fair, Dr Gerry Wolff PhD, 18 Penlon, Menai Bridge, Anglesey, LL59 5LR, UK.
Tel: +44 1248 712962
Eail: gerrywolff65[at]gmail.com
Web: www.energyfair.org.uk

Fukushima commemoration
On March 11, 2012, it will be one year after the devastating earthquake and tsunami, leading to three meltdowns at the nuclear reactors at Fukushima-Daiichi. All around the globe this will be remembered with many events varying in intention, size and outreach.
The Nuclear Monitor would like to give an overview of as many events as possible and therefore we need your help.
If you are aware of any event to commemorate Fukushima, please let us know by sending an email to wiseamster@antenna.nl
A 28-page compilation of articles published in the Nuclear Monitor since March 2011 about Fukushima and its consequences is still available as a pdf-file at the same email-address,
Thank you.

ACCELERATOR-DRIVEN NUCLEAR REACTOR AND TRANSMUTATION

Guinevere, a first-of-a-kind reactor system has been set up in Belgium by coupling a subcritical assembly with a particle accelerator. The work is heralded as a major step in the program to research advanced radioactive waste management. Transmutation of long-lived isotopes into short lived ones would simplify the permanent geologic disposal of radioactive waste.

(741.6219) WISE Amsterdam - The equipment, Guinevere, is a demonstration model that supports the project for a larger version that will be called Myrrha (Multipurpose Hybrid Research Reactor for High-tech Applications). It was assembled by France's National Centre for Scientific Research and is managed by the Belgian Nuclear Research Centre (SCK-CEN) at Mol, about 50 kilometers east of Antwerp. The overall project is supported by 12 other European laboratories and the European Commission. The research infrastructure for Guinevere was inaugurated on March 4, 2010, at the Belgian Nuclear Research center SCK-CEN in Mol.

Nuclear terminology classifies an item of equipment as in a critical state if the chain fission reaction is self-sustaining and each reaction leads on average to one more. The term supercritical means the number of fissions is increasing, while subcritical means it is decreasing and will therefore dwindle to nothing.

Guinevere is designed to be subcritical if it were not for an accelerator system that sends a constant stream of protons to a target that emits neutrons to trigger fission. According to a SCK-CEN statement, "This type of reactor is very safe because the reactor section relies on a particle accelerator: when it is turned off, the reactor will stop immediately."

As well as this kind of accelerator-driven operation, Guinevere is also capable of 'classic' criticality triggered by a neutron source in the reactor core and maintained by the reactor geometry and operation of its lead cooling system. This mode of operation was 'inaugurated' in February 2011.

Guinevere has "very limited power" and is being used to learn more about the operation and control of this kind of reactor arrangement. The knowledge will be put to use at Guinevere's larger relation, Myhrra.

Myrrha.
Myrrha, a flexible fast spectrum research reactor (50-100 MW-th) is conceived as an accelerator driven system (ADS), able to operate in sub-critical and critical modes. It contains a proton accelerator of 600 MeV, a spallation target and a multiplying core with MOX fuel, cooled by liquid lead-bismuth (Pb-Bi). Myrrha will be operational at full power around 2023. Until 2014 the Front End Engineering Design (FEED), the associated R&D program, the licensing process and the set-up of the international consortium will take place. Construction of the facility and assembly of the components is foreseen in the period 2015-2019. Three years (2020-2022) are foreseen for the full commissioning of the facility. The total investment cost was estimated in 2009 at 960 million euro.
The Belgian government will support 40 % (384 million euro) of the total budget (M€ 960) of which 60 million euro until construction phase in 2014. Almost three years into the project, SCK-CEN is still looking to set up an international consortium to ensure additional financing and, according to a World Nuclear News article, it has completed a memorandum of understanding with the Chinese Academy of Sciences focusing on Myrrha.

Myrrha will be able to produce radioisotopes and doped silicon, but its research functions would be particularly well suited to investigating transmutation. This is when certain radioactive isotopes with long half lives are made to 'catch' a neutron and thereby change into a different isotope that will decay more quickly to a stable form with no radioactivity. If achievable and on an industrial scale, transmutation could greatly simplify the permanent geologic disposal of radioactive waste.

Partitioning and Transmutation
The purpose foreseen for ADS is the "burning" of transuranic elements, particularly the minor actinides (Neptunium, Americium and Curium) that place severe constrains on geological disposal of nuclear waste, more effectively and more safely than is achievable in critical reactors. The fraction of neutrons which are delayed in the fission of minor actinides is much smaller than for uranium, with the result that control of a critical core comprising mostly minor actinide fuel is expected to be difficult, yet using few largely-minor-actinide-fuelled reactors may prove more advantageous than distributing (transporting) minor actinide fuel throughout the whole reactor fleet. ADS can achieve the required control and safely burn the transuranics in a largely minor-actinide fuelled core.

Although the driver fuel proposed for Myrrha does not contain minor actinides, it would demonstrate the essential features of ADS for the first time, that is, the combination of a high-power proton-beam accelerator, spallation source and a subcritical core. "The scientific and technological value of this demonstration would therefore be very high is successfully achieved", is written in a 2009 'independent' evaluation of the Myrrha project. Well, independent…? The international team of experts only existed of experts from the nuclear sector, who all believe in the necessity of nuclear power and the possibility to fix technological problems with technological solutions.

And even these independent experts admit the technical problems to be overcome are not trivial. A high-power proton-beam accelerator that meets the project reliability requirements has yet to be developed, the techniques for precise positioning and controlled displacement of the proton beam need to be mastered; maintaining a stable, free surface of flowing lead-bismuth liquid target is also necessary: these are all formidable challenges.

It should also be pointed out that there may be a question of timing, of whether the demonstration of ADS will eventually prove necessary within the time frame proposed for Myrrha, as Belgian and/or European fuel cycle and waste management strategies evolve. It should also be kept in mind that the successful demonstration of ADS is only part of partitioning and transmutation (P&T); advanced fuel cycle technology in which substantial amounts of minor actinides are handled and incorporated into new fuel is also necessary. This is still in a very early stage of development.

Even the most elaborate transmutation schemes will leave behind substantial amounts of long-lived radionuclides requiring disposal, while generating large new volumes of operating and decommissioning wastes. Transmutation does not eliminate the need for a high-level waste repository. Waste from prior reprocessing operations, whether for commercial or military purposes, is highly unlikely to be transmuted since almost all of it will have been vitrified for safety reasons before a transmutation program can be put into place. This large amount of waste would have to be sent directly to the repository. In other words, there are fundamental and substantial limitations to the reduction in long-lived radioactivity that can be achieved even with an elaborate and very expensive transmutation program.

All transmutation schemes require reprocessing and separation of transuranic radionuclides. The current use of commercial reprocessing and MOX-fuel, the simpliest of schemes to transmutate a small fraction of existing plutonium, results in the separation of significant quantities of plutonium, which is undesirable from a proliferation standpoint. Transmutation would greatly increase separation of –weapons-usable material and/or the diffusion of technologies that would facilitate such separation. It will thereby considerably increase the risks of proliferation.

Reprocessing, which is required in all transmutation schemes, is one of the most damaging components of the fuel cycle. It results in the discharges of large volumes of waste and radioactive emissions to air and water.

Sources: Nuclear Alchemy, An assessment of Transmutation as a nuclear waste management strategy, Hisham Zerriffi & Annie Makhijani, May 2000 / Independent evaluation of the MYRRHA project, OECD Nuclear Energy Agency, 2009 / Press releases SCK-CEN, 4 & 12 March 2010 /
World Nuclear News, 11 January 2012
Contact: WISE Amsterdam

SHOWDOWN TIME FOR VERMONT YANKEE

The future of the Vermont Yankee reactor remains murky following a federal judge's January 19 ruling against state laws that would have required the shutdown of the reactor at the end of its original license period on March 21, 2012.

(741.6220) NIRS - U.S. District Judge J. Garvan Murtha ruled that two state laws intended to prevent Vermont Yankee from operating after that date are pre-empted by the Atomic Energy Act, which gives all power to the federal Nuclear Regulatory Commission for regulation of nuclear power on safety or radiological grounds and forbids states from enacting their own laws on such issues.

That would appear to be a clear-cut victory for the Entergy Corporation, which owns the troubled reactor. But as is often the case with nuclear power issues, the outcome of this ongoing saga remains uncertain.

At *Nuclear Monitor* presstime, the state had not yet announced whether it would appeal the decision -and there do appear to be some grounds for appeal. Judge Murtha's ruling was based not on the actual language of the Vermont laws, but on the fact that many state legislators had frequently and publicly expressed serious concern about the safety of the reactor during deliberations on the laws. In other words, Judge Murtha went after what he perceived as the motivations for the laws, rather than the laws themselves. Considering that there may be multiple motivations for nearly every law a legislature enacts, this would seem to be on slippery ground.

A little background: in 2002, Entergy agreed that the Vermont Public Service Board would have to issue a new Certificate of Public Good (CPG) to allow Vermont Yankee to continue operating, even if a license extension were granted by the Nuclear Regulatory Commission. The Public Service Board does not deal with nuclear safety issues; rather it focuses on rates, quality of service, environmental matters generally, and radioactive waste storage and decommissioning issues -which courts have ruled can fall under state authority.

In 2006, with Vermont Yankee's operations under mounting criticism within the state, the Vermont legislature passed a law requiring approval from both houses of the legislature for the Public Service Board to issue a CPG. And in February 2010, following revelations of radioactive tritium releases and other problems, the Vermont Senate voted 26-4 against allowing the Board to issue the CPG.

It was the 2006 law, and another related law, that the judge struck down. However, the judge also ruled against Entergy on another issue, and determined that the Vermont Public Service Board must still issue the CPG for Vermont Yankee to continue operating. Entergy has now applied for the CPG; it isn't known at this point whether the Board will reflect the overwhelming sentiment of Vermonters and deny the Certificate, or whether it will allow the reactor to continue operating.

Meanwhile, in a separate legal proceeding, the State and the grassroots New England Coalition on Nuclear Pollution have gone to court to argue that the NRC's license extension for Vermont Yankee should be nullified because Entergy did not apply for a needed permit under the federal Clean Water Act. Entergy and the NRC have responded that the company did have a different but similar permit. States have a clear right to regulate water discharges from nuclear reactors.

Judge Murtha's decision was met with outrage by those who have been fighting Vermont Yankee for years. Protests have taken place across the state—from the reactor gates in the south to a march by Occupy Burlington in the north. A number of actions will take place throughout March, including a mock evacuation on March 11 (Vermont Yankee is a Fukushima-clone GE Mark I reactor), a "retirement party" for Vermont Yankee on March 21 and nonviolent civil disobedience the next day, culminating in a major rally on April 1 in Brattleboro just a few miles from the reactor site. The actions are being coordinated by the SAGE Alliance (of which NIRS is a member) and more information can be found at http://sage-alliance.net/action_center. The Alliance is also asking grassroots groups across the country to support Vermont Yankee shutdown efforts by holding support rallies at Entergy-owned facilities everywhere during March.

Source and contact: Michael Mariotte at NIRS Washington

INCREASING NONPROLIFERATION THROUGH NUCLEAR TRADE

The Obama administration, in advanced negotiations on nuclear-cooperation agreements with Jordan and Vietnam, has withdrawn a demand that these countries forgo their rights to produce nuclear fuel, senior U.S. officials said. The policy shift, adopted after an extensive interagency review, drew criticism from some U.S. lawmakers, who charged that it could ease the spread of sensitive nuclear technologies.

(741.6221) WISE Amsterdam - A letter from senior US officials signals that the country will continue to seek nuclear trade agreements with conditions on enrichment and reprocessing implemented on a "case-by-case" basis. The letter from deputy energy secretary Daniel Poneman and undersecretary of state for arms control and international security Ellen Tauscher was sent to the administration of President Barack Obama on 10 January. The text of the letter was published by a Global Security Newswire article on 23 January.

The Obama administration in 2009 signed a nuclear-cooperation agreement with the United Arab Emirates that bound the Arab country not to enrich uranium domestically or reprocess spent plutonium fuel, the two technologies that can be used to produce nuclear weapons.

President Barack Obama cited the U.A.E. agreement as the "gold standard" for future nuclear-cooperation pacts. Washington has used the deal to press Iran over its nuclear program, arguing that Tehran should follow the Emirates and rely on the international market for nuclear fuel.

U.S. officials involved in the policy review said Washington risked losing business for American companies seeking to build nuclear reactors overseas, and could greatly diminish its ability to influence the nonproliferation policies of developing countries. And obviously the Obama administration concluded that most countries wouldn't be willing to follow the U.A.E. model, and that insisting on it would hurt American interests.

The fundamental justification for the decision is that insisting on the standard negatively impacts trade opportunities for U.S. companies, which in turn restricts the country's ability to set non-proliferation conditions: "Nuclear trade carries with it a critical nonproliferation advantage in the form of consent rights, along with other opportunities to influence the nuclear policies of our partners"

But the U.S. is pursuing a range of other tools (Nuclear Suppliers Group and fuel leasing arrangements), to ensure that developing countries seek to purchase nuclear fuel from foreign suppliers rather than developing the technologies needed to produce the fuel themselves.

In addition to negotiations with Jordan and Vietnam, the departments of State and Energy are beginning to renegotiate pacts signed in the 1970s with South Korea and Taiwan that will lapse in the coming years. The agreements, which are legally designated as treaties, require congressional approval.

South Korea is beginning to renegotiate its 1974 nuclear-cooperation agreement with the U.S. South Korean officials argue Seoul needs to use this method to safely dispose of the spent fuel coming from the country's growing nuclear-power industry. The 1974 U.S.-South Korean nuclear cooperation agreement requires U.S. consent if "any irradiated fuel elements containing fuel material received from the United States of America [are to be] altered in form or content." As a matter of policy, South Korea requests that the United States agree to such activities even if U.S.-origin material is not involved. The cooperation agreement will expire in 2014, however, and South Korea wants to negotiate a new agreement that will give it the same programmatic permission that the United States has given the European Union, Japan, Switzerland, and, with certain conditions, India.

Under the agreements with the European Union, India, Japan, and Switzerland, the United States has provided advance long-term consent for reprocessing. In India's case, according to the Indian-U.S. nuclear cooperation agreement, this long-term consent does not go into effect until India has built and brought into operation "a new national reprocessing facility dedicated to reprocessing material" under International Atomic Energy Agency (IAEA) safeguards and the two countries have agreed on "arrangements and procedures under which reprocessing or other alteration in form or content will take place in this new facility."

U.S. officials fear such a move would undercut efforts to get North Korea to give up its nuclear-weapons program. An agreement with Vietnam that doesn't follow the U.A.E. model could make it harder for the U.S. to get Seoul to accept stringent terms.

U.S. lawmakers are focused on the Jordan negotiation (an agreement is expected at the end of this year), fearing an agreement that allows domestic nuclear-fuel production could have a cascading effect across the Middle East. This is also because the U.A.E.'s pact allows it to renegotiate if another country in the Middle East gains more favorable terms. Saudi Arabia has also signed a memorandum of understanding with the U.S. and has echoed Jordan's reservations about giving up its right to enrich uranium, senior Arab diplomats said.

Lawmakers and nonproliferation experts fear more lenient nuclear-cooperation agreements with Jordan and Vietnam could undercut the campaign to contain Iran's nuclear program. "If the U.S. lets Jordan, Vietnam or South Korea make nuclear fuel, you can kiss any attempt to persuade Iran or any other state to forgo fuel making goodbye," said Henry Sokolski, executive director of the Nuclear Policy Education Center.

Sources: Arms Control Today, Frank von Hippel, March 2010 / Nuclear Policy Education Center, 23 January 2012 / World Nuclear News, 25 January 2012 / Wall Street Journal, 25 January 2012

HELP FUKUSHIMA CHILDREN ESCAPE HIGH RADIATIONS

Watari District is one of the most severely polluted areas in Fukushima City. Since high levels of radiation exceeding 2μSv/hour (2 microsievert/hr) are still observed across the District, Watari residents are urging the government to help them evacuate at least children until decontamination is completed. While going forward with the project, we will continue to lobby the government to change its evacuation policy. The government criterion for evacuation, 20millieSv/year, is nearly four times as high as the safe limit in radiation-controlled areas. The evacuation criterion itself needs to be reconsidered.

(741.6222) WISE Amsterdam - While the Japanese government defines 20mSv/year as a criterion for designating special evacuation points, NGOs have demanded that the government should establish a broader, "optional evacuation area" to allow people to decide whether or not to evacuate for themselves. Since the Japanese government is unwilling to change its evacuation policy, however, people in Fukushima, especially residents of Watari District (Fukushima City), have suffered enormously.

In the Watari district of Fukushima City which is 60 kilometer from the Fukushima nuclear plant, 16,000 people of 6,700 households are exposed to high levels of radiation exceeding 2μSv/hour. However, given the lack of information from the government and the absence of proper financial compensation for evacuees, many families are not able to move out of the contaminated area for a variety of reasons such as work or school.

The government has delayed evacuation of children and pregnant women with the promise of decontamination. This policy can be said to violate human rights. At this very moment, children in Watari District live, study, and play in the severely polluted environment. Here, it is crucial to facilitate their temporary evacuation until satisfactory decontamination is accomplished.

No groups have launched "POKA-POKA Project for Fukushima Children" in response to the dire situation in Watari District. The project is jointly managed by Save Watari Kids, Fukushima Network for Saving Children from Radiation, Citizens against the Fukushima Aging Nuclear Power Plants, and Friends of the Earth Japan. The project focuses on Watari District as well as Onami, Nankodai, and Oguraji and aims to lower radiation exposure for children of families that have to stay in the polluted areas for a variety of reasons.

The group will organize trips to a location in west part of Fukushima City and 30 minutes by car from Watari district, where recorded radiation rates are much lower. They also try to subsidize costs of travel and accommodation for families in Watari district. This will allow children to spend time away from high levels of radiation as well as support the local communities and help economic recovery. We hope that many families can take part in this project. While doing so, we will continue to lobby the government to change its evacuation policy that puts citizens at risk. This is not only Watari's problem. The problem is also relevant to Fukushima and, indeed, Japan as a whole.

Contact: Kanna Mitsuta, Eri Watanabe, Akiko Yoshida at Friends of the Earth Japan.
3-30-8-1F Ikebukuro Toshima-ku, Tokyo 171-0014, Japan.
Tel: +81 3 6907 7217
Email: yoshida[at]foejapan.org
Web: http://www.foejapan.org

CHILD LEUKEMIA AND NUCLEAR POWER PLANTS

The International Journal on Cancer, published in its January 2012 magazine a new study from France, establishing a very clear correlation between the frequency of acute childhood leukemia and proximity to nuclear power stations. It confirms the study conducted in Germany by the Cancer Registry in Mainz in 2008, which had reached the same conclusion.

(741.6223) WISE Amsterdam - This rigorous epidemiological study is called "Childhood leukemia around French nuclear power plants – the Geocap study, 2002-2007", and conducted by a team from INSERM (Institut national de la sante et de la recherche medicale), IRSN (Institut de Radioprotection et de Surete Nucleaire) and the national child cancer registry of the hospital of Villejuif, demonstrates for the period 2002-2007 in France the doubling of occurrence of childhood leukemia: the increase is up to 2.2 among children under 5 years.

This study again confirms an earlier German study (KiKK-Study Dec 2007) that the incidence of child leukemia more than doubles near nuclear power plants for children below the age 5 living within a 5 kilometer radius of nuclear power plants, compared to children living further then 20 kilometers from a nuclear power plant.

The nation wide study includes 2753 child leukemia cases diagnosed between 2002 and 2007 and a control group of 30,000. The addresses were geocoded around 19 nuclear power plants.

This is in line with a USA study by the National Academy Press, U.S., which argues that women and children are at significantly greater risk of suffering and dying from radiation-induced cancer than a man exposed to the same dose of ionizing radiation.
Current regulation of radiation and nuclear activity ignores the disproportionately greater harm to both women and

children. Radiation harm includes not only cancer and leukemia, but reduced immunity and also reduced fertility, increases in other diseases including heart disease, birth defects including heart defects, other mutations.

Sascha Gabizon, international director of the Women's environment and health network WECF says "studies in Russia have shown that radioactive contamination of pregnant women in Chelyabinsk, Russia, lead to mutations of chromosomes, being transmitted into the 3rd and 4th generation of children". Gabizon: "victims of nuclear energy will never be compensated for, as the nuclear industry pays artificially low insurance costs, which means the tax-payer and future generations pay both economically as with their health. Nuclear energy is highly subsidized, the price of nuclear energy does not include the irreversible and long-term damage caused throughout the nuclear fuel cycle". In the light of these finding Gabizon calls for immediate measure for the protection of the population, especially small children, including legislation and support for resettlement of all families currently living in the vicinity of nuclear power plants.

WECF is a unique network of over 100 grassroots women and environment organizations worldwide, working in multi-sector partnerships demonstrating sustainable development alternatives at the local level, and sharing lessons learned and promoting sustainable policies at the global level.

For years, "Sortir du nucleaire" has seen the IRSN discrediting work in all epidemiological studies showing an impact of nuclear facilities on health. Sortir du nucleaire would therefore on this all too rare occasion like to congratulate the IRSN for participating in this epidemiological study. "Even in non-accidental situation, the proof is in the pudding -nuclear technology does not belong in a civilized world."

The study is available at: http://onlinelibrary.wiley.com/doi/10.1002/ijc.27425/abstract

Sources: Press release Reseau Sortir du nucleaire, 11 January 2012 / WECF press release, 17 January 2012
Contact: Chantal Van den Bossche, WECF press:
Email: chantal.vandenbossche[at]wecf.eu
Tel: +31 6 2812 9992
Web: www.wecf.eu

PROTEST AT PROPOSED NUCLEAR CONSTRUCTION SITE EGYPT

Egypt remains poised to build its first nuclear power plant, originally approved under the leadership of ousted strongman Hosni Mubarak. Egypt's electricity minister said in March 2011, that the country would go ahead with the tender for the plant's construction after the popular uprising that ousted President Hosni Mubarak. But local opposition remains fierce, with demonstrations, clashes with military police and a site occupation.

(741.6224) WISE Amsterdam – Egypt has an ambitious nuclear power program already for decades. In November 1975, a year after a nuclear agreement between Egypt and Soviet Union, the U.S. Ford administration promised to construct two reactors. Discussions on the deal were started when president Nixon visited the country in 1974. But due to growing opposition in Congress in the following years especially regarding safeguards and the position of Israel, the deal never materialised.

On July 8, 1978, then–president Anwar Sadat proudly announced a deal with Austria to store nuclear it's waste in Egypt, but Austria decided shortly after to never commission their Zwentendorf nuclear power plant after a referendum. On February 16, 1981, Egypt ratified the Nonproliferation Treaty and in the same week France made a bid for the construction of two pressurised water reactors, including the supply of fuel and French technical assistance. Feasibility studies were conducted for the El Dabaa site by the French company Sofratom.

But the program was frozen after the 1986 Chernobyl nuclear disaster in the Ukraine.

Now, after years of stop-start efforts, Egypt's nuclear-energy ambitions are once again in flux. Deposed Egyptian president Hosni Mubarak had pushed hard in recent years to reinvigorate the country's nuclear-power ambitions,

On August 25, 2010, Mubarak made a final decision on the selection of Dabaa (nearly 350km north of Cairo on the Mediterranean coast) as the site of Egypt's first nuclear reactor. The Supreme Council of Nuclear Energy has been restructured in order for Mubarak to head it. The Dabaa plant will be followed by three other reactors, tentatively scheduled to start production in 2025. The first plant was scheduled to start producing electricity in 2017, but the new government has not made any statements about its plans for the plant since construction was suspended.

Protests at El Dabaa
On January 13, about 500 residents rallied, demanding that construction on the plant be halted. They stormed the Dabaa proposed nuclear site, destroying many buildings and staging a sit-in. The protestors, who, according to some reports, exchanged gunfire with soldiers, claim that the plant development project has usurped their land. The clashes left 41 people injured, including 29 soldiers, according to state-run newspaper Al-Ahram. Employees have refused to return to the plant until security is re-established.

According to Egypt's Al-Masry Al-Youm newspaper the meteorological station, ground water station and many of the offices had been attacked and it says looters made off with computers, monitoring devices for earthquakes, transformers, cables and furniture. Engineers from the country's Atomic Energy Authority subsequently began to dismantle and remove the remaining equipment, according to Al-Masry Al-Youm.

On Saturday, January 14, following the clashes with military police on Friday, residents of Dabaa staged an occupation, called a 'sit-in', of the site. In the days following the occupation the northern command military leadership met with officials from the Dabaa nuclear site. The Nuclear Stations Authority has been blamed for failing to secure the site and for not dismantling radioactive equipment after the site was stormed, putting inhabitants of the sur-

rounding area at risk. Mohi al-Essawy of the National Center for Nuclear Safety explained that it is the responsibility of the Nuclear Stations Authority and not the Nuclear Safety Authority to secure the site.

On January 19, protesters said they would continue their sit-in and asserted that the government would not be able to force them out. They have already built 50 houses on the site, changed its name to New Dabaa and decided to move the cattle market there. They also said they would give 1,000 square meters for free to young people who cannot afford a place to live. They rejected the option of negotiations to bring an end to their sit-in.

Taha Mohamed Al-Sayed, governor of Matrouh, had held an urgent meeting with protestors' representatives, calling on them to exercise self-restraint. The governor was quoted as telling the protestors that the army will not attack them. Al-Sayed ordered police to secure the plant's gates.

On the first days of the January protests, while hundreds of protestors surrounded El Dabaa, someone managed to sneak in and steal some of its radioactive material. One safe containing radioactive material was seized while another was broken open and some of its contents removed, according to Khaleej Times and confirmed by the IAEA. The government has alerted security officials to the theft and a search party is underway.

Sources: Financial Times, 4 August 1976 / Vrij Nederland, 5 August 1978 / Egypt's nuclear program, Center for Development Policy, March 1982 / Al-Masry Al-Youm, 17 January / Nature, 20 January 2012 / Egypt Independent, 14, 17, 20 & 22 January 2012

BLUE RIBBON COMMISSION ISSUES FINAL REPORT ON NUCLEAR WASTE

The Blue Ribbon Commission on America's Nuclear Future (BRC) on January 27, released its final report to the U.S. Energy Secretary, "detailing comprehensive recommendations for creating a safe, longterm solution for managing and disposing of the nation's spent nuclear fuel and high-level radioactive waste." The report is the culmination of nearly two years of work by the commission and its subcommittees, which met more than two dozen times since March 2010, gathering testimony from experts and stakeholders.

(741.6225) WISE Amsterdam - The United States currently has more than 65,000 tons of spent nuclear fuel stored at about 75 operating and shutdown reactor sites around the country. More than 2,000 tons are being produced each year. The Department of Energy (DOE) also is storing an additional 2,500 tons of spent fuel and large volumes of high-level nuclear waste, mostly from past weapons programs, at a handful of government-owned sites.

The Blue Ribbon Commission's Final Report noted that the Obama Administration's 2009 decision to halt work on a repository at Yucca Mountain in Nevada is the latest indicator of a nuclear waste management policy that has been troubled for decades and has now reached an impasse. Allowing that impasse to continue is not an option, the report said. "The need for a new strategy is urgent, not just to address these damages and costs but because this generation has a fundamental, ethical obligation to avoid burdening future generations with the entire task of finding a safe, permanent solution for managing hazardous nuclear materials they had no part in creating," the Commission wrote in the report's Executive Summary.

The strategy outlined in the Commission report contains three crucial elements. First, the Commission recommends a consent-based approach to siting future nuclear waste storage and disposal facilities, noting that trying to force such facilities on unwilling states, tribes and communities has not worked.
Second, the Commission recommends that the responsibility for the nation's nuclear waste management program be transferred to a new organization; one that is independent of the DOE and dedicated solely to assuring the safe storage and ultimate disposal of spent nuclear waste fuel and highlevel radioactive waste.
Third, the Commission recommends changing the manner in which fees being paid into the Nuclear Waste Fund – about US$750 million a year – are treated in the federal budget to ensure they are being set aside and used as Congress initially intended.

The report also recommends immediate efforts to commence development of at least one geologic
disposal facility and at least one consolidated storage facility, as well as efforts to prepare for the
eventual large-scale transport of spent nuclear fuel and high-level waste from current storage sites to those facilities.
The report also recommends the U.S. continue to provide support for nuclear energy innovation and workforce development, as well as strengthening its international leadership role in efforts to address safety, waste management, non-proliferation and security concerns.
This is a bit curious recommendation because only two lines further down in the official Commission's press release it is stated: "The Commission noted that it was specifically not tasked with rendering any opinion on the suitability of Yucca Mountain, proposing any specific site for a waste management facility, *or offering any opinion on the role of nuclear power in the nation's energy supply mix.*" (emphasis WISE)

Criticism
Logically there is a lot of criticism on the Blue Ribbon Commission from the start and only two days before the publication of the final report, 88 national, regional and local environmental organizations, and more than 5,400 individuals, sent a letter to Energy Secretary Steven Chu
urging him to reject the upcoming recommendation from the Commission that would encourage establishment of an "interim" radioactive waste storage dump and begin the transportation of high-level radioactive waste across the U.S. The letter was initiated by organizations representing communities around permanently closed reactor sites. The Commission's draft report

cites these closed reactors, which are still storing their waste on their sites, as the reason that an "interim" storage site should be established immediately.

As the letter states, such a program runs exactly counter to the interests of these communities, "The Commission you appointed is claiming that it is acting in the interest of communities such as ours where closed nuclear power reactors are located, when in fact the Commission's recommendations are in opposition to our number one priority: isolation of radioactivity from our environment for as long as it is a hazard. Centralizing waste storage for purposes of expanded waste production or for reprocessing is contrary to this goal, and is not responsible policy."

Below comments on some of the recommendations of the final report from Arjun Makhijani, Ph.D., President of the Institute for Energy and Environmental Research (IEER).

Military waste:
"It is tragic that the Commission did not substantively address the most pressing radioactive waste contamination threats to precious water resources – for instance hundreds of times the drinking water limit at Hanford, Washington on the banks of the Columbia River. The Commission had a charter to conduct a 'comprehensive' review of the nuclear waste problem, including defense wastes from the nuclear bomb program. Yet, it simply said it did not have the resources to deal with all the problems and punted the nuclear weapons waste issue to Congress while focusing on commercial spent fuel at nuclear reactor sites."
"I am even more dismayed that the Commission suggested that Congress consider the possibility of leaving the defense waste disposal in the purview of the Department of Energy (DOE). The Commission has entirely ignored the immense evidence that DOE's plans for disposal of several types of defense waste pose much greater threats to water resources, most especially at Hanford, than from even Yucca Mountain, a poor repository site."

On reprocessing and breeder reactors:
The commission acknowledges in its report that:
"…no currently available or reasonably foreseeable reactor and fuel cycle technology developments -including advances in reprocess and recycle technologies- have the potential to fundamentally alter the waste management challenge this nation confronts over at least the next several decades, if not longer." (p. 100)

Makhijani: "The Commission did reject some reprocessing advocates' claims by recognizing that it will not eliminate the need for a repository and that no form of reprocessing is economical today. But it left the door open for reprocessing existing spent fuel at some future date. Reprocessing spent fuel from existing reactors will multiply risks and costs. There is simply no economic or technical case for that, and the Commission was provided with ample evidence to that effect. Even if the chosen path is breeder reactors, it would be technically better and economically far superior to use the half million tons of depleted uranium that already exist, enough to fuel a U.S. reactor fleet at the present size for 5,000 years. The Commission unfortunately chose to ignore these facts."

"To its credit the Commission did recognize that reprocessing is not an answer to the waste management problem (as indicated by quote above) and that use of plutonium fuel creates an 'increased proliferation risk' (p. 105) both as currently practiced in France and as it might in the future be practiced with breeder reactors."

"Despite having been presented with ample evidence of the failure of the sodium-cooled fast neutron reactor program – US$100 billion has been spent worldwide on the technology and yet it is nowhere near commercial – the BRC is suggesting more of the same. This is unwarranted when there are so many renewable energy options that are far closer to reality and far safer."

On spent fuel storage:
Makhijani: "The Commission used the Fukushima tragedy to punt on the question of hardened dry rather than wet storage of spent fuel at reactor sites. The National Academies had already concluded well before Fukushima that dry storage was safer; Fukushima has only made the risks of wet storage clearer. Nothing we learn from it will indicate that wet storage is safer than dry storage. Yet, the Commission, citing lessons yet to be learned from Fukushima called for yet another study instead of hardened on-site dry storage that has been urged by dozens of organizations."

"IEER calls on the Administration and Congress to mandate that all spent fuel aged more than five years be moved to hardened dry storage on site, and the remaining spent fuel kept in low-density storage in reactor pools. Nuclear Waste Fund monies should be used for on-site hardened dry storage."

On siting:
Makhijani: "The Commission made real progress in pointing out that the top-down approach by which Congress simply mandated characterization of a single site – Yucca Mountain, Nevada – had failed. It recommended a "consent-based" process that would give some regulatory muscle to state, local, and tribal governments. This is a far better approach, even if it is likely to be slower at the start, as the Commission pointed out. Yet the consent-based process must be preceded by a prolonged scientific effort before siting begins."

Makhijani: "The site is only one of three elements in geologic isolation – the others are engineered barriers and repository sealing approaches. The three elements must work together. *There should be at least ten years of research on this problem before site selection begins.* Without that the risk of environmental injustice, in a consent-based process is substantial."

Makhijani: "I am dismayed that the Commission saw fit to recommend that DOE have a large upfront role in both the next steps for repository program, "including R&D on geological media" (p. 118) and for the Interim Storage site before a new organization is put in place to take over the responsibility. DOE was in large part responsible for the mess the program is in now, which began well before Congress cut off the process in 1987, pointing to Yucca Mountain alone. On the one hand the Commission has cautioned against haste; on the other hand, it has encouraged haste in a really ill-advised way by recommending a continuing DOE role in critical activities better left to an independent agency."

Voices heard, but disregarded
"Since Secretary Chu appointed the Blue Ribbon Commission in 2010, concerned citizens living in communities impacted by radioactive waste from across the United States have participated in the BRC meetings, sent comments, and supported experts to participate," said Mary Olson of the Radioactive Waste Project of Nuclear Information and Resource Service. "Our voices have been heard, but disregarded. This comes as no surprise since a majority of the Commissioners are

individuals who have made, or supported the making of, the radioactive waste in question over the course of their careers. Of course they want to move it -they want to make more."

The Blue Ribbon Commission on America's Nuclear Future does include several members who are not directly tied to the nuclear industry, but a controlling share of the seats are held by individuals who, at one time or another, have had primary decision-making authority, or whohave personally profited from commercial nuclear technology.

Sources: NIRS News, 25 January 2012 / Blue Ribbon Commission press release, 27 January 2012 / IEER response to BRC, 27 January 2012
Contact: Mary Olson at NIRS

IN BRIEF

China denies nuclear accident reports. China has denied reports that it was forced to shut down its newest nuclear reactor last year after an incident. A report from Japan's Atomic Energy Agency said the China Experimental Fast Reactor (CEFR) stopped generating electricity in October following an accident. The incident sparked alarm in Japan and South Korea over the prospect of radiation leaking from the CEFR. According to a Tokyo newspaper, which cited the Japanese Atomic Energy Agency's investigation, those fears were intensified by Beijing's failure to report the accident or release details of what happened. But Wan Gang, the director of the China Institute of Atomic Energy (CIAE), denied there had been an accident or any cover-up and also refuted the allegations of poor safety. "CEFR hasn't been operating since July last year so reports that an accident occurred in the autumn are extremely inconsistent with the facts," Gang told Chinese media. But that again, is not in line with reports sofar. On July 21, 2011, exactly one year after achieving first criticality, the head of China National Nuclear Corporation (CNNC), Sun Qin, declared that the unit had successfully achieved grid connection.
CEFR is a fourth-generation reactor and China's first fast reactor. The sodium-cooled, pool-type fast reactor has been constructed with some Russian assistance at the China Institute of Atomic Energy (CIEA), near Beijing, which undertakes fundamental research on nuclear science and technology. The reactor has a thermal capacity of 65 MW and can produce 20 MW in electrical power.
World Nuclear News, 21 July 2011 / Telegraph (UK), 27 January 2012 / NewsTrackIndia.com, 28 January 2012

Germany: site selection HLW repository after 2019. Under a new plan, agreed on by the national government and federal states, the Gorleben salt dome in Lower Saxony would be a reference site for the site selection of a spent fuel disposal facility. The plan does not rule out using Gorleben but also says no decision has been made to use the site. The scientific study of the site, Germany's only existing candidate for a high-level nuclear waste repository, was halted under a moratorium 2000. The moratorium was lifted 2010 years after the Federal Office for Radiation Protection, or Bfs, filed an application to resume studies and prolong Gorleben's operating license through September 2020.
Under the new plan, the first step will be the development of the legal and regulatory framework which is scheduled to be completed in mid-2012. The plan calls for development of safety requirements and determination of what types of geologic formations might be used for waste disposal, between mid-2012 and mid-2013. They could include salt domes and mines, clay and crystalline rock, according to the plan. Hydrological parameters will also be set. By mid-2013, the German parliament is scheduled to put the criteria into a federal law governing repository development. The authorities involved in site selection will have until mid-2014 to identify potential sites and until the end of 2014 to select candidate sites. Surface studies are planned through the end of 2019. After that, underground studies will be done and a site will be chosen, although the plan does not specify a date for that decision. Construction and commissioning approvals are to be issued after 2019.
Nuclear Fuel, 26 December 2012

Africans and the Global Uranium Trade. Uranium from Africa has long been a major source of fuel for nuclear power and atomic weapons, including the bomb dropped on Hiroshima. In 2002, George W. Bush claimed that Saddam Hussein had "sought significant quantities of uranium from Africa" (later specified as the infamous "yellowcake from Niger"). Africa suddenly became notorious as a source of uranium, a component of nuclear weapons. But did that admit Niger, or any of Africa's other uranium-producing countries, to the select society of nuclear states? Does uranium itself count as a nuclear thing? In this book, Gabrielle Hecht lucidly probes the question of what it means for something--a state, an object, an industry, a workplace--to be "nuclear." Hecht shows that questions about being nuclear--a state that she calls "nuclearity"--lie at the heart of today's global nuclear order and the relationships between "developing nations" (often former colonies) and "nuclear powers" (often former colonizers). Nuclearity, she says, is not a straightforward scientific classification but a contested technopolitical one.
Hecht follows uranium's path out of Africa and describes the invention of the global uranium market. She then enters African nuclear worlds, focusing on miners and the occupational hazard of radiation exposure. Could a mine be a nuclear workplace if (as in some South African mines) its radiation levels went undetected and unmeasured? With this book, Hecht is the first to put Africa in the nuclear world, and the nuclear world in Africa. Doing so, she remakes our understanding of the nuclear age.
Gabrielle Hecht is Professor of History at the University of Michigan. She is the author of The Radiance of France: Nuclear Power and National Identity after World War II and editor of Entangled Geographies: Empire and Technopolitics in the Global Cold War, both published by the MIT Press. Hardcover: 440 pages, published by MIT Press (expected on 2 March, 2012). ISBN: 978-0262017268

'Worst scenario' on Fukushima crisis kept under wraps. Japan's nuclear disaster minister Goshi Hosono has said 'the worst scenario' on development of the nuclear crisis at the Fukushima complex, which was compiled two weeks after the crisis began, was shared only by a few lawmakers, including then Prime Minister Naoto Kan, due to fears it might cause confusion among the public. "The scenario was not a possibility in fact. If it had been made public at that time, it was likely that no one would have remained in Tokyo," Hosono was quoted as saying by Kyodo News. "It would have caused trouble regarding the government's handling of the nuclear crisis," he said. Asian Age, 30 January 2012

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.

Receiving the WISE/NIRS Nuclear Monitor

US and Canada based readers should contact NIRS for details of how to receive the Nuclear Monitor (address see page 11). Others receive the Nuclear Monitor through WISE Amsterdam.
For individuals and NGOs we ask a minimum annual donation of 100 Euros (50 Euros for the email version). Institutions and industry should contact us for details of subscription prices.

WISE AMSTERDAM/NIRS

ISSN: 1570-4629

Editor: Dirk Bannink

With contributions of Michael Mariotte, WECF, Energy Fair and Laka Foundation

Next issue (Nuclear Monitor 742) will be mailed out February 17, 2012

WISE/NIRS offices and relays

WISE Amsterdam
P.O. Box 59636
1040 LC Amsterdam
The Netherlands
Tel: +31 20 612 6368
Fax: +31 20 689 2179
Email: wiseamster@antenna.nl
Web: www.antenna.nl/wise

NIRS
6930 Carroll Avenue, Suite 340
Takoma Park, MD 20912
Tel: +1 301-270-NIRS
(+1 301-270-6477)
Fax: +1 301-270-4291
Email: nirsnet@nirs.org
Web: www.nirs.org

NIRS Southeast
P.O. Box 7586
Asheville, NC 28802
USA
Tel: +1 828 675 1792
Email: nirs@main.nc.us

WISE Argentina
c/o Taller Ecologista
CC 441
2000 Rosario
Argentina
Email: wiseros@ciudad.com.ar
Web: www.taller.org.ar

WISE Austria
c/o Plattform gegen Atomgefahr
Roland Egger
Landstrasse 31
4020 Linz

Austria
Tel: +43 732 774275; +43 664 2416806
Fax: +43 732 785602
Email: post@atomstopp.at
Web: www.atomstopp.com

WISE Czech Republic
c/o Jan Beranek
Chytalky 24
594 55 Dolni Loucky
Czech Republic
Tel: +420 604 207305
Email: wisebrno@ecn.cz
Web: www.wisebrno.cz

WISE India
42/27 Esankai Mani Veethy
Prakkai Road Jn.
Nagercoil 629 002, Tamil Nadu
India
Email: drspudayakumar@yahoo.com;

WISE Japan
P.O. Box 1, Konan Post Office
Hiroshima City 739-1491
Japan

WISE Russia
Moskovsky prospekt 120-34
236006 Kaliningrad
Russia
Tel/fax: +7 903 299 75 84
Email: ecodefense@rambler.ru
Web: www.anti-atom.ru

WISE Slovakia
c/o SZOPK Sirius
Katarina Bartovicova
Godrova 3/b
811 06 Bratislava
Slovak Republic
Tel: +421 905 935353
Email: wise@wise.sk
Web: www.wise.sk

WISE South Africa
c/o Earthlife Africa Cape Town
Maya Aberman
po Box 176
Observatory 7935
Cape Town
South Africa
Tel: + 27 21 447 4912
Fax: + 27 21 447 4912
Email: coordinator@earthlife-ct.org.za
Web: www.earthlife-ct.org.za

WISE Sweden
c/o FMKK
Tegelviksgatan 40
116 41 Stockholm
Sweden
Tel: +46 8 84 1490
Fax: +46 8 84 5181
Email: info@folkkampanjen.se
Web: www.folkkampanjen.se

WISE Ukraine
P.O. Box 73
Rivne-33023
Ukraine
Tel/fax: +380 362 237024
Email: ecoclub@ukrwest.net
Web: www.atominfo.org.ua

WISE Uranium
Peter Diehl
Am Schwedenteich 4
01477 Arnsdorf
Germany
Tel: +49 35200 20737
Email: uranium@t-online.de
Web: www.wise-uranium.org

WISE/NIRS NUCLEAR MONITOR

c/o WISE Amsterdam
PO Box 59636
1040 LC Amsterdam
Netherlands

PRINTED MATTER
MATIERE IMPRIME

TPG Post
Port betaald