

NUCLEAR MONITOR

December 13, 2013 | No. 775

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

Editorial

Dear readers of the WISE/NIRS Nuclear Monitor,

In this issue of the Monitor:

- Michael Mariotte from the Nuclear Information and Resource Service explains the complicated nuclear waste saga in the US;
- Dr David Lowry writes about French involvement in Iran's nuclear program, accusing France of "breathtaking hypocrisy" and noting that "it would be funny if it wasn't so serious";
- we have several articles about nuclear security concerns, covering Pakistan, the US, and cyber-security; and
- we update the situation in Japan, and summarize some recent books dealing with Fukushima.

The Nuclear News section includes reports on major uranium mine spills in Namibia and Australia, and the declining fortunes of nuclear power in the OECD, Brazil, South Africa and Germany.

This is the last issue of the Nuclear Monitor for 2013 – a horrendous year for the nuclear power and uranium mining industries. We'd be grateful for any feedback you have on the 19 issues produced this year (after getting off to a late start in March). We're thick-skinned so feel free to share with us your thoughts on our coverage (or lack of coverage) of particular issues.

Regards from the editorial team.
Email: monitor@wiseinternational.org

Radioactive waste in the US: A multi-pronged issue

Author: Michael Mariotte – Nuclear Information and Resource Service
Web: www.nirs.org
Email: nirsnet@nirs.org

775.4373 The unprecedented wave of operating reactor shutdowns and new reactor cancellations have received most of the attention during 2013, but issues surrounding radioactive waste in the US have intensified and are poised for significant activity during the coming year.

Indeed, there is so much critical action over nuclear waste occurring simultaneously it can be difficult to keep track of what is happening where and when, and how the venues and issues overlap. So here's a handy guide to current events and what to expect when and where.

Monitored this issue:

Radioactive waste in the US: A multi-pronged issue	1
The French links with Iran's nuclear project	4
– Dr David Lowry	
Pakistan: nuclear security concerns	5
Nuclear cyber-security	6
USA: nuclear security lapses	7
Fukushima Fallout: Updates from Japan	8
Fukushima books	10
NUCLEAR NEWS	12
– Namibia: Leach tank failure	
– Australia: Major spill at Ranger	
– British bomb factory "played down" seriousness of fire	
– World Bank says no money for nukes, Goldman Sachs to sell uranium unit	
– Nuclear decline in OECD	
– Brazil cools on nuclear power plans; favours wind	
– Switzerland can reach 98% renewable electricity	
– South Africa puts nuclear on hold ... again	
– Germany's 'Grand Coalition' committed to nuclear phase-out	
– France: Nuclear power to stay	
– South Korea: Nuclear power policy	



Yucca Mountain

On November 18, the US Nuclear Regulatory Commission (NRC) directed its staff to resume work on the safety evaluation report for the proposed Yucca Mountain repository, 150 kms from Las Vegas on sacred Western Shoshone Indian Nation treaty lands. The NRC suspended work on reviewing the Department of Energy's (DoE) application to proceed with the Yucca repository following a 2009 decision by the Obama administration to abandon the project. The NRC order comes in response to a 2-1 decision at the DC Appeals Court in August ordering the NRC to resume the Yucca licensing process, so long as funds remain in its coffers to do so.

But with only US\$11 million it has for that purpose – far short of what a full evaluation would require – the process can't go far without additional appropriations from Congress. And as long as dedicated Yucca opponent Sen. Harry Reid (D-Nev.) remains Senate Majority Leader, no more funding from Congress is likely to materialise. Thus the practical effects of the NRC's order and court decision seem extremely limited.

But the dim prospects for resuming work at Yucca haven't deterred some in the nuclear industry, and more importantly some powerful House Republicans, who are still determined to see the site opened over the objections of Reid and the Administration. Their only hope, however, is that they can somehow put together pro-Yucca legislation that can pass both houses of Congress – somehow getting through Reid – with a veto-proof margin. As unlikely as that scenario is, we can expect to see movement on a pro-Yucca bill beginning in the House Energy and Commerce Committee during 2014, if for no other reason than to encourage nuclear industry campaign contributions to Republican House candidates.

Nuclear Waste Fund

Under 1982 legislation, the DoE was legally obliged to begin taking irradiated nuclear fuel from utilities for disposal in a permanent repository beginning in 1998. With no permanent repository available nor even on the horizon, the US government has been unable to

meet its obligations despite collecting a levy from utilities to pay for spent fuel management.

On November 19, a DC Appeals Court ruling directed the DoE to stop collecting these Nuclear Waste Fund fees. Since the enactment of the Nuclear Waste Policy Act 30 years ago, DoE has collected some US\$30 billion, of which about US\$8 billion was spent studying the Yucca site and building initial infrastructure.

In a related matter, on November 14, a court awarded over US\$235 million in damages to three utilities known as the Yankee Companies affected by federal failure to fulfill the high-level radioactive waste disposal commitments mandated by Congress. All three of the utilities' reactors have been decommissioned, but the failure of the federal government to remove spent fuel has forced the utilities to continue to store the materials on site.

But despite being upset by the DoE being forced to dispense millions – and potentially many billions – of federal dollars to nuclear utilities by its failure to establish a permanent disposal site (the "damages" which, of course, were caused by Congress' unrealistic 1998 mandate in the first place), many in Congress have been eyeing the Nuclear Waste Fund as a source of money for their own pet waste projects, such as establishing "consolidated interim storage" waste sites and a new separate agency to handle the radioactive waste issue.

US Senate action on radioactive waste

The Senate Energy Committee, chaired by Sen. Ron Wyden (D-Ore.) has scheduled a mark-up session and potential vote on S. 1240, a bill to incorporate some of the recommendations of the DoE's 'Blue Ribbon Commission' (brc.gov), which issued its final report on the waste issue in January 2012. The session was originally planned for December 19, 2013, but was cancelled without explanation and is now tentatively set for an unknown January 2014 date.

The most controversial part of the legislation is its de-emphasis of establishing a permanent radioactive waste disposal

site – putting off that task until later – and instead supporting establishment of one or more "interim" storage sites. That approach would require the near-term initiation of widespread transportation of high-level radioactive waste not just once – to a permanent site – but at least twice, and perhaps even more. Critics like the Nuclear Information and Resource Service (NIRS) dubbed a similar legislative effort in the 1990s a 'Mobile Chernobyl' and successfully blocked it with the help of a veto from President Clinton.

This time around – before even one word has been written in the mainstream media about the waste transport – in November NIRS presented the Senate Energy Committee with a petition signed by more than 42,000 people opposing the bill and 'interim' storage generally.

Besides the transportation issue – and about 100 million Americans live within a mile or so of the only available transport routes no matter where an interim site(s) might be located – there is legitimate concern that an "interim" site would become a de facto permanent facility with none of the regulatory safeguards that would be required of a permanent site.

The bill also attempts to address the issue of 'consent' by establishing a new framework for a local or regional jurisdiction that 'volunteers' to host such a facility to demonstrate public support for that position.

Environmentalists have been pushing Committee members not only to drop the interim storage concept, but also to require that utilities move existing radioactive waste from fuel pools to hardened on-site dry cask storage facilities as quickly as possible.

According to Senate sources, significant portions of S.1240 were being rewritten from the bill introduced during the Spring prior to the markup. Should the bill pass the Committee, which is by no means certain since it is as yet unclear whether the re-write is intended to improve the bill itself or improve its chances of passage (and the two are vastly different goals), its future remains cloudy.

Since as currently written, it does not include any Yucca-related language, it seems possible that Sen. Reid would allow it to come for a floor vote in 2014. But that prospect becomes unlikelier if Reid perceives that it might spur the House to act on pro-Yucca legislation that could allow the two competing bills to come together for a conference committee.

Nuclear Regulatory Commission

Meanwhile, yet another federal court decision, this one from the summer of 2012, has brought the NRC headlong into another aspect of the radioactive waste issue. That decision threw out the agency's "waste confidence" determination: a rule that provided the underpinning for the NRC's ability to license nuclear reactors.

That rule basically said the NRC had confidence that a waste repository would be built and that the interim storage measures used today (fuel pools and dry casks) would be safe until the repository was open. But the court ruled that with the abandonment of the Yucca Mountain project and no new proposal in site, the agency could no longer assume a permanent site will ever be built. Moreover, the court said that the NRC had no technical basis for its assertion that fuel pools and dry casks are acceptably safe for an indefinite, and potentially very long-

term, future. The court's ruling forced the NRC to institute a moratorium on issuing licenses for new reactor construction as well as license renewals for existing reactors. The moratorium cannot be lifted until the issue is resolved.

The NRC responded with a quickly-done, several hundred page Generic Draft Environmental Impact Statement that boils down to a simple assertion: the likelihood of a fuel pool or dry cask accident is so low the agency doesn't have to worry about it.

The NRC this Fall then held a 12-city road show to try to sell the public on this document; many of the meetings were packed with anti-nuclear activists who appeared distinctly unsold on the concept. Interest has been high: the NRC is accepting written public comment on the document through December 20; nearly 9,500 comments to the NRC have gone through a NIRS action page on the issue (<http://tinyurl.com/nirs-action>), by far the most public comments to an agency that ever have gone through a NIRS page.

The NRC hopes to issue a final document this Spring and resume licensing by the Fall of 2014 but, given the flawed nature of its approach, new lawsuits against it are inevitable.

In a related issue, on November 18 the NRC staff issued a separate document

that concluded that expedited transfer to dry cask storage would provide only a minor or limited safety benefit – in direct contradiction to environmentalists' position on S. 1240 – as well as an attempt to bolster support for its waste confidence position. Senator Edward Markey (D-Mass.) called the NRC memo "biased, inaccurate and at odds with the conclusions of other scientific experts – including those expressed in a peer-reviewed article that was co-authored" by current NRC Chair Allison Macfarlane in 2003 and a separate study completed by the National Academy of Sciences in 2004.

Sources:

- www.nirs.org/radwaste/wasteconfidence.htm
- www.world-nuclear-news.org/WR-Reviving-Yucca-Mountain-1911137.html
- www.beyondnuclear.org/radioactive-waste-whatsnew/2013/11/20/court-rulings-revive-yucca-dump-licensing-proceeding-end-col.html
- www.nationaljournal.com/global-security-newswire/legal-battle-against-rule-crucial-to-all-u-s-reactor-licenses-rages-on-20131127
- www.nytimes.com/2013/11/20/us/energy-dept-is-told-to-stop-collecting-fee-for-nuclear-waste-disposal.html
- www.nti.org/gsn/article/nrc-staff-rejects-concerns-about-nuclear-reactor-vulnerability-terrorism/

The French links with Iran's nuclear project

Author: *Dr David Lowry – independent research consultant, former director of the European Proliferation Information Centre*

Web: www.drdaavidlowry.blogspot.co.uk

Email: drdaavidlowry@hotmail.com

775.4374 November 29 – Among the reasons the Geneva talks on Iran's nuclear program had to be reconvened last week was that France objected to the deal being closed off earlier. The French objections were over Tehran's contested plutonium production plant at Arak, but whatever doubts they might have over Arak, they seem to be sanguine about Iran's involvement in uranium enrichment.

Indeed, they are in industrial partnership with the Iranians in this technology and have been for four decades since the agreement was initiated by the Shah in 1975. Oddly, this deal never gets reported in the context of the Iran nuclear negotiations. Is there any good reason why not?

The origins of the deal illustrate the dangers of international nuclear collaboration. A joint-stock uranium enrichment Eurodif (European gaseous diffusion uranium enrichment) consortium was formed in 1973, with France, Belgium, Spain and Sweden the original shareholders. In 1975 Sweden's 10% share in Eurodif was sold to Iran.

The French government subsidiary company Cogema (now Areva) and the then Iranian government established the spin-out Sofidif (Société Franco-Iranienne pour l'enrichissement de l'uranium par diffusion gazeuse) with 60% and 40% shares, respectively. In turn, Sofidif acquired a 25% share in Eurodif, which gave Iran its 10% share

of Eurodif.

The former Shah of Iran, Mohammad Reza Pahlavi, lent US\$1 billion (and another US\$180 million in 1977) for the construction of the Eurodif factory to have the right to buy 10% of the site's production.

Although Iran's active involvement in Eurodif was halted following the 1979 Iranian revolution, Iran has retained its active involvement in Sofidif, headquartered in Rue La Fayette in Paris, to the present day.

Its current annual report is audited by KPMG. Dr Ali Daei of the Atomic Energy Organisation of Iran was appointed Iran's new permanent representative to Sofidif as recently as September 25 last year.

Iran's stake in Eurodif was exposed in a report written by Paris-based German nuclear expert Mycle Schneider for the Greens and the European Free Alliance in the European Parliament.

Four years ago, on October 1 2009, an earlier preliminary atomic agreement with Iran was reached involving the UN nuclear watchdog body, the International Atomic Energy Agency (IAEA), under which it was agreed to transfer three quarters of Iran's low-enriched uranium abroad.

In return, the West agreed to supply Iran with fuel for the Tehran Research

Reactor, which came online in 1967 and which produces medical isotopes for tests for around one million patients in Iran.

When Argentina, which had previously supplied the fuel for the Tehran Research Reactor, indicated it was unwilling to do so again, it prompted Iran to ask the IAEA for help.

It turned out that France was to play a critical role in resolving the impasse over enriched uranium fuel for the reactor.

Although in principle Iran's Natanz uranium enrichment plant – officially declared to the IAEA in February 2003 – could have enriched the low-enriched uranium to the level needed for the reactor to operate, the main "uranium yellowcake" feedstock for enrichment, the uranium conversion facility in Esfahan, had been contaminated. France had both the know-how and willingness to help clean up the contaminated fuel.

Fast forward to November 2013. France, as a nuclear technology supplier to Iran, ganging up on its customer client with the other self-appointed five permanent members of the UN security council plus Germany, is guilty of breathtaking hypocrisy. It would be funny if it wasn't so serious.

Reprinted from the Morning Star, www.morningstaronline.co.uk/a-8340-The-French-links-with-Irans-nuclear-project

Pakistan: nuclear security concerns

In the latest unrest at Niger's uranium mines, one person was killed and 14 wounded in a car bomb attack at Areva's uranium mine

775.4375 In September, documents leaked by former US National Security Agency contractor Edward Snowden revealed that keeping tabs on the security of Pakistan's nuclear, chemical and biological facilities was consuming a growing share of the budgets of US intelligence agencies.[1]

"Knowledge of the security of Pakistan's nuclear weapons and associated material encompassed one of the most critical set of ... intelligence gaps," according to a leaked budget document, and this lack of information is especially troubling in light of "the political instability, terrorist threat and expanding inventory [of Pakistan's nuclear weapons]."[2]

US agencies are concentrating on two possibilities: the chance that nuclear sites in Pakistan could be assaulted by local extremist groups, and that radical militants could infiltrate the military or intelligence agencies, giving them a better position to gain access to nuclear materials or to mount an insider attack.[2]

Another concern is that Pakistan's recent focus on developing compact lower-yield nuclear weapons might make it easier for extremists groups to steal an entire warhead.[1]

In September 2012, former nuclear weapons developer and proliferator A.Q. Khan said he was directed by Pakistan's now-deceased prime minister Benazir Bhutto to sell sensitive technology to two foreign nations, undermining the view that he was a rogue operator. Khan's claim was quickly denied by the governing Pakistan People's Party.[3]

In January 2012, a Pakistani national living in the US received a three-year prison sentence for plotting to provide Pakistan with technology and substances with atomic uses in violation of US nonproliferation controls. Nadeem Akhtar was charged with attempting to export radiation sensors, calibration equipment, specialised resins, attenuators and surface refining materials. Akhtar admitted receiving directions from a trading firm in Karachi, which received its directions from persons or entities within the Pakistani government. Some of the technology may have been destined for Pakistan's Khushab complex, where plutonium is produced.[4]

In 2010, documents released by Wikileaks revealed numerous concerns about nuclear security in Pakistan. "Despite pending economic catastrophe, Pakistan is producing nuclear weapons at a faster rate than any other country in the world," a December 2008 US intelligence document prepared for NATO noted. A White House strategy meeting in 2009 addressed potential threats to the Pakistani nuclear arsenal in great detail. "Why is it that we're trying to prevent the Pakistani government from collapsing?" one official said. "Because we fundamentally believe that we cannot afford a country with 80 to 100 nuclear weapons becoming the Congo." [5]

Recently declassified US documents show that the Reagan administration put Cold War considerations above nonproliferation concerns in the late 1980s when it decided to continue providing foreign aid to Pakistan even after the discovery of a nuclear-technology

smuggling operation. Proposals from arms control officials to punish Islamabad by ending US\$4 billion in annual economic and military aid were rejected because of Islamabad's support for Afghan forces fighting the Soviet Union. [6]

References:

- [1] 24 Oct 2013, 'Obama Says He is Confident About Pakistani Nuclear Security', www.nti.org/gsn/article/obama-says-he-confident-about-pakistani-nuclear-security/
- [2] 3 Sept 2013, 'U.S. Concerned About Pakistani Nuke Security, Secret Budget Reveals', www.nti.org/gsn/article/us-has-heightened-monitoring-pakistani-uke-bio-and-chem-sites-leaked-document-shows/
- [3] 17 Sept 2013, 'Khan Says Pakistani Nuke Tech Sold on Bhutto's Orders; Party Denies Claim', www.nti.org/gsn/article/k-khan-claims-he-sold-uke-tech-former-leaders-orders-ruling-party-denies-assertion/
- [4] 9 Jan 2012, 'Man Gets 3 Years For Plotting to Send U.S. Nuke-Related Goods to Pakistan', www.nti.org/gsn/article/maryland-man-gets-3-years-plotting-export-uke-related-goods-pakistan/
- [5] 1 Dec 2010, 'Leaked Memos Reveal Further Concerns on Pakistani Nukes', www.nti.org/gsn/article/leaked-memos-reveal-further-concerns-on-pakistani-nukes/
- [6] 26 Nov 2013, 'U.S. Ignored Attempted Pakistani Nuclear Smuggling in 1980s: Records', www.nti.org/gsn/article/us-decided-1980s-ignore-apparent-nuclear-smuggling-pakistan-documents/

Nuclear cyber-security

775.4376 IAEA computers infected. The International Atomic Energy Agency said on October 22 that in recent months malware had contaminated some of its computers but no sensitive data had been impacted. The infected computers are located at the Vienna International Centre.[1] This is not the first time the IAEA has been the target of cyber-attacks. A hacker website in 2012 published the contact information for IAEA experts that it had illicitly copied from a former IAEA computer server. The hackers were calling for an international investigation of Israel's atomic program.[2]

Stuxnet attack on Iran was more dangerous than previously thought. The Stuxnet virus that ravaged Iran's Natanz nuclear facility "was far more dangerous than the cyberweapon that is now lodged in the public's imagination," security expert Ralph Langner writes in Foreign Policy.[3,4] Stuxnet, a joint US-Israel project, is known for reportedly destroying roughly a fifth of Iran's nuclear centrifuges by causing them to spin out of control.

Langner states that Stuxnet – which was delivered into Natanz through a worker's thumb drive – also increased the pressure on spinning centrifuges while showing the control room that everything appeared normal by replaying recordings of the plant's protection system values while the attack occurred. The intended effect was not destroying centrifuges, but "reducing lifetime of Iran's centrifuges and making the Iranians' fancy control systems appear beyond their understanding," Langer writes.

Only after years of undetected infiltration did the US and Israel unleash the second variation to attack the centrifuges themselves and self-replicate to all sorts of computers. The first version was only detected with knowledge of the second. So while the second Stux-

net is considered the first cyber act of force, the new details reveal that the impact of the first virus will be much greater.

Langner writes: "The sober reality is that at a global scale, pretty much every single industrial or military facility that uses industrial control systems at some scale is dependent on its network of contractors, many of which are very good at narrowly defined engineering tasks, but lousy at cybersecurity."

In October, Jofi Joseph, a former White House national security aide, accused Ben Rhodes, the deputy national security advisor for communications, of leaking classified information about Stuxnet to the media. Joseph had earlier been fired after it came to light that he was behind the Twitter account @NatSecWonk.[5]

Stuxnet in Russia? Security firm Kaspersky has claimed that Stuxnet "badly infected" the internal network of an unnamed Russian nuclear plant after it caused chaos in Iran's nuclear facilities. Kaspersky CEO Eugene Kaspersky said a staffer at the unnamed Russian nuclear plant informed him of the infection.[6] When asked about Kaspersky's comments about the infection of one or more nuclear plants in Russia, security experts from FireEye and F-Secure said the nature of Stuxnet means it is likely that numerous power plants outside of Russia and Iran have fallen victim to the malware.[7]

Stuxnet in space? Security firm Kaspersky also claims that Stuxnet infected the International Space Station after being installed through a USB stick carried on board by a Russian cosmonaut. He did not provide details or elaborate on how the virus affected operations.[8]

New variant of Stuxnet. The Israeli and Saudi Arabian governments are working to create a new, more destructive

variant of Stuxnet, according to Iranian news outlet Farsnews. Farsnews reported that an unnamed source with links inside the Saudi Arabian secret service confirmed the news, warning that the two nations plan to use it to further disrupt Iran's nuclear program.[9]

References:

- [1] <http://uk.reuters.com/article/2013/10/22/uk-nuclear-iaea-malware-idUKBRE99L08Q20131022>
- [2] www.nti.org/gsn/article/computer-attackers-release-iaea-contact-data/
- [3] Ralph Langner, 19 Nov 2013, 'Stuxnet's Secret Twin', www.foreignpolicy.com/articles/2013/11/19/stuxnets_secret_twin_iran_nukes_cyber_attack
- [4] Michael Kelley, Nov 2013, 'Stuxnet Attack On Iran's Nuclear Plant Was 'Far More Dangerous' Than Previously Thought', www.businessinsider.com.au/stuxnet-was-far-more-dangerous-than-previous-thought-2013-11
- [5] Allie Jones, 24 Oct 2013, 'Fired White House Tweeter Accused Ben Rhodes of Leaking Stuxnet', www.nti.org/gsn/article/hagel-nato-must-do-more-deal-cyber-attacks/
- [6] Lee Bell, 11 Nov 2013, 'Kaspersky claims Stuxnet infected a Russian nuclear plant', www.theinquirer.net/inquirer/news/2306151/kaspersky-claims-stuxnet-infected-a-russian-nuclear-plant
- [7] Alastair Stevenson, Nov 2013, 'Stuxnet: UK and US nuclear plants at risk as malware spreads outside Russia', www.v3.co.uk/v3-uk/news/2306181/stuxnet-uk-and-us-nuclear-plants-at-risk-as-malware-spreads-outside-russia
- [8] Connor Simpson, 11 Nov 2013, 'Russian Cosmonauts Occasionally Infect the ISS with Malware', www.thewire.com/global/2013/11/russian-cosmonaut-accidentally-infected-iss-stuxnet/71470/
- [9] 3 Dec 2013, www.v3.co.uk/v3-uk/news/2316605/governments-preparing-stuxnet-20-malware-for-nuclear-strike

USA: nuclear security lapses

775.4377 These news items draw heavily on resources produced by the Nuclear Threat Initiative. You can subscribe to the NTI's daily Global Security Newswire at www.nti.org/get-involved/subscribe

A number of nuclear security problems in the US were discussed in Nuclear Monitor #769, including[1]:

- an Air Force unit that oversees one-third of the US land-based nuclear missiles failed a safety and security inspection;
- in March, the deputy commander of the 91st Missile Wing complained of "rot" in the group after an inspection gave its missile crews the equivalent of a "D" grade on Minuteman 3 launch operations, resulting in the suspension and retraining for 19 officers;
- a B-52 bomber flight over several US states during which the crew was unaware that actual weapons were onboard;
- a US Air Force crew ejected from a B-1 bomber that ran violently aground during a training flight;
- Energy Department personnel pretending to be terrorists reached a substance representing nuclear-weapon fuel after they fought through defenses in an exercise at the Savannah River Site in South Carolina;
- an Inspector General audit found over two dozen files with evidence of incidents involving Nuclear Regulatory Commission staff that should have been reported to NRC security officials, but weren't; and
- foreign visitors allowed "unaccompanied access to numerous buildings" at the Oak Ridge National Laboratory.

Here we summarize some further lapses.

Los Alamos accused of disregarding security during VIP visits. A Los Alamos National Laboratory, New Mexico, employee with responsibility for site security is charging that the facility suspended some safety procedures during VIP visits in 2011, and then retaliated against him after he complained. The employee, Michael Irving, filed a lawsuit in the federal court in October 2013, asserting that he has the right to criticise breaches of security that

impact safety around nuclear weapon materials.[2]

Two plead guilty to communication of classified nuclear weapons data. The US Justice Department announced on June 21 that a scientist and his wife, who both previously worked as contractors at the Los Alamos National Laboratory, have pleaded guilty to charges relating to their communication of classified nuclear weapons data to a person they believed to be a Venezuelan government official.[3] Physicist Leonardo Mascheroni and his wife Marjorie Mascheroni face prison terms. Later reports indicate that Leonardo Mascheroni may withdraw his guilty plea.[4]

Security personnel cheating on tests. More than a year after three peace activists broke into the Y-12 National Security Complex in Tennessee, security continues to pose a "significant management challenge" for the Energy Department, the Inspector General said in a report issued on November 26. The report refers to a number of unspecified "policy issues" that have not been resolved since the July 2012 break-in at the nuclear weapons facility. Responses to the break-in have included employee retraining and follow-up investigations that uncovered other security concerns such as security personnel cheating on tests.[5]

Guard dogs accused of cheating on tests. The Y-12 National Security Complex could be working its guard dogs to exhaustion and skipping steps in their training, raising the risk that intruders or explosives could slip into the facility unnoticed, the Energy Department Inspector General said in a report released in April. "We found that half of the canine teams we observed failed explosive detection tests, many canines failed to respond to at least one of the handler's commands, and that canines did not receive all required training," the report says. Auditors were unable to confirm claims that the guard dog company had cheated on canine proficiency tests, possibly by ordering animals to sit when they failed to do so on their own to signal detection of contraband.[6]

Lost driver enters nuclear weapons complex. An apparently lost driver entered the Y-12 National Security Complex on June 6 and proceeded roughly 3 kms across its restricted grounds before protective forces blocked her progress. The Complex allowed the driver onto the grounds during an early morning surge in employee traffic. Questioning of the driver revealed "there were mental issues involved," an Oak Ridge police officer said, adding that the driver "thought that there must have been a crash because there were nice officers waving her through with illuminated flashlight cones." Seven protection workers and a manager were removed from duty pending the outcome of an investigation.[7]

Air Force to more closely examine candidates for top nuclear posts. The US Air Force Chief of Staff Gen. Mark Welsh said on November 13 that candidates for senior nuclear positions in the service would be subjected to a more rigorous screening process. The decision comes after the Air Force general in charge of intercontinental ballistic missiles was discharged from his position in October due to concerns about his alcohol consumption.[8]

Former Dresden nuclear plant workers banned by NRC. The Nuclear Regulatory Commission issued orders on October 28 prohibiting two former employees of the Dresden Nuclear Power Station in Illinois from participating in nuclear work under its jurisdiction. The incident involved two senior reactor operators who worked at the Dresden plant. One of the men, Michael J. Buhrman, planned to rob an armoured car and recruited the assistance of a colleague, Landon Brittain. The plan was foiled when Buhrman was apprehended following a car-jacking on 9 May 2012. The pair fled the country while free on bail but were recaptured in Venezuela. Dresden personnel who knew about Buhrman's plan to commit an offsite crime failed to report the situation to plant management.[9,10]

US missile officers leave blast doors open while napping. US Air Force officers responsible for launching land-

based nuclear missiles twice violated security policy by leaving blast doors open while napping. The incidents took place in April and May at the Minot Air Force Base, North Dakota, and the Malmstrom Air Force Base, Montana. Two launch crew commanders and two deputies received administrative punishment for the breaches. Officials with personal knowledge of the incidents say that similar transgressions have likely taken place and not been discovered. The Associated Press was alerted to the blast-door violations at Malmstrom by an official who wanted the incidents publicised out of a belief they show just how problematic discipline among ICBM crews has become. [11]

Analysis finds 'burnout' plaguing US nuclear-missile crews. A draft US Air Force-commissioned study found a significant number of personnel who oversee the service's ground-based, nuclear-armed ballistic missiles suffering from "burnout" over what they described as a high-pressure job environment offering few opportunities for advancement. RAND Corp. gathered the findings over three months earlier this year in a bid to explain why the nation's ICBM crews show a high rate

of on- and off-duty misconduct relative to other Air Force personnel.[12]

References:

- [1] 10 Oct 2013, 'US reactors vulnerable to terrorist attack', Nuclear Monitor #769, www.wiseinternational.org/node/4030
- [2] 16 Oct 2013, Los Alamos Accused of Disregarding Security During VIP Visits, www.nti.org/gsn/article/los-alamos-accused-disregarding-security-during-vip-visits/
- [3] US Department of Justice, 21 June 2013, 'Former Workers at Los Alamos National Laboratory Plead Guilty to Atomic Energy Act Violations', www.fbi.gov/albuquerque/press-releases/2013/former-workers-at-los-alamos-national-laboratory-plead-guilty-to-atomic-energy-act-violations
- [4] 5 Dec 2013, 'Ex-Lab Scientist May Reverse Plea in Nuclear-Secrets Case', www.nti.org/gsn/article/ex-los-alamos-scientist-may-reverse-his-guilty-plea/
- [5] Diane Barnes, 3 Dec 2013, 'Nuclear-Arms Security Concerns Persist After Y-12 Break-In', www.nti.org/gsn/article/nuclear-arms-security-concerns-persist-after-y-12-break-/
- [6] Diane Barnes, 29 April 2013, 'Tired, Poorly Trained Guard Dogs Could Endanger Y-12 Nuclear Arms Site',

- www.nti.rsvp1.com/gsn/article/y-12-guard-dogs-exhausted/
- [7] 10 June 2013, 'Unauthorized Driver Gets Past Y-12 Nuke Site Security', www.nti.org/gsn/article/guards-wave-unauthorized-driver-y-12-nuke-facility/
- [8] 14 Nov 2013, 'Air Force to More Closely Examine Candidates for Top Nuclear Posts', www.nti.org/gsn/article/air-force-subject-candidates-top-nuke-command-jobs-tougher-scrutiny/
- [9] Aaron Larson, 30 Oct 2013, 'Former Dresden Nuclear Plant Workers Banned by NRC', www.powermag.com/former-dresden-nuclear-plant-workers-banned-by-nrc
- [10] 18 Nov 2013, 'Bungling nuclear worker-turned-armed-robber jailed', www.dailymail.co.uk/news/article-2509317/Michael-J-Buhrman-sentenced-40-years-hiding-Venezuela.html
- [11] 23 Oct 2013, 'U.S. Missileers Left Blast Doors Open in Security Breach', www.nti.org/gsn/article/us-missileers-found-leaving-blast-doors-open-breach-security-policy/
- [12] 21 Nov 2013, 'Analysis Finds 'Burnout' Plaguing U.S. Nuclear-Missile Crews', www.nti.org/gsn/article/air-force-backed-study-finds-burnout-among-icbm-crews/

Fukushima Fallout: Updates from Japan

Some of these news items are taken from the twice-weekly updates produced by Greenpeace International. You can subscribe to the updates at: www.greenpeace.org/international/en/news/Blogs/nuclear-reaction or <http://tinyurl.com/gp-nukes>

Public health

775.4378 Australian public health expert Assoc. Prof. Tilman Ruff has written an important, detailed article, titled 'A Public Health Perspective on the Fukushima Nuclear Disaster', in the Oct-Dec edition of the Asian Perspective journal. It neatly summarises recent (and not-so-recent) research regarding the health effects of ionising radiation and applies that knowledge to the case of Fukushima. We won't attempt to summarise a wide-ranging article here. One point that illustrates the risks: "To provide a perspective on these risks, for a child born in Fukushima in 2011 who was exposed to a total of 100 mSv of additional radi-

ation in its first five years of life, a level tolerated by current Japanese policy, the additional lifetime risk of cancer would be on the order of one in thirty, probably with a similar additional risk of premature cardiovascular death." [1]

Tadamori Oshima, head of the government's task force on disaster reconstruction, says that a target to reduce contamination of land around the Fukushima plant to a level equivalent to annual exposure of 1 mSv may be "informally" relaxed. "After we bring ambient radiation (down) to between 5 to 10 millisieverts and complete the decontamination, we will take thorough measures to manage individuals' dosage and safeguard their health. But

a new radiation target would be difficult to publish because it would create a big problem," he said. Radiation levels in the area vary greatly. For example, Tomioka, a township about 12 kms south of the Fukushima Daiichi plant, had ambient radiation levels equivalent to annual doses ranging from 1 to 50 millisieverts by March 2013. [2]

Hot spots

TEPCO said on December 2 it had found radioactive contamination 36,000 times permissible levels in water taken from an observation well. The readings were taken from the well east of reactor #2 and 40 metres from the sea. The contamination measured

1.1 million becquerels per litre. TEPCO says no major changes in the levels of radioactive contamination in the sea have been detected.[3]

TEPCO has also found extremely high radiation levels in an area near a ventilation pipe. TEPCO found the radiation levels – equivalent to exposure levels of up to 25 sieverts per hour – on a duct which connects reactor buildings and the 120-metre-tall ventilation pipe. The estimated radiation level is the highest ever detected outside reactor buildings. A TEPCO official said materials derived from melted nuclear fuel likely entered the piping during venting soon after the accident occurred in March 2011 and have remained there.[4,5]

Water worries

It has emerged that the water storage tanks that have caused so many problems this year were built in part by illegally hired workers. Workers were told to lie about being hired by third party brokers. “Even if we didn’t agree with how things were being done, we had to keep quiet and work fast. People didn’t have contracts, so when they weren’t needed any more, they were cut immediately,” said Yoshitatsu Uechi, a former Fukushima worker who lodged a complaint with labour authorities. His account was confirmed by other workers. One said: “Yes, we did a shoddy job. The quality of what we did was low, but what else would you expect? We had to race to finish up the tanks.”[6,7]

A panel established by Japan’s industry ministry has warned that plans to deal with the water crisis are still inadequate and that space to store contaminated water will run out in within two years if matters are not addressed. The panel made a number of suggestions including the construction of giant tanks and laying asphalt on the site to help prevent rainwater from entering the ground and flowing into the damaged reactor buildings where it is then contaminated. The panel also warned that some water storage tanks have been built on weak ground that could sink and their stability should be addressed.[8]

TEPCO is currently storing 390,000 tons of contaminated water, growing by several hundred tons each day. There is an ongoing discussion about partially decontaminating the water then

releasing it into the Pacific Ocean. It is estimated that it will take at least seven years to partially decontaminate the water already being stored.[9]

Evacuees and decontamination

Japan’s parliament passed a bill on December 4 extending the length of time victims of the Fukushima disaster have to claim compensation from three to ten years. The new legislation also says that a person can now claim compensation for any health problems resulting from the accident for 20 years after their symptoms appear rather than for 20 years after the accident occurred as was the case previously.[10,11]

Meanwhile, a science and technology ministry screening panel has compiled a plan to set a cap on compensation to residents who face prolonged evacuation, angering evacuees. The panel on disputes for nuclear damage compensation wants to set limits ranging from 10 million yen to 14 million yen (\$97,000 to \$136,000).[12]

A survey by Japan’s Reconstruction Agency of people who were evacuated from two towns close to the Fukushima plant found that 67% of 2,760 households from Okuma and 65% of 1,730 households from Futaba have said they will not return to their homes. Those numbers are up from 42% and 30%, respectively, in a January survey, which used slightly different wording. Those surveyed cited fears about radiation exposure and the length of time the repopulation process was taking. The latest survey found that only 9% of respondents from Okuma and 10% from Futaba said they want to return.[13,14]

Many of those evacuated from towns close to Fukushima are still living in temporary accommodation. Occupancy rates of the temporary housing built in Iwate, Miyagi and Fukushima prefectures in the aftermath of the disaster are at 85%. “We haven’t been making progress in building public housing for disaster victims and acquiring land for projects to relocate entire communities,” an Iwate housing official said. “Family members live apart and it’s no good. Since we can’t go back to our hometown, this is like a living hell. Nothing will change even if we complain,” said Yoichi Matsumoto, a resident in temporary accommodation

in Iwaki. It is not expected that the situation will improve soon. “There is a strong likelihood that it may take five years or more after the quake to see all occupants move out,” said an Iwate official.[15]

By the end of October, only 28.5% of houses, 33.2% of roads and 12.3% of forests around the Fukushima plant had been cleaned, according to the Fukushima Department of Environment. The Japanese government has extended the time-frame for the clean-up of the exclusion zone around the plant, initially due to be completed by March 2014, until 2017. Officials have cited several difficulties as reasons for pushing back the timetable, including finding space to store contaminated waste. Endo Kouzou, Supervisor for Decontamination Operations at the Fukushima Department of Environment, said: “It is very hard to earn support from locals in terms of where to put the contaminated materials. This is the biggest problem. Another thing is that, despite various decontamination operations, radiation cannot be eliminated once for all.”[16]

State secrecy bill

The lower house of Japan’s Parliament approved a state secrecy bill on November 27 that imposes stiffer penalties on bureaucrats who leak secrets and journalists who seek them. The bill was approved after hours of delay due to protests by opposition lawmakers. The bill allows heads of ministries and agencies to classify 23 vaguely worded types of information related to defense, diplomacy, counterintelligence and counterterrorism. Critics say it might sway authorities to withhold more information about nuclear power plants. Under the bill, leakers in the government face prison terms of up to 10 years, up from one year now. Journalists who obtain information “inappropriately” or “wrongfully” can get up to five years in prison.[17]

The legislation has triggered protests from Human Rights Watch, the International Federation of Journalists, the Federation of Japanese Newspapers Unions, the Japan Federation of Bar Associations and many other media watchdogs. Academics have signed a petition demanding it be scrapped.

Reporters Without Borders accused Japan of “making investigative journalism illegal”. It said in a statement: “How can the government respond to growing demands for transparency from a public outraged by the consequences of the Fukushima nuclear accident if it enacts a law that gives it a free hand to classify any information considered too sensitive as a state secret?” [18]

During deliberations in November, Masako Mori, the minister in charge of the bill, admitted that security information on nuclear power plants could be designated a state secret because the information “might reach terrorists.” [17,19]

Residents of Fukushima Prefecture are angry over the railroading of the bill through the lower house. At a public hearing in Fukushima on November 25, all of the seven local residents who were invited to state their opinions voiced opposition to or concerns about the bill. [20]

Elsewhere in Japan

More than 1,900 people have joined a law suit against Kansai Electric Power Co. (KEPCO) demanding the company permanently shut down its Oi nuclear power plant in Fukui Prefecture, western Japan. The suit was filed with the Kyoto District Court last November. [21]

References:

[1] https://www.mapw.org.au/files/downloads/AP37-4_Tilman%20Ruff%20%281%29.pdf

[2] www.reuters.com/article/2013/12/05/us-japan-fukushima-ldp-idUSBRE9B407C20131205

[3] www.greenpeace.org/international/en/news/Blogs/nuclear-reaction/fukushima-nuclear-crisis-update-for-december-/blog/47626/

[4] http://www3.nhk.or.jp/nhkworld/english/news/20131207_01.html

[5] 7 Dec 2013, ‘Record outdoor radiation level detected at Fukushima plant’, <http://ajw.asahi.com/article/0311disaster/fukushima/AJ201312070041>

[6] www.greenpeace.org/international/en/news/Blogs/nuclear-reaction/fukushima-nuclear-crisis-update-for-december-/blog/47626/

[7] Antoni Slodkowski, 5 Dec 2013, ‘Insight - Fukushima water tanks: leaky and built with illegal labor’, www.reuters.com/article/2013/12/05/us-japan-nuclear-fukushima-labour-insight-idUSBRE9B415P20131205

[8] <http://ajw.asahi.com/article/0311disaster/fukushima/AJ201312040025>

[9] www.greenpeace.org/international/en/news/Blogs/nuclear-reaction/fukushima-nuclear-crisis-update-for-december-/blog/47626/

[10] <http://english.kyodonews.jp/news/2013/12/259949.html>

[11] <http://jen.jiji.com/jc/eng?g=eco&k=2013120400401>

[12] 10 Dec 2013, ‘Panel sets limit on compensation to Fukushima evacuees’, <http://ajw.asahi.com/article/0311disaster/fukushima/AJ201312100062>

[13] http://www3.nhk.or.jp/nhkworld/english/news/20131206_38.html

[14] 7 Dec 2013, ‘Over 60% of evacuees from Fukushima towns don’t plan to return home’, <http://ajw.asahi.com/article/0311disaster/fukushima/AJ201312070045>

[15] www.japantimes.co.jp/news/2013/12/04/national/many-evacuees-still-in-temp-housing/

[16] 4 Dec 2013, ‘1,000 days after Fukushima: residents of crisis zone frustrated by slow clean-up’, www.euronews.com/2013/12/04/1000-days-after-fukushima-residents-of-crisis-zone-frustrated-by-slow-clean-up/

[17] David McNeill, 26 Nov 2013, ‘Japan cracks down on leaks after scandal of Fukushima nuclear power plant’, www.independent.co.uk/news/world/asia/japan-cracks-down-on-leaks-after-scandal-of-fukushima-nuclear-power-plant-8965296.html

[18] Justin McCurry, 6 Dec 2013, ‘Japan whistleblowers face crackdown under proposed state secrets law’, www.theguardian.com/world/2013/dec/05/whistleblowers-japan-crackdown-state-secrets

[19] Mari Yamaguchi, 26 Nov 2013, ‘Japan secrecy law stirs fear of limits on freedoms’, http://hosted.ap.org/dynamic/stories/A/AS_JAPAN_SECRETY_LAW?SITE=AP

[20] 27 Nov 2013, ‘Fukushima residents furious at lower house passage of contentious secrecy bill’, <http://mainichi.jp/english/english/newsselect/news/20131127p2a00m0na013000c.html>

[21] <http://english.kyodonews.jp/news/2013/12/259606.html>

Fukushima books

Fukushima

Mark Willacy

ISBN: 9781742612959

March 2013

RRP A\$32.99

Macmillan Australia

Also available as an e-book

www.panmacmillan.com.au/display_title.asp?ISBN=9781742612959

‘Fukushima’ is the story behind the twin catastrophes of the tsunami and nuclear meltdowns, seen through the eyes of witnesses and victims – from the mother patiently excavating the mud and debris left by the tsunami as she

looked for the remains of her daughter, to the prime minister of the day, Naoto Kan, to the plant director of Fukushima Dailchi and his senior engineers, to the elite firefighters who risked their lives to avert the ultimate nuclear nightmare.

The book is written by Mark Willacy, a Tokyo-based correspondent for the Australian Broadcasting Corporation.

Villains are identified, including the “nuclear village” of power companies,

politicians and bureaucrats, aided by a compliant media. And heroes are identified, including the nuclear plant's manager, the 'Fukushima 50' who stayed behind and the 'samurai firemen' who worked to prevent an even bigger disaster, along with the individual officials, scientists, journalists and others who battled against a complacent establishment.

"There's this view that you're either pro- or anti-nuclear in covering this disaster, and I'm not either," Willacy told Japan Times on July 27. "My reporting is about exposing official corporate and regulatory failings. The government ignored repeated warnings from their own panel members, their own seismologists and their own committees. I find it horribly ironic that TEPCO of all people had the closest, most accurate simulation of anyone – their 15.7-metre tsunami wave forecast was the closest anyone got to what actually happened on March 11."

Willacy argues that Japan has much to learn from the nuclear disaster, including the need for independent regulators, an end to 'amakudari' jobs for bureaucrats in nuclear companies and reform of the 'kisha club' media system that helped prevent scrutiny. He warns that another Fukushima is possible if the lessons of the disaster are ignored.

Nuclear Disaster at Fukushima Daiichi: Social, Political and Environmental Issues

Edited by Richard Hindmarsh
Routledge
2013

Also available as an e-book
www.routledge.com/books/details/9780415527835/

Informed by a leading cast of international scholars, including Japanese scholars on the ground as the disaster unfolded, this collection of essays sets the Fukushima disaster against the background of social, environmental and energy security and sustainability. It provides insights into its background and the disaster management options taken and the political, technical and social reactions as the accident unfolded, and critically reflects on both the implications for managing future

nuclear disasters and the future of nuclear power itself.

Contributors note that a history of pro-nuclear government policies led to safety, siting and construction of nuclear reactors compromised in a number of areas that inadvertently invited natural disaster. Post-disaster, the book probes the flawed disaster management options taken as radioactive pollution began spreading; and the political, technical, and social reactions as the meltdown unfolded.

The book is edited by Assoc. Prof. Richard Hindmarsh, an Australian academic and co-founder of the Asia-Pacific Science, Technology and Society Network.

The essay titles are as follows:

- Nuclear Disaster at Fukushima Daiichi: Introducing the Terrain
- Social Shaping of Nuclear Safety: Before and After the Disaster
- Social Structure and Nuclear Power Siting Problems Revealed
- Megatechnology, Siting, Place and Participation
- Environmental Infrastructures of Emergency: The Formation of a Civic Radiation Monitoring
- Map during the Fukushima Disaster
- Post-Apocalyptic Citizenship and Humanitarian Hardware
- Envirotechnical Disaster at Fukushima: Nature, Technology and Politics
- Nuclear Power after 3/11: Looking Back and Thinking Ahead
- The Search for Energy Security After Fukushima Daiichi
- The Future Is Not Nuclear: Ethical Choices for Energy after Fukushima
- Nuclear Emergency Response: Atomic Priests or an International SWAT Team?

Fukushima comic

World Nuclear News reports that a former worker at the Fukushima Daiichi site has created a manga comic of his experiences. Kazuto Tatsuta won a manga competition held by large publishing company Kodansha.

Why would World Nuclear News report this? It seems the content is quite

bland, "an unusual and sober depiction of the accident site and of normal people who continue to work without extreme apprehension about radiation." Workers are shown "going through strict safety and security routines, working among the water storage tanks and relaxing in the basic facilities."

WNN, 1 Nov 2013, 'Manga shows Fukushima worker's experience', www.world-nuclear-news.org/ON-Manga-shows-Fukushima-workers-experience-0111131.html

Who wrote the anti-nuke novel?

A novel released in September illustrates the resurgence of Japan's corrupt 'Nuclear Village' in the aftermath of the Fukushima disaster. The book, 'Genpatsu Whiteout: Another Reactor Explosion Is Inevitable: Indictment from An Elite Bureaucrat', tells a story about a rush to restart reactors shut down after March 2011, with government officials and politicians wielding powerful personal connections to fight off opposition from local leaders, activists and the media.

A guessing game is underway over the identity of the author, who appears to have an insider's knowledge of the industry. The novel says the author, Mr. Retsu Wakasugi (a pseudonym), is a graduate of the Tokyo University law department and currently works at an unidentified government ministry.

"A search for the culprit is on," Taro Kono, a politician from the governing Liberal Democratic Party, wrote in a Twitter post on September 17: "Suspected: 'someone who is a senior official at the energy agency with considerable career experience but now with lots of free time maybe as a result of being sidelined.'" Kono himself may be the inspiration for one character in the novel, described as a "lone wolf of the conservative party" with an anti-nuclear stance.

Yuka Hayashi, 19 Sept 2013, 'Fukushima Watch: Who Wrote the New Anti-Nuke Novel?', <http://blogs.wsj.com/japanrealtime/2013/09/19/fukushima-watch-who-wrote-the-new-anti-nuke-novel/>

NUCLEAR NEWS

Namibia: Leach tank failure

All milling operations at the Rossing uranium mine in Namibia ground to a halt after a structural failure at one of twelve leach tanks in the processing plant on December 3. A statement from Rossing said that a leak was detected and it was decided to pump out the tank for fixing, and during that process the leach tank experienced a “catastrophic structural failure”. Rossing said the slurry was “channeled in trenches and contained in a holding tank”. The area was evacuated.

Ben De Vries, General Manager of Operations, said: “This is obviously a very serious incident which is currently under investigation. I can assure you that we are applying a rigorous and structured approach to determine the cause of this failure and ensure that we safely return the plant to normal operations as soon as possible. At the moment the milling operation had been stopped, but is expected to restart once the failed tank has been isolated from the production process. Production in the other areas of the mine has not been affected and continues as usual.”

www.namibtimes.net/forum/topics/rossing-shuts-operations-after-catastrophic-leak

Australia: major spill at Ranger

A tank in the processing area of the Ranger uranium mine in the Northern Territory failed on December 7, spilling around 1.4 million litres of radioactive and acidic slurry. It is understood the radioactive liquid then flowed outside the “bund area”, or nearby containment banks, onto grassed areas and into the mine’s stormwater and drainage system.

Workers were evacuated. All processing operations have been suspended (mining has already ceased as the open-pit ore body has been depleted). The federal environment minister has ordered an immediate clean-up and investigation – but still plans to devolve federal uranium mine approval and assessment powers to states and territories despite their demonstrated incompetence.

More than A\$80 million (US\$73 million) was wiped off the value of Rio Tinto subsidiary Energy Resources of Australia (ERA) as a result of the spill, with shares down nearly 13%.

The Gundjeihmi Aboriginal Corporation (GAC), which represents the Mirarr Traditional Owners, has called for an audit of the site’s facilities. “People living just a few kilometres downstream from the mine don’t feel safe,” GAC chief executive Justin O’Brien said. “How can we trust the assurances of a company which has repeatedly failed to safely manage this highly toxic material? It’s a catastrophic failure on the part of not only the operator but also the government regulators in the Northern Territory and Canberra. ... This is nothing but a hillbilly operation, run by a hillbilly miner with hillbilly regulators.”

About 60 Mirarr people live at Mudginberri, on Magela Creek, just 7 kms downstream from the mine. “It’s the wet now; it rains every day,” O’Brien said. “That creek is flowing right past the mine and into the community, where they fish and hunt, get barramundi, catfish, mussels. They drink the water. They play in it. People are worried sick.”

Monash University academic Dr Gavin Mudd said: “ERA has form with this. The company has a history of delaying infrastructure maintenance in order to maximise profits.”

The Australian Conservation Foundation and the Environment Centre NT are calling for a halt to operations and an independent safety audit of the site and infrastructure; a review of the cumulative impacts of the Ranger operation and the adequacy of the regulatory regime; an independent assessment of the costs and consequences of the wider Australian uranium trade; a halt to any approvals or advance on the planned Ranger 3 Deeps underground uranium mining operation; and no devolving of federal powers to assess/approve uranium mining projects to state or territory governments

The Australian Manufacturing Workers’ Union is calling for all operations to be suspended until a full audit and inquiry into the infrastructure on the site has

been conducted. AMWU Regional Organiser Bryan Wilkins said: “This mine site has a history of not dealing with safety issues – this was an accident waiting to happen. This incident occurred after parent company Rio Tinto boasted they cut costs by \$2 billion this year. They may be saving money but they are putting people’s lives at risk in the process. This tank was about 20 years old and it was an accident waiting to happen – they are lucky no one was hurt this time.”

www.abc.net.au/news/2013-12-07/spill-at-nt-uranium-mine-near-kakadu/5142148

www.abc.net.au/local/stories/2013/12/09/3907874

[htm?site=darwin](http://www.theage.com.au/comment/another-million-reasons-to-probe-uranium-mining-20131209-2z0l6.html)

www.theage.com.au/comment/another-million-reasons-to-probe-uranium-mining-20131209-2z0l6.html

<http://scott-ludlam.greensmps.org>

[au/content/speeches-parliament/taking-note-feeble-and-evasive-answers-questions-spill-radioactive-acid](http://www.theage.com.au/content/speeches-parliament/taking-note-feeble-and-evasive-answers-questions-spill-radioactive-acid)
www.theage.com.au/environment/radioactive-spill-in-kakadu-stirs-rage-20131208-2yzee.html

British bomb factory “played down” seriousness of fire

AWE, the private consortium that runs nuclear weapons plants at Aldermaston and Burghfield in Berkshire for the Ministry of Defence, “played down” a fire that could have caused “numerous fatalities” according to an internal investigation by the government’s Health and Safety Executive (HSE). AWE was guilty of a “disturbing” catalogue of safety blunders in the handling of explosives, the HSE said, and its actions “fell far below the standard expected in an explosives manufacturing company.” HSE released the report of its 10-month investigation into the fire at Aldermaston under freedom of information laws.

www.robbedwards.com/2013/12/nuclear-bomb-factory-played-down-fire-says-safety-watchdog.html

World Bank says no money for nukes, Goldman Sachs to sell uranium unit

The World Bank and United Nations

have appealed for billions of dollars to provide electricity for the poorest nations. Announcing the 'Sustainable Energy for All' initiative, World Bank president Jim Yong Kim said US\$600–800 billion a year will be needed to meet the campaign target of universal access to electricity, doubling energy efficiency and doubling the share of renewable energy by 2030. [1,2,3]

"We don't do nuclear energy," Kim said as he and UN leader Ban Ki-moon outlined efforts to make sure all people have access to electricity by 2030. Kim said: "Nuclear power from country to country is an extremely political issue. The World Bank Group does not engage in providing support for nuclear power. We think that this is an extremely difficult conversation that every country is continuing to have. And because we are really not in that business our focus is on finding ways of working in hydro electric power in geo-thermal, in solar, in wind. We are really focusing on increasing investment in those modalities and we don't do nuclear energy." [1]

Kim added that it had been difficult to find long term capital for poorer countries but insisted: "We will show investors that sustainable energy is an opportunity they cannot afford to miss." [1]

In July, the World Bank adopted a policy of providing "financial support for green-field coal power generation projects only in rare circumstances," such as where there are "no feasible alternatives to coal." [4]

Meanwhile, US bank Goldman Sachs Group has reportedly put its uranium trading business up for sale. Goldman's two-person uranium desk was inherited with the purchase of US utility Constellation Energy's London-based trading operation in 2009. [5]

[1] AFP, 27 Nov 2013, 'World Bank says no money for nuclear power', www.globalpost.com/dispatch/news/afp/131127/world-bank-says-no-money-nuclear-power

[2] World Bank media release, 27 Nov 2013, <http://tinyurl.com/wb-no-nukes>

[3] Sustainable Energy for All: www.se4all.org

[4] John Upton, 18 July 2013, 'World

Bank joins war on coal', <http://grist.org/news/world-bank-joins-war-on-coal/> [5] Scott Disavino and David Sheppard, 25 Nov 2013, 'Goldman Sachs to sell uranium unit', www.bdlive.co.za/world/americas/2013/11/25/goldman-sachs-to-sell-uranium-unit

Nuclear decline in OECD

The amount of nuclear-generated electricity in the OECD area declined by 5.2% between 2011 and 2012, according to the Brown Book of nuclear energy data published by the OECD Nuclear Energy Agency. Total OECD nuclear generation amounted to 1884 TWh in 2012, a 5.2% fall from 1988 TWh in 2011. Total electricity generation fell 0.1% over the same period. There were 331 operational reactors in the OECD as of 31 December 2012 – 133 in Europe, 125 in the Americas (US, Canada and Mexico) and 73 in the Pacific region (South Korea and Japan).

The Brown Book states: "The share of electricity production from nuclear power plants also decreased from 19.9% in 2011 to 18.9% in 2012. This decline reflects the permanent shutdown of three reactors that had reached the end of their operational lifetime (two in the United Kingdom and one in Canada), operational issues at some facilities and suspended operation at all but two reactors in Japan. Record electricity production at nuclear power plants in the Czech Republic and Hungary, combined with increased production in Canada, France, Spain and Sweden balanced, to some extent, declining production in Belgium, Germany, the United Kingdom and the United States."

www.oecd-nea.org/ndd/pubs/2013/7162-bb-2013.pdf
www.modernpowersystems.com/news/newsnuclear-generation-fell-5-in-2012-4141948
www.nucnet.org/all-the-news/2013/12/03/shutdowns-hit-nuclear-generation-in-oecd-countries

Brazil cools on nuclear power plans; favours wind

Brazil will probably scale down its plans for new nuclear plants due to safety concerns following the Fukushima disaster and pick up some of the slack

with a "revolution" in wind power, the head of the government's energy planning agency said. Mauricio Tolmasquim, chief of the Energy Research Company, told Reuters it was "unlikely" the government would stick to its plans to build four new nuclear plants by 2030. He declined to specify how many might be built instead. [1]

"After Japan, things got put on standby," Tolmasquim told Reuters. "We haven't abandoned (the plans) ... but they haven't been resumed yet either. It's not a priority for us right now."

Tolmasquim added: "This is wind power's moment. There's been a revolution in terms of cost."

Nevertheless, Brazil is proceeding with the Angra 3 nuclear power project. In November, Areva signed a contract worth 1.25 billion euros (US\$1.67 billion) with the Brazilian utility Eletrobras Eletronuclear for the completion of the Angra 3 reactor, located in the state of Rio de Janeiro. The Angra 3 project has a long history. Construction started in 1984 but faltered two years later. A return to construction was approved in 2007. [2]

[1] www.reuters.com/article/2013/09/15/us-brazil-nuclear-idUSBRE98E06U20130915

[2] <http://online.wsj.com/article/PR-CO-20131107-914400.html>

Switzerland can reach 98% renewable electricity

Switzerland already gets more than half of its electricity from renewable sources. Now, German researchers say that the country could have 98% renewable power by 2050, up from the current 57%. Germany's GLR has published the country edition of its Energy evolution study for Switzerland (currently only available in German). Written on behalf of Greenpeace, the study finds that Switzerland can increase the share of renewables by quickly expanding photovoltaics, while the growth of biomass, wind power, hydropower, and geothermal would be more moderate. The Swiss plan to shut down their last nuclear plant in 2025.

Renewables International, 4 Dec 2013, www.renewablesinternational.org

net/swiss-energie-wende-investigation/150/537/75178/

Energy[R]evolution Schweiz, www.greenpeace.org/switzerland/de/The-men/Strom-zukunft-Schweiz/Energy-Revolution/

South Africa puts nuclear on hold ... again

The South African Department of Energy has reported that new nuclear power will not be required until after 2025 or even later. The country is likely to take on other power sources, according to the updated version of the Integrated Resource Plan (IRP) for electricity, such as hydro and shale gas. The IRP is a 20-year plan that models demand and supply of electricity and plans for generation needs. Nuclear was seen as highly expensive compared to other available resources, however less-than-expected power demand is also playing a role in the latest projections. The National Planning Commission had cautioned against committing to an "expensive and irreversible" nuclear program, particularly when electricity demand has not grown in line with expectations.[1]

Earlier plans to build up to 20 GW of nuclear capacity were shelved in 2008, and more recent plans to build up to 10 GW by 2023 have now been dealt a blow. In addition, the development of Pebble Bed Modular Reactor technology consumed a great deal of R&D funding in South Africa before being abandoned in 2010.[2]

Two power reactors are in operation at the Koeberg Power Station near Cape Town, in the south-west of the country – the only power reactors in Africa.

[1] K. Steiner-Dicks, 4 Dec 2013, 'South Africa puts nuclear on hold', <http://analysis.nuclearenergyinsider.com/new-build/south-africa-puts-nuclear-on-hold>

[2] Steve Kidd, 4 Dec 2013, 'South Africa: can it go further in nuclear?', [www.neimagazine.com/opinion/opinionsouth-africa-can-it-go-further-in-](http://www.neimagazine.com/opinion/opinionsouth-africa-can-it-go-further-in-nuclear-4140471/)

[nuclear-4140471/](http://www.neimagazine.com/opinion/opinionsouth-africa-can-it-go-further-in-nuclear-4140471/)

Germany's 'Grand Coalition' committed to nuclear phase-out

The new German 'grand coalition' between Angela Merkel's Christian Democratic Union party, the Christian Social Union and the Social Democratic Party will remain committed to the nuclear phase-out and the energy transition, the coalition contract between the three parties says. "No later than 2022, the last nuclear power plant in Germany will be shut down," says the coalition contract.

The coalition government will continue the implementation of a law, adopted in July 2013, for choosing a site for deep geological long-term storage of high-level nuclear waste.

The coalition contract is available online (in German only): www.cdu.de/sites/default/files/media/dokumente/koalitionsvertrag.pdf

NucNet, 28 Nov 2013, 'Germany's 'Grand Coalition' Remains Committed To Energy Transition', www.nucnet.org/all-the-news/2013/11/28/germany-s-grand-coalition-remains-committed-to-energy-transition

Nuclear power to stay in France

The French government won't shut any more nuclear reactors after the country's oldest plant at Fessenheim is shut down, industry minister Arnaud Montebourg said. "My answer is no, my answer is clear," Montebourg said in an interview in Paris. Nuclear power will always provide at least half of France's electricity, he said. Montebourg's comments undercut President Francois Hollande's promise, made in last year's election campaign, to cut France's atomic output from 75% to 50% of electricity production by about 2025.[1,2]

Meanwhile, Thomas Houdre from the regulator Autorite de Surete Nucleaire said that "significant safety improvements have to be made" at spent fuel

pools at French nuclear power plants. "There is no way of managing an accident in a spent-fuel pool. We want the possibility of this happening to be practically eliminated," he said. Last year, EDF declared a "major safety event" after it was discovered that fuel storage pools at the Cattenom plant were vulnerable to leaks.[3]

[1] Tara Patel, 12 Nov 2013, 'France Won't Shut Any More Atomic Reactors, Minister Says', www.bloomberg.com/news/2013-11-12/france-won-t-shut-down-any-more-nuclear-reactors-minister-says.html

[2] 8 Dec 2013, 'French nuclear power here to stay, says industry minister', <http://uk.reuters.com/article/2013/12/08/uk-france-nuclear-share-idUKBRE9B704V20131208>

[3] Tara Patel, 4 Dec 2013, 'France's 58 Nuclear Pools Must Be Safer, Watchdog Says', www.businessweek.com/news/2013-12-03/france-s-58-nuclear-pools-must-be-safer-watchdog-says-energy

South Korea: Nuclear power policy

Nuclear power should account for up to 29% of South Korean generation capacity by 2035, according to draft long-term energy plans submitted to the government. Previous plans called for 41% nuclear by 2035. The draft plan has been submitted to the parliament by the Ministry of Trade, Industry and Energy prior to a public hearing. In it, the government "recognises" the role of nuclear power but also says it plans to reduce power demand over the period to 2035. Korea's 23 nuclear reactors currently account for 22% of the country's generation capacity, and 29% of its electricity output. The South Korean nuclear power industry is in crisis because of a corruption and forgery scandal (see Nuclear Monitor #771 and #765).

WNN, 10 Dec 2013, 'Nuclear to remain Korean mainstay', www.world-nuclear-news.org/NP-Nuclear-to-remain-Korean-mainstay-1012137.html

Changes at NIRS

On January 1, 2014, our colleague and good friend Michael Mariotte will be stepping down as Executive Director of the US Nuclear Information and Resource Service (NIRS) after 27 years in the job. Tim Judson, currently the Associate Director, will become Acting Executive Director on that day.

Michael will assume the newly-created position of President of NIRS, and will be as busy as ever providing strategic and tactical advice, and expanding NIRS's outreach capabilities, social media, internet presence, and supporter and member base.

As Michael notes in a letter in which he announces this change, "it has been an exciting year with announcements of five permanent reactor shutdowns in the US, cancellation of eight proposed new reactors, and abandonment of five proposed power uprates for existing reactors. Next year promises to be just as significant".

Michael had to take this step because he is ill.

This is how he writes about it himself, typical for how he is: "Last January, I had major surgery for what was thought to be non-malignant cysts on my pancreas. Unfortunately, it turned out to be pancreatic cancer. What can I say? It sucks. But it's also reality".

I met Michael for the first time in Dannenberg, Germany at an international conference of anti-nuclear groups. We had been working with NIRS in the years before and we wanted to increase and deepen the cooperation. We talked, at the conference and in the blockades of the waste transports to Gorleben, just after the conference.

I was impressed by his skills, knowledge, compassion for the anti-nuclear cause and his energy. Most of all I was impressed by his personality; warm, straight, modest, open-hearted.

And I still am. It is an honour that I have been enabled to work with Michael on the merge of NIRS and WISE, that we have managed to keep both organisations afloat and have been able to increase the effective output of both organisations.

Sad as I am about what happens now, I look forward to keep working with Michael in the years to come.

The Nuclear Monitor and I personally wish Michael, Tim and NIRS all the best.

Peer de Rijk, Executive Director, WISE International

WISE / NIRS Nuclear Monitor

The World Information Service on Energy (WISE) was founded in 1978 and is based in Amsterdam, the Netherlands.

The Nuclear Information & Resource Service (NIRS) was set up in the same year and is based in Washington D.C., US.

WISE and NIRS joined forces in the year 2000, creating a worldwide network of information and resource centers for citizens and environmental organizations concerned about nuclear power, radioactive waste, proliferation, uranium, and sustainable energy issues. The WISE / NIRS Nuclear Monitor publishes information in English 20 times a year. The magazine can be obtained both on paper and as an

email (pdf format) version. Old issues are (after 2 months) available through the WISE homepage: www.wiseinternational.org

Subscriptions:

US and Canada based readers should contact NIRS for details on how to receive the Nuclear Monitor (nirsnet@nirs.org). All others receive the Nuclear Monitor through WISE.

Version NGO's/individuals

Institutions/Industry		
Paper	100 euro	350 euro
Email	50 euro	200 euro

Contact us via:

WISE International
Po Box 59636, 1040 LC Amsterdam,
The Netherlands
Web: www.wiseinternational.org
Email: info@wiseinternational.org
Phone: +31 20 6126368
ISSN: 1570-4629

