

# NUCLEAR MONITOR

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A PUBLICATION OF WORLD INFORMATION SERVICE ON ENERGY (WISE)  
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## Editorial

Dear readers of the WISE/NIRS Nuclear Monitor,

In this issue of the Monitor:

- We update the situation at the Waste Isolation Pilot Plant in the US following the serious accident in February;
- Engineer and whistleblower Evert van Amerongen writes about the dangerous hypocrisy of Dutch nuclear legislation;
- We summarise the latest World Energy Outlook report of the International Energy Agency; and
- We summarise the uranium agreement between the Nigerian government and Areva.

The Nuclear News section has reports on a Lifetime Achievement Award for Michael Mariotte of the Nuclear Information & Resource Service; a waste transport ship fire in the UK; leaked photos revealing the decrepit states of nuclear waste storage ponds at Sellafield in the UK; 143 states support a UN resolution calling for DU clean-up assistance; and in Germany, activists held up a uranium train in Hamburg for seven hours, and authorities performed poorly in a nuclear accident training exercise.

Feel free to contact us if you have feedback on this issue of the Monitor, or if there are topics you would like to see covered in future issues.

Regards from the editorial team.

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## WIPP waste accident a 'horrific comedy of errors'

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**NM794.4430** The precise cause of the February 14 accident involving a radioactive waste barrel at the world's only deep geological radioactive waste repository has yet to be determined, but information about the accident continues to come to light.

The Waste Isolation Pilot Plant (WIPP) in New Mexico, USA, is a dump site for long-lived intermediate-level waste from the US nuclear weapons program. More than 171,000 waste containers are stored in salt caverns 2,100 feet (640 meters) underground.



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On February 14, a heat-generating chemical reaction – the Department of Energy (DOE) calls it a deflagration rather than an explosion – compromised the integrity of a barrel and spread contaminants through more than 3,000 feet of tunnels, up the exhaust shaft, into the environment, and to an air monitoring approximately 3,000 feet north-west of the exhaust shaft.<sup>1</sup> The accident resulted in 22 workers receiving low-level internal radiation exposure.

Investigators believe a chemical reaction between nitrate salts and organic 'kitty litter' used as an



On May 30, WIPP recovery teams obtained samples from the damaged waste barrel.

absorbent generated sufficient heat to melt seals on at least one barrel. But experiments have failed to reproduce the chemical reaction, and hundreds of drums of similarly packaged nuclear waste are still intact, said DOE spokesperson Lindsey Geisler. “There’s still a lot we don’t know,” she said.<sup>2</sup>

Terry Wallace from Los Alamos National Laboratory (LANL) said: “LANL did not consider the chemical reactions that unique combinations of radionuclides, acids, salts, liquids and organics might create.”<sup>3</sup>

Determining the cause of the accident has been made all the more difficult because the precise composition of the waste in the damaged barrel is unknown.<sup>4,5</sup> A former WIPP official said: “The DOE sites that sent in the waste got careless in documenting what was being shipped in ... The contractors at the sites packing the waste were not exactly meticulous. When we complained to DOE, it was made clear we were just to keep taking the waste and to shut up.”<sup>6</sup>

Operations to enable a resumption of operations at WIPP will cost approximately US\$242 million (€193m) according to preliminary estimates by the DOE. In addition, a new ventilation system is required which will cost US\$65–261 million (€52–208m).<sup>7</sup> Taking into account indirect costs such as delays with the national nuclear weapons clean-up program, the total cost could approach US\$1 billion (€800m).<sup>4</sup> Further costs could be incurred if the State of New Mexico fines DOE for its safety lapses at WIPP.<sup>5</sup>

The DOE hopes WIPP will reopen in 2016 but the shut-down could extend to 2017 or beyond.<sup>8</sup>

### A ‘horrific comedy of errors’

British academic Rebecca Lunn, a professor of engineering geosciences, describes how waste repositories would work in a perfect world. “Geological disposal of nuclear waste involves the construction of a precision-engineered facility deep below the ground into which waste canisters are carefully manoeuvred. Before construction of a geological repository can even be considered, an environmental

safety case must be developed that proves the facility will be safe over millions of years.”<sup>9</sup>

Prof. Lunn’s description is far removed from the situation at WIPP. Robert Alvarez, a former assistant to the energy secretary, said that a safety analysis conducted before WIPP opened predicted accidents such as the February 14 deflagration once every 200,000 years, yet WIPP has been open for merely 15 years.<sup>5</sup> WIPP is on track for not one but over 13,000 radiation release accidents over a 200,000 year period.

The WIPP accident resulted from a “horrific comedy of errors” according to James Conca, a scientific adviser and WIPP expert: “This was the flagship of the Energy Department, the most successful program it had. The ramifications of this are going to be huge.”<sup>14</sup>

The problems began long before February 14, and they extend beyond WIPP. Serious problems have been evident across the US nuclear weapons program. Systemic problems have been evident with DOE oversight. The problematic role of the National Nuclear Security Administration (NNSA) – a semi-autonomous agency within the DOE – is emphasised in a detailed analysis by investigative journalist Joseph Trento.<sup>6</sup>

A DOE official quoted by Trento said a root problem is “the fact that DOE has no real operational control over the NNSA. Under the guise of national security, NNSA runs the contractors, covers up accidents and massive cost overruns and can fire any DOE employee who tries to point out a problem. Because they control so many jobs and contractors, every administration refuses to take them on.”

Trento explains the *realpolitik*: “The contractor game at NNSA is played this way: Major corporations form LLC’s [limited liability companies] and bid for NNSA and DOE contracts. For example, at SRS [Savannah River Site] they bid to clean up waste and get some of the billions of dollars from Obama’s first term stimulus money. Things go wrong, little gets cleaned up, workers get injured or exposed to radiation and outraged NNSA management cancels the contract. A new LLC is formed by the same NNSA list of

corporate partners and they are asked to bid on a new management contract. The new LLC hires the same workers as the old management company and the process gets repeated again and again. The same mistakes are made and the process keeps repeating itself. These politically connected DOE contractors, responsible for tens of billions of dollars in failed projects and mishandling of the most deadly materials science has created, have been protected by the biggest names in both the Republican and Democratic parties at an enormous cost to the U.S. taxpayers, public health and the environment.”

### Los Alamos National Laboratory

Of immediate relevance to the February 14 WIPP accident are problems at Los Alamos National Laboratory (LANL). The waste barrel involved in the accident was sent from LANL to WIPP. LANL staff approved the switch from an inorganic clay absorbent to an organic material in September 2013. That switch is believed to be one of the causes of the February 14 accident. LANL also approved the use of a neutraliser that manufacturers warned shouldn't be mixed with certain chemicals.<sup>10</sup>

A September 30 report by the DOE's Office of Inspector General identifies “several major deficiencies in LANL's procedures for the development and approval of waste packaging and remediation techniques that may have contributed” to the February 14 WIPP accident.<sup>11</sup> The report states:

*“Of particular concern, not all waste management procedures at LANL were properly vetted through the established procedure revision process nor did they conform to established environmental requirements. In our view, immediate action is necessary to ensure that these matters are addressed and fully resolved before TRU [transuranic] waste operations are resumed, or, for that matter, before future mixed radioactive hazardous waste operations are initiated.*

*“In particular, we noted that:*

- *Despite specific direction to the contrary, LANL made a procedural change to its existing waste procedures that did not conform to technical guidance provided by the Department for the processing of nitrate salt waste; and*
- *Contractor officials failed to ensure that changes to waste treatment procedures were properly documented, reviewed and approved, and that they incorporated all environmental requirements for TRU waste processing. These weaknesses led to an environment that permitted the introduction of potentially incompatible materials to TRU storage drums. Although yet to be finally confirmed, this action may have led to an adverse chemical reaction within the drums resulting in serious safety implications.”*

### WIPP failings

The February 14 accident has shone a light on multiple problems at WIPP (discussed in greater detail in Nuclear Monitor #787).<sup>12</sup>

A DOE-appointed Accident Investigation Board released a report into the accident in April.<sup>13</sup> The report identified the “root cause” of the accident to be the many failings of Nuclear Waste Partnership, the contractor that

operates the WIPP site, and DOE's Carlsbad Field Office. The report criticized their “failure to fully understand, characterize, and control the radiological hazard. The cumulative effect of inadequacies in ventilation system design and operability compounded by degradation of key safety management programs and safety culture resulted in the release of radioactive material from the underground to the environment, and the delayed / ineffective recognition and response to the release.”

The Accident Investigation Board report states that personnel did not adequately recognize, categorize, or classify the emergency and did not implement adequate protective actions in a timely manner. It further noted that there is a lack of a questioning attitude at WIPP; a reluctance to bring up and document issues; an acceptance and normalization of degraded equipment and conditions; and a reluctance to report issues to management, indicating a chilled work environment.

Trento said: “The report has a familiar litany and tone: Ignored warnings from the Defense Facilities Board, lack of DOE contractor supervision, and a missing safety culture. There are hundreds of similar reports about the Savannah River Site, LANL, Oak Ridge, Hanford and other DOE national laboratories and sensitive national security sites. The Department of Energy is in serious trouble.”<sup>6</sup>

A US Environmental Protection Agency review of air testing at WIPP in February and March found discrepancies in recorded times and dates of sample collections, flawed calculation methods, conflicting data and missing documents. It also found that WIPP managers sometimes said air samples contained no detectable levels of radiation when measurable levels were present.<sup>14</sup>

A degraded safety culture was responsible for the accident, and the same failings inevitably compromised the response to the accident. Among other problems:<sup>4,6</sup>

- The DOE contractor could not easily locate plutonium waste canisters because the DOE did not install an upgraded computer system to track the waste inside WIPP.
- The lack of an underground video surveillance system made it impossible to determine if a waste container had been breached until long after the accident. A worker inspection team did not enter the underground caverns until April 4 – seven weeks after the accident.
- The WIPP computerized Central Monitoring System has not been updated to reflect the current underground configuration of underground vaults with waste containers.
- 12 out of 40 phones did not work so emergency communications could not reach all parts of WIPP in the immediate aftermath of the accident.
- WIPP's ventilation and filtration system did not prevent radiation reaching the surface, due to neglect.
- The emergency response moved in slow motion. The first radiation alarm sounded at 11.14pm. Not until 9.34am did managers order workers on the surface of the site to move to a safe location.

Everything that was supposed to happen, didn't. Everything that wasn't supposed to happen, did.

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## International Energy Agency's 'World Energy Outlook'

**NM794.4432** The International Energy Agency (IEA) – a self-described autonomous organisation with 29 member countries – has released its latest World Energy Outlook (WEO) report.<sup>1</sup>

In the central scenario of WEO, world primary energy demand is 37% higher in 2040 compared to 2013, and energy supply is divided into four almost equal parts: low-carbon sources (nuclear and renewables), oil, natural gas and coal.

Electricity is projected to be the fastest-growing final form of energy – WEO states that 7,200 gigawatts (GW) of power capacity needs to be built by 2040. Global investment in the power sector amounts to US\$21 trillion (€16.8t), with over 40% in transmission and distribution networks.

CO<sub>2</sub> emissions from the power sector rise from 13.2 gigatonnes (Gt) in 2012 to 15.4 Gt in 2040, maintaining a

share of around 40% of global emissions over the period.

Fossil fuels continue to dominate the power sector, but their share of generation declines from 68% in 2012 to 55% in 2040.

### Nuclear growth?

WEO notes that nuclear power accounts for 11% of global electricity generation, down from a peak of almost 18% in 1996.

There is "no nuclear renaissance in sight" according to the IEA.

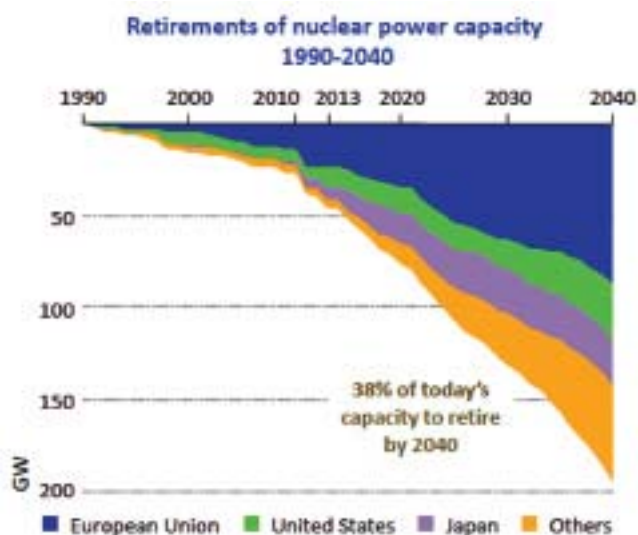
In the WEO 'Low Nuclear Case', global nuclear capacity drops by 7% between 2013 and 2040. In the 'New Policies Scenario', nuclear capacity rises by 60% to 624 GW. This is the net result of 380 GW of capacity additions and 148 GW of retirements.

Just four countries account for most of the projected nuclear growth in the 'New Policies Scenario': China (132 GW increase), India (33 GW), South Korea (28 GW) and Russia (19 GW). Generation increases by 16% in the US, rebounds in Japan (although not to the levels prior to the accident at Fukushima Daiichi) and falls by 10% in the European Union. The number of countries operating power reactors increases from 31 in 2013 to 36 in 2040.

Needless to say, the projected growth in the New Policies Scenario is speculative and unlikely. Historically, low projections from bodies such as the IEA and the IAEA tend to be more accurate than high projections.<sup>2</sup>

WEO states that nuclear growth will be "concentrated in markets where electricity is supplied at regulated prices, utilities have state backing or governments act to facilitate private investment." Conversely, "nuclear power faces major challenges in competitive markets where there are significant market and regulatory risks, and public acceptance remains a critical issue worldwide."<sup>3</sup>

More than 80% of current nuclear capacity is in OECD countries but this falls to 52% in 2040 in the New Policies Scenario. Of the 76 GW presently under construction, more than three-quarters is in non-OECD countries.



### A wave of reactor retirements

WEO states: "A wave of retirements of ageing nuclear reactors is approaching: almost 200 of the 434 reactors operating at the end of 2013 are retired in the period to 2040, with the vast majority in the European Union, the United States, Russia and Japan."

WEO estimates the cost of decommissioning reactors to be more than US\$100 billion (€80b) up to 2040. The report notes that "considerable uncertainties remain about these costs, reflecting the relatively limited experience to date in dismantling and decontaminating reactors and restoring sites for other uses."

IEA chief economist Fatih Birol said: "Decommissioning of those power plants is a major challenge for all of us – for the countries that are pursuing nuclear power policies and for those who want to phase out their nuclear power plants. Worldwide, we do not have much experience and I am afraid we are not well-prepared

in terms of policies and funds which are devoted to decommissioning. A major concern for all of us is how we are going to deal with this massive surge in retirements in nuclear power plants."<sup>4</sup>

Paul Dorfman of the Energy Institute at University College London noted that the US\$100bn figure is only for decommissioning and does not include the costs of permanent waste disposal. "The UK's own decommissioning and waste disposal costs are £85bn alone, so that gives you an idea of the astronomical costs associated with nuclear," he said.<sup>5</sup>

### Nuclear safety, waste and weapons

WEO notes: "Public concerns about nuclear power must be heard and addressed. Recent experience has shown how public views on nuclear power can quickly shift and play a determining role in its future in some markets. Safety is the dominant concern, particularly in relation to operating reactors, managing radioactive waste and preventing the proliferation of nuclear weapons. Confidence in the competence and independence of regulatory oversight is essential ..."

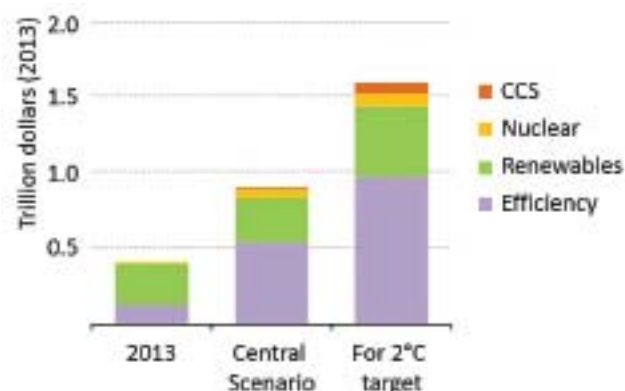
In the WEO high-growth New Policies Scenario, the cumulative amount of spent nuclear fuel that has been generated more than doubles, reaching 705,000 tonnes in 2040. The report notes that no country has yet established permanent facilities for the disposal of high-level radioactive waste from commercial reactors.

### Nuclear power and climate change

WEO states that nuclear power "has avoided the release of an estimated 56 gigatonnes of CO<sub>2</sub> since 1971, or close to two years of emissions at current rates." The claim is meaningless without a point of reference. Presumably the calculation is based on the arbitrary assumption that all nuclear power generation displaces generation from coal-fired power plants.

### Renewable electricity generation

The share of renewables in total power generation rises from 21% in 2012 to 33% in 2040 in the New Policies Scenario, and renewables account for nearly half of new capacity. Renewable electricity generation nearly triples between 2012 and 2040, overtaking gas as the second-largest source of generation in the next couple of years and surpassing coal after 2035.



Investment needed to limit global temperature rise by 2040, according to the IEA.

China sees the largest increase in generation from renewables, more than the gains in the EU, US and Japan combined.

Wind power accounts for the largest share of growth in renewables-based generation (34%), followed by hydropower (30%) and solar (18%).

Biofuels use more than triples. Advanced biofuels, which help address sustainability concerns about conventional biofuels, gain market share after 2020, making up almost 20% of biofuels supply in 2040.

Global subsidies for renewables amounted to US\$121 billion (€97b) in 2013 and are anticipated to increase to nearly US\$230 billion (€184b) in 2030 in the New Policies Scenario, before falling to \$205 billion (€164b)

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## Dangerous hypocrisy of Dutch nuclear legislation

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**NM794.4431** Why do you bother, you will die sometime! That was the incredible remark of the employer when the link was made between my health problems and the handling of small industrial cobalt-56 point sources in 1983. The same can be said about the attitude of legal authorities towards small point source type debris particles with very high activity concentration.

Involved radiation experts concluded that the cobalt-56 incident resulted from a failure to comply with safety regulations. The result was a complete depression of the body, heavy infection of the swollen hands, a lot of hair falling out, mouth infection, teeth loosened and falling out, liver disturbance, stomach aches, and intestinal bleedings. Despite still-existing health problems, it could have been worse – cobalt-56 is a beta-emitting radionuclide with a short half-life and relatively low radiotoxicity.

A criminal complaint was lodged. After 2.5 years of opposition, further prosecution was cancelled on the basis of expected changes in Dutch legislation in 1986. The activity concentration of small point sources was no longer limited. This exemption clause was in conflict with Euratom Council Directive 80/836.

A more dangerous issue in the public domain is the use of americium-241 point sources, which are freely available for purchase. Americium-241 is an artificial radioisotope which is produced in nuclear reactors. The small debris particles of americium-241 oxides – from radioactive Ionisation Chamber Smoke Detectors (ICSDs) – emit alpha radiation with very high activity concentration and

in 2040. In 2013, almost 70% of subsidies to renewables for power were provided in just five countries: Germany, the US, Italy, Spain and China.

Fossil-fuel subsidies totalled \$550 billion (€439b) in 2013 – 4.5 times greater than subsidies for renewables – and are holding back investment in efficiency and renewables. For example, in the Middle East, nearly 2 mb/d of crude oil and oil products are used to generate electricity when, in the absence of subsidies, renewables would be competitive with oil-fired power plants.

Energy efficiency slows energy demand growth. Without the cumulative impact of energy efficiency measures, oil demand in 2040 would be 22% higher, gas demand 17% higher and coal demand 15% higher.

very high radiotoxicity. Radioactive debris particles are included in the waste incineration component of the filling substances of asphalt. About 20% of the so-called “fine dirt” in the air along the roads is formed by the wear products of the asphalt and those oxide particles may be inhaled by members of the public. In physical contact with the well-blooded tissue of mucous membranes and lungs, this radioactive dust can cause fatal cancers.

Along with other small point sources, ICSDs were covered by the exemption clause in Dutch legislation. Much later, in 2006, the sale of ICSDs was banned in the Netherlands. Thus the Netherlands joined a small group of countries – including France, Luxemburg and Switzerland – banning ICSDs in favour of safe optical smoke detectors.

Still there are other problem areas, such as when steel waste scraps are recycled with radioactive oxide slag included in the recycled steel. Radioactive particles can become free when machining and can be inhaled.

Returning to my story – my exposure to cobalt-56 point sources in 1983 was the start of a very long road in politics. In 1987/88 the subject was discussed in the Dutch Parliament. The Minister of Environment did not give correct answers and he delegated the subject to Social Affairs and Employment because employment issues were involved. The chairman of the Committee of Petitions refused in the Second Chamber of Parliament to dispute the integrity of the expert institutes involved. The exemptions regarding activity concentrations of small point sources were used to avoid taking appropriate action.

On seven occasions, written questions regarding the

activity concentration of small point sources were put in the Second Chamber, but still no correct answers were provided. Questions were also put in the Euro-Parliament, but a Dutch Director General on behalf of the Board of the European Committee protected the Dutch authorities.

In June 2000, the Dutch RIVM Institute released a report with estimates of radiation exposure from consumer goods. The result was bizarre – abnormal applications and handling of radioactive sources were not taken into account because they could not be implemented in an analytical model by these so-called scientists. So those issues were simply forgotten.

In the General Consultation – the formal discussion between the Parliament with the minister – in October 2001, the rigid attitude of the responsible officials in answering the Second Chamber could no longer be maintained and it resulted in the announcement of a prohibition of ICSDs which was eventually enforced in 2006.

The speaker of the Second Chamber noted with satisfaction that the additional exemption clause was no

longer present in the new decree – after 15 year of arguing. The minister concluded: “It will be emphasized that the ICSD’s are safe and that this ... is not inspired by unsafe considerations, etc. There is no reason for panic at all!”

However the minister agreed that risks associated with incorrect application and handling conditions could be an argument to hasten replacement of ICSDs. Is this ambiguous or what?! An information campaign to inform the public was later cancelled.

A whistleblower acting in the public interest is not appreciated by a multinational. It cost me my job as a mechanical engineer in the European Research Centre of a Swedish multinational in the Netherlands, my house and income.

Appreciation from the political system was also lacking, all the more so as the political system made dangerous errors time and time again. One of the links between corporate power and the inadequate political response was a Dutch senator who was also a member of the board of the Swedish multinational.

## Nigerien government and Areva agree to uranium deal

**NM794.4433** Niger’s Cabinet approved a uranium production deal with French nuclear group Areva on October 10, after protracted and contentious negotiations. The new 10-year agreement covers the Somair and Cominak mines. Under the deal, Areva agreed to fewer tax breaks and higher royalty rates. The company also agreed to pay to rebuild the road to its mines in Arlit, fund a local development project, and build a new headquarters in the capital Niamey. Plans for Areva to invest in a third mine, at Imouraren, have been put on hold until the uranium price rises.<sup>1</sup>

Despite the concessions from Areva, the agreement continues to provoke discontent amongst civil society, including trade unions. The agreement has been criticised as favourable to Areva, at the expense of the Nigerien population, with allegations that environmental and other significant issues have been left out of the agreement.<sup>2</sup> There have been repeated protests against Areva in recent years in Niger.<sup>3</sup>

In July, campaigners in Niger were arrested shortly before the French president’s visit to Niamey. François Hollande visited to discuss the deployment of French troops in Niger. Around 10 activists, including Ali Idrissa, the national co-ordinator of the Publish What You Pay coalition, and trade union activist Solli Ramatou, were arrested. The day before Hollande’s arrival, the coalition held a joint press conference calling for peaceful demonstrations during Hollande’s visit. They are calling for Areva and the Nigerien government to publish the details of the uranium deal that was struck in May (and approved by the Cabinet in October).<sup>4</sup>

“We condemn the arrests of Nigerien civil society activists by the government,” said Alice Powell from Publish What You Pay. “Niger’s citizens should be free to debate how their natural resources should be managed. It is very disappointing to see the government shut down debate in this manner.”<sup>4</sup>

Security has also been an ongoing issue. Among other incidents, eight employees of Areva and one of its contractors were kidnapped in 2010, and one person was killed and 14 wounded in a car bomb attack at Areva’s Somair mine at Arlit in May 2013.<sup>5</sup>

Reuters reported in September that the US is preparing a possible redeployment of drones in Niger targeting Islamist militants blamed for attacks across the region. The Nigerien government said last year it would welcome the deployment of armed US drones after attacks on the Somair uranium mine and a military barracks in Agadez.<sup>6</sup>

Environmental and health standards are ongoing problems. “Most people know nothing about the risks,” says Idayat Hassan from the Center for Democracy and Development, adding that there is a lack of political will to implement international standards and reduce contamination levels.<sup>7</sup>

A statement issued by protesters in February complained that 90% of Niger’s population lives without electricity while the country “produces enough uranium to light one in every three light bulbs in France.”<sup>8</sup>

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WISE Uranium: [www.wise-uranium.org/upne.html](http://www.wise-uranium.org/upne.html)

Publish What You Pay: [www.publishwhatyoupay.org/where/coalitions/niger](http://www.publishwhatyoupay.org/where/coalitions/niger)

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# NUCLEAR NEWS



Tanya and Michael  
with children.

## Lifetime Achievement Award for Michael Mariotte

Michael Mariotte, President of the Nuclear Information and Resource Service (NIRS), was honored on November 10 by 14 environmental organizations in recognition of his three decades of work to educate the public and lawmakers about the dangers of nuclear power. The award was presented by Ralph Nader.

Among his many achievements over 30 years, Michael led the successful fight to block the Calvert Cliffs-3 reactor project in Maryland. In the 1990s, he initiated a program to support fledgling anti-nuclear groups across Eastern Europe and the former Soviet Union with tens of thousands of dollars in grants and visits by U.S. energy experts to Ukraine, Czech Republic, Bulgaria and Hungary. Drawing upon public awareness of the 1986 Chernobyl reactor disaster, Michael played a major role in the fight to defeat federal 'Mobile Chernobyl' legislation that would have permitted the mass transportation nationwide of nuclear fuel waste, with the outcome hinging on a one-vote margin of victory in the US Senate in 2000.

Michael influenced an entire generation of anti-nuclear activists by bringing the idea of "anti-nuclear action camps" from Europe to the US and helped organize six of them – three in New England and three in Midwest. The Vermont Yankee reactor shutdown announcement came 15 years to the day after the arrests of members of the first New England action camp.

The 14 groups supporting the award are Alliance for Nuclear Accountability, Beyond Nuclear, Center for Study

of Responsive Law, Clean Water Action, Environment America, Friends of the Earth, The Guacamole Fund, Greenpeace, Independent Council for Safe Energy Fund, Institute for Energy and Environmental Research, Nuclear Information and Resource Service, Physicians for Social Responsibility, Public Citizen, Sierra Club and World Information Service on Energy.

Former NIRS board chair Paxus Calta said: "MM was a visionary with respect to Eastern Europe, which is how we met. He was one of the few people in the US who saw what was completely apparent in Czechoslovakia, that without orders for new reactors in the 1990s in the west, the newly liberated former communist countries were the place nuclear engineering infrastructure could be maintained. And just as Westinghouse and GE's focus moved to eastern Europe. MM designed (with me) and implemented the east European small grant program, he got money from Ted Turner and others, recognizing that relatively small contributions from the west could have tremendous impact in the east. We gave out 40 grants, funding everything from bike tours, to direct action camps, micro anti-nuclear university and east/west internships. Some of the most important reactors in the world in this fight were the pair of units affectionately called K2R4, which were in Khmelnytsky and Rivne in the Ukraine.

"One of the most important interns to come to the micro anti-nuclear university was Tanya Murza also from Rivne. We stopped the western funding for the reactors at K2R4 and basically knocked the east European development bank (the EBRD) out of the business of paying western companies to complete 25 unfinished Russian reactors. And Tanya stayed and she and MM had two charming kids. MM has been a hero and inspiration to a whole bunch of people including me."

[www.nirs.org/about/  
mmlifetimeachievementawardpr111014.pdf](http://www.nirs.org/about/mmlifetimeachievementawardpr111014.pdf)

<http://funologist.org/2014/11/11/a-cardboard-hero-of-the-revolution-button/>

<http://safeenergy.org/2014/11/12/on-awards-and-elections/>





## UK: Waste transport ship fire

A ship carrying intermediate-level radioactive waste from Dounreay to Belgium which caught fire and began drifting in the Moray Firth, near Scotland, has raised new concerns about plans to move waste and fuel from Dounreay to Sellafield by sea.

The MV Parida was transporting a cargo of cemented radioactive waste when a fire broke out in a funnel. The blaze was extinguished, but 52 workers were taken from the Beatrice oil platform by helicopter as a precaution. The Nuclear Decommissioning Authority said the platform was evacuated because the ship may have crashed into it, but not out of any concerns about radioactive contamination.<sup>1</sup>

Questions were asked about why this ship set out given the severe weather warnings. Highlands Against Nuclear Transport said the incident was a warning about transporting radioactive cargoes by sea, and called for proposals to move other nuclear waste from Dounreay to Sellafield by sea to be scrapped. Angus Campbell, the leader of the Western Isles Council, said the Parida incident highlighted the need for a second coastguard tug in the Minch. "A ship in similar circumstances on the west coast would be reliant on the Northern Isles-based ETV [emergency towing vessel] which would take a considerable amount of time to get to an incident in these waters."<sup>2</sup>

Cumbrians Opposed to a Radioactive Environment (CORE) say the contentious plans to ship some 26 tonnes of 'exotic' nuclear materials (irradiated and unirradiated plutonium and highly enriched uranium fuels) from Dounreay to Sellafield have moved a major step closer following recent sea and port trials in Scottish waters undertaken by the NDA's ship Oceanic Pintail which is based at Barrow-in-Furness.<sup>3</sup>

– Reprinted from *nuClear news No.68, Nov 2014*, [www.no2nuclearpower.org.uk/nuclearnews/NuClearNewsNo68.pdf](http://www.no2nuclearpower.org.uk/nuclearnews/NuClearNewsNo68.pdf)

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## UK: Leaked Sellafield photos reveal radioactive threat

*The Ecologist* has published a set of leaked images from an anonymous source showing decrepit nuclear waste storage facilities at the Sellafield nuclear plant. The images show the state of spent nuclear fuel storage ponds that were commissioned in 1952 and used



Rust, corrosion, and weeds growing in cracks in the concrete walls of nuclear waste storage ponds at Sellafield.

until the mid-1970s to store spent fuel until it could be reprocessed. They were abandoned in the mid-1970s and have been left derelict for almost 40 years.

The ponds are now undergoing decommissioning but the process is fraught with danger. Nuclear expert John Large warned that if the ponds drain, the Magnox fuel will ignite and that would lead to a massive release of radioactive material.

*Oliver Tickell, 27 Oct 2014, 'Leaked Sellafield photos reveal 'massive radioactive release' threat', [www.theecologist.org/News/news\\_analysis/2611216/leaked\\_sellafield\\_photos\\_reveal\\_massive\\_radioactive\\_release\\_threat.html](http://www.theecologist.org/News/news_analysis/2611216/leaked_sellafield_photos_reveal_massive_radioactive_release_threat.html)*

## 143 states support UN call for DU clean-up assistance

143 states voted in favour of a fifth UN General Assembly First Committee resolution on DU weapons, which calls for states to provide assistance to countries affected by the weapons. Four states opposed the resolution, and 26 abstained (including Germany, which has previously supported similar resolutions).

The resolution, which built on previous texts with the addition of a call for 'Member States in a position to do so to provide assistance to States affected by the use of arms and ammunition containing depleted uranium, in particular in identifying and managing contaminated sites and material' was submitted by Indonesia on behalf of the Non-Aligned Movement. The resolution also recognised the need for more research on DU in conflict situations.

Predictably, the UK, US, France and Israel voted against the resolution. It has recently emerged that the US may again use DU in Iraq.

International Coalition to Ban Uranium Weapons coordinator Doug Weir said: "The reasons given for abstaining have become increasingly feeble, and now seem to revolve around paradoxical arguments calling for more research while opposing a text that calls for exactly that. The people of Iraq and other affected states deserve far better."

[www.bandepleteduranium.org/en/143-states-support-call-du-vote-at-un-1comm](http://www.bandepleteduranium.org/en/143-states-support-call-du-vote-at-un-1comm)

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# SHOOT FIRST, ASK QUESTIONS LATER

## THE HISTORY OF DEPLETED URANIUM WEAPONS USE AND RESEARCH

1960

**Early 1960s** US army tests DU alloys for weapons use.

1970

**1960s-early 1970s** US research programme produces first DU rounds.

**1971** Internal UK government memo notes that DU dust is toxic.

**1975** US trial M774 DU tank round in joint tests with UK/West Germany.

**Mid 1970s** US Navy and Air Force test DU rounds.

**1975** US Air Force legal review of 30mm DU rounds: DU for use against armoured targets, should not be used against human targets if other weapons are available.

1980

**1978** US Navy Phalanx DU ammunition production begins. A10 aircraft with DU rounds deployed to Europe.

**1985** First Soviet DU round, the 3VBM-13.

1990

**1987** US develops DU armour for M1 Abrams tank.

**1991** First UK DU round enters service.

2000

**1993** US provides France with 1000 tonnes of DU for its DU rounds.

**1998** Experiments show that DU can turn human cells cancerous.

**2001** UK Royal Society publish report into DU radiation risks. Calls for research to improve knowledge on DU risks.

**2001** UNEP field report on DU in Kosovo, first thorough field investigation. US only provides coordinates after two interventions by Kofi Annan. Many recommendations still not implemented by 2010.

**2001** WHO monograph on DU. Focus on lung cancer and kidney damage. Highlights many uncertainties, calls for research into genotoxicity of DU, recommends management of contaminated sites.

**2001** Decontamination begins in Montenegro, in first project of its kind.

**2002** UK Royal Society publishes second report. Chemical risk to kidneys and environmental risks. Neither investigates genotoxic effects of DU.

**2002** UNEP report on Serbia and Montenegro. Many recommendations still not implemented by 2010.

**2003** UK MoD Independent Review Board examines knowledge gaps identified by Royal Society: research makes significant contributions but civilian health effects not investigated. Further research recommended but not completed.

**2003** UNEP report on Bosnia and Herzegovina finds DU in groundwater. Many recommendations still not implemented by 2010.

**2004** US Capstone study examines DU dust generation, provides key risk data but also new uncertainties.

**2005** UNEP and Iraqi Radiation Protection Centre start to look at DU sites in Iraq. Hampered by lack of resources, security situation and US refusal to provide targeting data.

**2005** US military experiment: mice exposed to DU more likely to develop leukaemia.

**2007** UNEP Iraq report highlights risks from contaminated scrap metal.

**2007** UN General Assembly: concern over potential health risks from DU.

**2008** US Congressional committee criticises VA study on veterans: too small, no control group and failure to report cancer in one subject.

**2008** European Parliament: moratorium leading to a ban.

**2009** Belgium bans DU weapons, followed by Costa Rica.

2010

**2014** Iraq calls for assistance and global treaty ban. Still no robust studies into civilian exposure to DU.



### IRAQ 1991

286,000kg fired US/UK\*

### BOSNIA 1994-95

1,200kg fired US (NATO)\*

### SERBIA, KOSOVO, MONTENEGRO 1999

5,700kg fired US (NATO)\*



### IRAQ 2003

118,000kg fired US/UK\*

\*Figures based on data released by US and UK militaries. Does not include conflicts where DU use currently unconfirmed: Somalia, Chechnya, Afghanistan and Georgia.



**ICBUW**  
icbuw.org

## Activists hold up uranium train in Hamburg

Anti-nuclear activists stopped a trainload of “yellow cake” uranium in Hamburg harbour, Germany, for more than seven hours earlier this month.<sup>1</sup> The train was taking 15 containers of the ore from Kazakhstan to Malvési in southern France for processing, a frequent run. While two activists suspended themselves over the railway track, eight were temporarily arrested on the ground. Activists have demanded that Mayor Olaf Scholz, a Social Democrat, close Hamburg harbour to nuclear shipments, as the city of Bremen has done. From November 28–30, an international meeting to oppose uranium transportation will be held in Münster, hosted by SOFA Münster ([www.sofa-ms.de/home.html](http://www.sofa-ms.de/home.html)).

Meanwhile, an alliance of German environment activists plans to try to prevent the export of CASTOR containers with highly radioactive fuel pebbles to the USA from Jülich and Ahaus. When the supervisory board of the Jülich research centre met on November 19 to discuss what to do with the CASTORS there, activists mounted a protest outside. The catchcry of the anti-nuclear movement, “Nothing in, nothing out!” is the basic tenet of the new alliance, currently comprising 13 groups, with more likely to come on board.

1. <http://nuclear-news.net/2014/11/12/activists-hold-up-uranium-train-in-hamburg/>

## German authorities stuff up nuclear exercise

A secret large-scale simulation of an atomic disaster at a German nuclear power plant in Lingen ended poorly on 17 September because crisis managers at national and state levels fought over responsibilities. The outcome was revealed by the investigative newspaper Taz in October, citing 1,000 pages of internal ministerial protocols and files.

In a real situation a radioactive cloud would have moved southeast from Lingen across Osnabrück, Steinfurt, Warendorf, Gütersloh and Bielefeld before authorities had alerted people to the danger. Only because of the

assumed wind direction, cities like Münster and Hamm were spared the first atomic cloud; had a different wind been assumed they, too, would have been hit by the fallout unprepared.

Taz reported that despite this disaster the federal environment ministry had drawn no conclusions from the failure of the emergency exercise by time it published its story.

Willi Hesters of the Aktionsbündnis Münsterland gegen Atomanlagen (Münsterland Alliance Against Atomic Installations) said: “This exceeds the worst fears. It appears that in a real situation the German authorities appear to be unable to adequately inform and protect the population in case of a maximum credible accident. Why was this exercise kept secret? Why have no consequences been drawn yet? If the authorities are unable to protect the population in case of grave atomic accidents, the federal environment ministry must immediately close down all atomic installations.”

The simulated worst case scenario in Lingen, where there is also a nuclear fuel factory, is particularly controversial because earlier this year the precautionary areas for atomic accidents were drastically enlarged. Under the new rules, all areas within a 20 km radius of nuclear power stations would have to be evacuated within 24 hours; within a radius of 100 kilometres people would have to stay indoors and take iodine tablets.

Matthias Eickhoff from the activist group SOFA (Immediate Atomic Shutdown Münster) said: “If communication doesn’t work at the highest level between federal and state governments, how is it supposed to work at lower level between the states, counties and municipalities? A disaster beyond all expectations is unmanageable at administrative level.”

[www.taz.de/Geheime-Uebung-von-Bund-und-Laendern/!148295/](http://www.taz.de/Geheime-Uebung-von-Bund-und-Laendern/!148295/)

<https://linksunten.indymedia.org/en/node/127362>

# 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](http://www.wiseinternational.org)

## Subscriptions:

US and Canada based readers should contact NIRS for details on how to receive the Nuclear Monitor ([nirsnet@nirs.org](mailto:nirsnet@nirs.org)).

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