

Nuc...*brief & link*

2005-11-11 UT 20:05

NFCC Nuclear Fuel Cycle Consulting

President Bush's pick to oversee the troubled Yucca Mountain nuclear waste dump in Nevada said the country should move toward recycling -- not just burying -- spent nuclear fuel. **Edward Sproat**, a nuclear industry executive tapped to head the Energy Department's Office of Civilian Radioactive Waste Management, made the comments at his Energy Committee confirmation hearing. "If the country decides to go and close the fuel cycle, go to full reprocessing like our original intent was back in the 1960s and early 1970s, the impact would be a significant reduction in the amount of high-level radioactive waste that would have to be disposed of in a deep geological repository," Sproat said in answering a question from Sen. Jeff Bingaman.

http://www.nctimes.com/articles/2005/11/11/special_reports/science_technology/21_18_0111_10_05.txt

The Carnegie International Non-Proliferation Conference discussed a reform of the nuclear fuel supply. James **Timbie** opened the panel by focusing on the **establishment of a virtual or physical fuel bank overseen by the IAEA**. The fuel bank would be based on commitments made by suppliers to the IAEA and the client state receiving the enriched material from the IAEA. Thus, the IAEA would be use as a guarantor maintaining a regular supply schedule and ensure payment. Valentin **Ivanov focused on a "proliferation-resistant" fuel cycle**. Ivanov added that current proposed solutions are not adequate because they are based solely on political mechanisms to alleviate the problem. Former IAEA Deputy Director-General Pierre **Goldschmidt proposed a bilateral framework** instead of a multilateral structure. Basically, Goldschmidt emphasized a "generic" export license to states that meet basic non-proliferation criteria that allows the states to import fuel from a variety of suppliers. **Presentations** from http://www.carnegieendowment.org/static/npp/2005conference/2005_conference.htm

NUCLEAR POLICY

U.S. Secretary of Energy S. Bodman and Russian Federal Atomic Energy Agency Director, A. Rumyantsev released a joint statement on the **status of the Bratislava Nuclear Security Initiative**. They announced that progress is being made under the Initiative and expect a full report to be completed for

transmittal to Presidents Bush and Putin by 15 December 2005. **Press release:** http://www.doe.gov/engine/content.do?PUBLIC_ID=19146&BT_CODE=PR_PRESSRELEASES&TT_CODE=PRESSRELEASE

The **Carnegie International Non-Proliferation Conference** ended in Washington DC. Speeches, transcripts, videos are available from special website

http://www.carnegieendowment.org/statistics/npp/2005conference/2005_conference.htm

. Joseph Cirincione delivered a multimedia presentation on "A Brief **History of the Atomic Age.**" Mohamed **ElBaradei** discussed his top priorities. Secretary of Energy Samuel **Bodman** delivered a major policy address. Annalisa **Giannella**, the European Union's High Representative Javier Solana's Personal Representative for WMD, spoke about the **EU's multilateral approach.** Topics covered were also **Iran, North Korea,** the future of **verification,** preventing catastrophic **terrorism,** the **U.S. nonproliferation policy** and **trade controls.**

URANIUM

Australia: Advocates in favor of uranium mining are taking advantage of strong **community support in north-west Queensland** to step up pressure on the State Government **to grant a mining licence.**

<http://www.abc.net.au/news/newsitems/200511/s1504409.htm>

Pan African Mining Corp. announced that it has now entered into a formal agreement with L'Office des Mines Nationales et des Industries Strategiques OMNIS, for the establishment of a joint venture with respect to exploration, development and exploitation of certain **prospective uranium properties in Madagascar.** **Press release:**

http://www.marketwire.com/mw/release_html_b1?release_id=100836

NUCLEAR FUEL

U.S. Representative Judy **Biggert** (Rep., Illinois), an advocate for advanced nuclear energy technologies, said, she "secured \$80 million for the **Advanced Fuel Cycle Initiative,** a program that promises to reduce the volume and toxicity of spent nuclear fuel in an environmentally sensitive and proliferation-resistant way. **This funding will help Argonne expedite development of the UREX+ process** and technologies, which domestic and international experts acknowledge is the best method, both technically and economically, for recycling spent nuclear fuel". **Press Release:**

<http://judybiggert.house.gov/News.asp?FormMode=Detail&ID=575>

REACTORS, NPPs, UTILITIES

The NRC has begun a special inspection of electrical problems at the D. C. Cook NPP associated with the automatic shutdown of the plant's Unit 2 on Tuesday. The reactor shut down automatically when the main generator failed. Following the shutdown, two separate circuit breakers failed to operate properly to provide power to certain safety systems. **Press release:**

<http://www.nrc.gov/reading-rm/doc-collections/news/2005/05-043iii.html>

South Africa's Koeberg nuclear station was shut due to technical problems. Large parts of the Western Cape Province including many districts of Cape Town were plunged into chaos after one of two French-built reactors was shut for repairs. The second tripped. <http://za.today.reuters.com/news/NewsArticle.aspx?type=topNews&storyID=200>

[5-11-11T152834Z_01_BAN153272_RTRIDST_0_OZATP-NUCLEAR-SAFRICA-KOEBERG-20051111.XML](http://www.britishnucleargroup.com/content.php?pageID=31&nID=448)

NUCLEAR INDUSTRY

The Nuclear Regulatory Commission is considering revisions to clarify its regulations concerning the **licensing and approval processes for nuclear power plants such as Early Site Permits, Design Certifications and Combined Licenses** and would make the NRC's licensing process more effective and efficient for future applicants. The **proposed rule is described in a staff paper available** on the web site: <http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2005/>.

China: The signing for the contracts for construction and supervision of the second phase **expansion project of the Qinshan Nuclear Power Station** was held in Beijing. The expansion project concerns units 3 and 4. http://english.people.com.cn/200511/11/eng20051111_220656.html

STORAGE AND WASTE

British Nuclear Group has used rescue submarine technology, of the same type that freed seven Russian sailors from the bottom of the sea earlier this year, to take a huge **step toward wiping up to seven years off its Sellafield clean-up schedule**. The submersible remotely operated vehicle negotiated heavily alkaline waters and very poor visibility to survey the contents of a Magnox fuel storage pond, enabling engineers this week to reach a

clean-up milestone by retrieving the first fuel for storage at Sellafield's Fuel Handling Plant for 15 years. Press release: <http://www.britishnucleargroup.com/content.php?pageID=31&nID=448>

Nuclear Regulatory Commission is closely monitoring efforts by Southern Nuclear Operating Co. to determine the **disposition of pieces of spent nuclear fuel which cannot be accounted for in the spent fuel storage pools** at the Hatch nuclear power plant. The NRC in February had ordered all commercial nuclear power plant licensees to inventory their spent fuel pools. **Release:** <http://www.nrc.gov/reading-rm/doc-collections/news/2005/05-043ii.html>

The U.S. Department of Energy will be required to make **progress reports to Congress four times a year on its efforts to build a waste-treatment plant at Hanford nuclear reservation.** The so-called **vitrification plant** is being built to convert millions of gallons of highly radioactive waste — the remnants of decades of plutonium production for the nation's nuclear weapons arsenal — into glasslike logs for permanent disposal in a nuclear waste repository. <http://www.kgw.com/sharedcontent/APStories/stories/D8DPV6TO0.html>

Great Britain: The Committee on Radioactive Waste Management (CoRWM) has produced a Discussion Guide explaining the different options for dealing with radioactive waste in a way which will protect people and the environment. Guide available at <http://www.corwm.org.uk/content-772>

DECOMMISSIONING, CLEAN-UP

The US **United Steelworkers** has filed **an extensive information request** under the Freedom of Information Act from the Department of Energy concerning accidents, security breaches, radiation releases and other environmental contamination that occurred during the **DuPont Company's 1954 to 1989 operation of the Savannah River Site**. DuPont indicated on October 11 its intent to once again play a role in the plant's operation and bid on \$7.5 billion of DOE contracts. **Press release:** <http://www.uswa.org/uswa/program/content/2565.php>

Great Britain: A pioneering invention has successfully started the next stage in **decommissioning of Dounreay's Prototype Fast Reactor**. Inspired by a child's toy, it is being used to drain liquid metal from parts of the pipework that proved difficult to reach by normal means. UKAEA **press release:** http://www.ukaea.org.uk/press/2005/09/11_05.htm The UKAEA at Winfrith have recently hosted an event to inform potential bidders of their intended approach for the final decommissioning of its landmark reactor. The **decommissioning of the Steam Generating Heavy Water Reactor is the largest single element of the Winfrith site closure program** and will be the final contract awarded for the decommissioning of this facility. **Press release:** http://www.ukaea.org.uk/press/2005/03/11_05.html

REPOSITORIES

Utah: Gov. Jon Huntsman, bent on protecting Utah from becoming a national dumping ground for radioactive waste, announced he **will reject plans to double the size of Envirocare**, a landfill for government and reactor cleanup waste in Tooele County. <http://www2.tooeletranscript.com/index.php?option=content&task=view&id=8506&Itemid=54>

MISCELLANEOUS

Last month **John Loughhead, executive director of the UK Energy Research Centre** has been appointed a member of the Government's newly formed UK Energy Research Partnership, a high level research and innovation forum lead by the Government's Chief Scientific Advisor. Thursday saw the publication of an authoritative, multidisciplinary **report which aims to provide the government with a coherent, feasible solution to the acknowledged problem of the UK's looming energy gap**. The report, written by **John Loughhead**, is the result of a multidisciplinary consensus meeting between 150 scientific, technical, economic and sociological experts. **The Report says: Nuclear fission energy is a proven and reliable technology that will inevitably have a key role in a future clean energy mix. "Throw away the emission targets [of Kyoto] and there is no problem. But keep them and the nuclear option has to be the way,"** John Loughhead told a news conference. **Presentation, report:** <http://www.geolsoc.org.uk/template.cfm?name=PR60>

Italian Prime Minister Silvio **Berlusconi**, appearing at the First Notaries of the EU Conference said: **"Only Europe can decide to give life to a new project of realization of nuclear plants because the individual countries do not have the strength to and the word 'nuclear' frightens everyone, but it is an essential need of the future."** Text provided by the Italian Prime Minister's office: <http://www.agi.it/english/news.pl?doc=200511101434-0111-RT1-CRO-0-NF82&page=0&id=agionline-eng.italyonline>

AND FINALLY THIS

Technology Review, the journal of the **Massachusetts Institute of Technology** reports about a talk Nobel Peace Prize

laureate Mohamed ElBaradei gave at MIT last week: "Traditional nuclear power plants are very expensive to build, which can be a serious obstacle to their construction in poor countries. One **solution being proposed, according to ElBaradei, is to build hundreds of small nuclear power plants, each designed to serve a single town.**" "It's good to have a reactor that requires a minimum of maintenance and refueling" for remote locations in some situations, says Mujid Kazimi, a nuclear engineer at MIT. He says that similar small reactors are under development in Argentina and Brazil, and Toshiba has recently offered to build one for an Alaskan town." The article with the headline *Small Nuclear*: http://www.technologyreview.com/BizTech/wtr_15865,296,p1.html

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Nuc...briefing

NFCC 2005-11-11

Ref.: **Advanced Fuel Cycle Initiative AFCI**

The U.S. Senate and House of Representatives conferees agreed Nov 7 to the Energy and Water Appropriations conference report for fiscal year 2006. It appropriates \$80 mio to the Advanced Fuel Concepts Initiative (= Advanced Fuel Cycle Initiative!).

AFCI is directed by the Office of Nuclear Energy, Science and Technology of the Department of Energy. Shane Johnson is the Acting Director of the Office. He was appointed to this position in May 2005 (Biography: <http://www.ne.doe.gov/bios/bio-johnsonNE1.html>). Homepage of Office: <http://www.ne.doe.gov/>. The Office gets independent advice from the **Nuclear Energy Research Advisory Committee (NERAC)** <http://www.ne.doe.gov/nerac/neracoverview1a.html> .

The **budget request** for 2006 supports the newly established Idaho National Laboratory INL, which combines the resources of the former Idaho National Engineering and Environmental Laboratory and the former Argonne National Laboratory-West. This new lab began operations on February 1, 2005, and will lead much of the Department's exploration into advanced nuclear reactor and fuel cycle technology.

The DoE's AFCI was launched in 2003 as an outgrowth of the Advanced Accelerator Applications (AAA) Program. **AFCI is a focused research and development program to support the implementation of an advanced nuclear fuel cycle and to provide for an effective transition from the current once-through cycle.** The main goals are to:

- Reduce the long-term radiological impact of waste;
- Enable development of a simpler, cheaper repository;
- Reduce proliferation risk; and
- Improve long-term prospects for nuclear power.

The AFCI program includes a team of national laboratories, industrial partners and universities. Participating laboratories include Argonne, Los Alamos, Brookhaven, Oak Ridge, Sandia, Idaho, Idaho Accelerator Center, and the Savannah River Site (SRS). Industry partners include Burns & Roe Enterprises, Inc. and General Atomics. University Partners include the Universities of Nevada, Michigan, Berkeley, and Texas.

AFCI homepage is at http://afci.sandia.gov/AFCI_index.htm. **AFCI web sites** are at

- **Argonne** ("development and assessment of technologies for improved management of spent nuclear fuel"): <http://www.ne.anl.gov/research/afc/>
- **Idaho**: ("the nation's leading center of nuclear energy research and development") <http://nuclear.inl.gov/programs.shtml>
- **Los Alamos** (focus transmutation): <http://afci.lanl.gov/aboutaaa.html>.
