

## News from Beyond Nuclear

[www.beyondnuclear.org](http://www.beyondnuclear.org)

For Immediate Release: March 8, 2010

Linda Gunter: 301.455.5655 (cell). 301.270.2209 x 2 (o)

### **French Nuclear Reactor Planned for U.S. Vulnerable to Major Accident**

TAKOMA PARK, MD – Confidential documents revealed to French activist groups this week show that the design for the French Evolutionary Power Reactor (EPR and known in Europe as the European Pressurized Reactor) presents a serious safety risk. The documents, leaked by a source inside the French national utility, Électricité de France (EDF), confirm that corporate profitability is being placed ahead of public safety in the rush to deliver a new reactor design at minimum cost. Worse still, the documents show that the Areva-designed reactor has been approved for construction – and marketed around the world – despite inside knowledge about the reactor’s vulnerability to a major accident.

Originally slated for six U.S. sites (and seven reactors) the EPR remains viable only at the Calvert Cliffs site in Maryland, where it is the reference application which would streamline the way for other EPRs elsewhere. It is under construction in Finland and France, where both sites are mired in huge delays, technical flaws and massive cost-over-runs.

“These revelations come on the heels of earlier leaked disclosures showing the EPR is structurally vulnerable to aircraft impacts and the questions raised by the British, Finnish and French safety authorities about the design issues in the computer control of the reactor,” said Linda Gunter who specializes in researching the French nuclear sector for Beyond Nuclear. “This confirms the inherent dangers that still haunt this experimental nuclear technology,” said Gunter. “We see a pattern placing nuclear economics ahead of safety margins is still rife throughout a now global nuclear energy industry,” she continued. “It is unacceptable to place profits over public safety given the catastrophic consequences inherent in a nuclear accident,” she said. “The EPR should not be built in the U.S., or anywhere else,” she concluded.

A group of scientific experts, retained by the French anti-nuclear network, Sortir du nucléaire, have analyzed the leaked EDF documents (available in French at: <http://www.sortirdunucleaire.org/index.php?menu=actualites&sousmenu=dossiers&soussousmenu=EPRrevelations&page=index>) and have drawn the following preliminary conclusion:

Shortcuts in the design mean that some operating modes could cause the EPR reactor to explode because of a control rod ejection accident (the control rod clusters moderate the nuclear reaction). The operating modes have been developed, according to the French network, based on

priorities of economics so that the reactor can adapt to electricity demand.

The EPR reactor design seems to increase the risk of a Chernobyl-type accident, which would lead to the breach of containment and mass dispersion of radionuclides into the environment. The French network called for an immediate halt to further EPR development in Finland and France and for the French government to cease its aggressive marketing and promotion of nuclear technology around the world.

-30-

## **BACKGROUND**

### **The accident scenario in detail:**

According to calculations by EDF and Areva, the reactor's RIP (Instant Return to Power) control mode and the control rod cluster configuration can induce a rod ejection accident during low-power operation, and lead to the rupture of the control rod drive casing (i). This rupture would cause the coolant to leak outside the nuclear reactor vessel. Such a loss of coolant accident (LOCA - a very serious type of nuclear accident) would damage a large number of fuel rods by heating fuel pellets and claddings (ii), and thus cause the release of highly radioactive steam into the containment. So there is a great risk of a criticality accident resulting in an explosion (iii), the reactor power being increased in an extremely brutal way. Following the ejection of control rod clusters during low-power operation, the reactor emergency shutdown may fail (iv). Whatever the configuration of the control rod clusters, a rod ejection accident induces a high rate of broken fuel rods and therefore a high risk of a criticality accident (v).

For more details, see the documents disclosed by an anonymous EDF source (especially document No. 1) on our website:

<http://www.sortirdunucleaire.org/index.php?menu=actualites&sousmenu=dossiers&soussousmenu=EPRrevelations&page=index>

### **Press Contacts:**

English-speaking Media: Steven Mitchell, + 33 (0) 9 52 49 50 22

German-speaking Media: Jean-Yvon Landrac, + 33 (0) 6 87 30 41 10

Marc Saint-Aroman, +33 (0) 5 61 35 11 06

Charlotte Mijeon, +33 (0) 6 75 36 20 20

Nuclear physicists: Monique and Raymond Sené, +33 (0) 1 60 10 03 49

### **Documents to download:**

- 1 - Summary - “Une technologie explosive : l'EPR” (anonymous and undated)
- 2 - “Bilan de la phase préliminaire de l'étude d'EDG FA3 et perspectives”(EDF SEPTEN May 2009)
- 3 - “EPR – Gestion combustible – Lot 1 – Revue de conception du schéma de grappes FA3 du 25/10/2007”
- 4 -“EPR FA3 – Synthèse de l'étude de faisabilité de l'accident d'éjection de grappe” (EDF SEPTEN September 2007)
- 5 - “EPR FA3- Synthèse des voies de sortie de la problématique éjection de grappe” (EDF SEPTEN July 2007)
- 6 – Working paper: “Présentation synthétique de l'EPR” (EDF SEPTEN April 2004)
- 7 - “Note de présentation de la deuxième revue de projet radioprotection EPR” (EDF, Spring 2004)
- 8 - “Marges disponibles pour les activités d'exploitation du REP par rapport aux risques de criticité” (EDF SEPTEN April 2009)

**Notes :**

- i See. paragraph 6.1.6 Document No. 4
- ii Cf. Table 3, Document No. 4
- iii See Document n°4, Document n°5 Part 2, « Rapport Préliminaire de Sûreté EPR 15.2.4.e »
- iv See Document n°2, note 9
- v See Document n°2, note 8.2.1

--

Charlotte Mijeon  
International Relations Representative  
+ 33 6 75 36 20 20

Réseau "Sortir du nucléaire" / French Nuclear Phaseout Network  
Federation gathering 872 NGOs and organizations  
[www.sortirdunucleaire.org](http://www.sortirdunucleaire.org)  
[www.dont-nuke-the-climate.org](http://www.dont-nuke-the-climate.org)  
[www.chernobyl-day.org](http://www.chernobyl-day.org)

-30-

Beyond Nuclear aims to educate and activate the public about the connections between nuclear power and nuclear weapons and the need to abandon both to safeguard our future. Beyond Nuclear advocates for an energy future that is sustainable, benign and democratic. The Beyond Nuclear team works with diverse partners and allies to provide the public, government officials, and the media with the critical information necessary to move humanity toward a world beyond nuclear.

Contact information:

Beyond Nuclear  
6930 Carroll Avenue, Suite 400  
Takoma Park, MD 20912  
Tel: 301.270.2209 Fax: 301.270.4000  
Email: [info@beyondnuclear.org](mailto:info@beyondnuclear.org)  
Web site: [www.beyondnuclear.org](http://www.beyondnuclear.org)