



Savannah River Site Watch

**Savannah River Site Watch**

<http://www.srswatch.org/>

Columbia, South Carolina

For Immediate Release

June 23, 2014

**U.S. DOE Environmental Meeting on June 24 on Import to Savannah River Site (SRS) of German High-Level Nuclear Waste; DOE Wrongly Claims there would be a Plan for its “Disposition” in the US**

**Germany Must Halt Plans for the Unprecedented Export of German Commercial Spent Fuel, via Charleston, South Carolina, for Dumping at SRS; Violates German Law, European Commission Directive on Nuclear waste Management**

***Federal Register Notice of June 4: <http://www.gpo.gov/fdsys/pkg/FR-2014-06-04/pdf/2014-12933.pdf>***

Columbia, SC – The U.S. Department of Energy (DOE) will hold a public meeting on June 24 on what is believed to be the first import into the United States from a foreign country (Germany) of highly radioactive commercial spent nuclear fuel. There is no disposition path in the United States for Germany’s highly radioactive nuclear waste and there is concern that DOE is complicit in Germany’s plan to illegally dump a daunting nuclear waste problem on the U.S.

DOE provided more details on the proposed import in a June 4 Federal Register notice about a June 24 public meeting to be held in North Augusta, South Carolina, near the 310-square mile Savannah River Site (SRS). DOE proposes to import 455 large storage casks of highly radioactive German spent fuel over a period of three years via the port at Joint Base Charleston in Charleston, South Carolina. The Federal Register notice states that an “environmental assessment” (EA) would be prepared to “analyze the potential environmental impacts of a proposal to accept, process, and disposition” of the import of spent fuel.

“We do not want foreign nuclear waste dumped in South Carolina when the best way forward is for Germany to follow its own law that requires domestic disposal,” said Tom Clements, director of Savannah River Site Watch ([www.srswatch.org](http://www.srswatch.org)), a public interest group located near SRS. “This is a bad idea from an environmental and proliferation perspective and it must be canceled by both Germany and DOE.”

The spent fuel is from two commercial power reactors, the Arbeitsgemeinschaft Versuchsreaktor (AVR) reactor, which operated from 1967 to 1988, and the Thorium High Temperature Reactor (THTR)-300, which operated from 1983 to 1989. Those experimental gas-cooled electricity production commercial reactors used a spherical graphite nuclear fuel which originally contained about 900 kg of US-origin highly enriched uranium (bomb-grade uranium). Germany has had trouble in managing the material and since 2012 Germany has pursued export of the 900,000 highly radioactive spent fuel balls to the US.

According to Savannah River Site Watch (SRS Watch), a public interest group located near SRS, the planned export of commercial spent fuel from Germany violates the “Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management,” and an associated European Union directive (2011/70/EURATOM) which requires high-level waste to be disposed of within the borders of states where the waste was created.

In parallel with the EU directive, under German law passed in 2013 - Endlagersuchgesetz (Nuclear Waste Repository Site Selection Act) - it is illegal to send spent fuel abroad for reprocessing and disposal.

As an end-run to applicable laws and regulations, Germany and DOE are now trying to redefine the prototype AVR and THTR reactors as “research” reactors 25 years after they closed. A confidential analysis on this matter has evidently been prepared by the German government but SRS Watch has not been able to obtain it.

To make matters worse, one option is to reprocess the spent fuel in the H-Canyon reprocessing plant at SRS. That facility, which produced highly enriched uranium for US nuclear weapons, is not regulated by the US Nuclear Regulatory Commission or monitored by the International Atomic Energy Agency (IAEA). The DOE’s H-Canyon is the last DOE reprocessing plant in operation and has never reprocessed commercial spent fuel in any form.

“While DOE is presenting the import of this spent fuel as step being taken for nuclear non-proliferation reasons, it is clear that the main driver is the lack of will by Germany to properly address its own nuclear waste problem,” said Tom Clements, director of Savannah River Site Watch. “While some at SRS are eyeing the large sum of money that could be made on processing the spent fuel at SRS, Germany is legally obligated not to dump their nuclear waste problem at an unsafeguarded reprocessing plant at the Savannah River Site.”

According to SRS Watch, given a halt to plans to develop a high-level waste repository - Yucca Mountain - in the United States and no final disposal facility at SRS, the Federal Register notice is erroneous as there is no disposition plan for this waste nor any other high-level waste now at SRS. The only option for the waste, even if processed, would be long-term storage in one problematic form or another.

“DOE is totally erroneous in presenting that a disposition path exists in the U.S. as such is clearly not the case,” said Clements. “DOE must clarify that there is no known disposition path in the U.S. for the German commercial nuclear waste being considered for import. If Germany ships the waste to SRS it will have no disposition path even if the uranium is removed, which puts Germany in the position of illegally dumping nuclear waste.”

According to a memo from SRS - see below - Germany has paid \$10 million to the Savannah River National Lab to develop a new reprocessing technique that could have proliferation implications. “The non-proliferation cure - development by Germany the US of a new reprocessing technique and dumping the waste at SRS - is worse than the disease - leaving the waste in Germany for domestic disposal,” said Clements.

The environmental meeting on the proposal will be held on Tuesday, June 24, 2014, from 6:30 p.m. to 9:00 p.m. at the North Augusta Community Center, 495 Brookside Drive, North Augusta, South Carolina 29841. The notice also includes information as to where written comments can be sent. The meeting is

to gather comments on a draft Environmental Assessment to be prepared.

SRS Watch encourages the public to attend the “scoping meeting” and make comments against both the proposed import of the German waste and also the trend of SRS to accept foreign nuclear waste and plutonium.

The notice mentions three possible ways to manage and process the spent fuel but avoids mentioning that as no final disposition path exists it would stay at SRS, raising public concern about the proposal and larger issue of importation of the waste to SRS.

“DOE must fully explain how this proposal is not simply a commercial waste management deal disguised as nuclear non-proliferation and so far both DOE and the German government have fallen far short of an adequate explanation,” said Clements

Concerning transportation, the notice states “Under the proposed action, the German government would work with DOE to transport the used fuel by oceangoing vessel to the United States in DOE/U.S. Department of Transportation-certified Type B casks. The used fuel would be received at Joint Base Charleston in Charleston, South Carolina, and then the casks would be transported by rail to SRS. DOE estimates that this could involve approximately 455 casks received over a period of approximately 3 years.” It is rumored that the German port of Nordenham could be used for the shipments from Germany, after numerous cross-country shipments of the CASTOR casks.

#### Notes:

#### **1. Federal Register notice, June 4, “Environmental Assessment for the Acceptance and Disposition of Used Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium From the Federal Republic of Germany”**

text: <http://www.gpo.gov/fdsys/pkg/FR-2014-06-04/html/2014-12933.htm>

pdf: <http://www.gpo.gov/fdsys/pkg/FR-2014-06-04/pdf/2014-12933.pdf>

#### **2. “Statement of Intent” between The U.S. Department of Energy & two German government entities, signed on March 28/April 1, 2014:**

[http://www.srswatch.org/uploads/2/7/5/8/27584045/statement\\_of\\_intent\\_march\\_april\\_2014.pdf](http://www.srswatch.org/uploads/2/7/5/8/27584045/statement_of_intent_march_april_2014.pdf)

#### **3. Kein Export von Jülicher Atommüll nach South Carolina** - SRS Watch statement against proposed export of spent fuel from Germany to the Savannah River Site, March 8, 2014 at Fukushima event in Jülich, Germany,

<http://www.westcastor.de/srs.htm>

#### **4. SRS Watch news release, May 30 – with links to key documents in “notes”:**

[http://www.srswatch.org/uploads/2/7/5/8/27584045/savannah\\_river\\_site\\_watch\\_news\\_german\\_waste\\_sr\\_may\\_30\\_2014.pdf](http://www.srswatch.org/uploads/2/7/5/8/27584045/savannah_river_site_watch_news_german_waste_sr_may_30_2014.pdf)

**[Department of Energy to Analyze Import of Highly Radioactive German Spent Fuel from Experimental](#)**

## [Gas-Cooled Reactors, with Savannah River Site in South Carolina as a Destination](#)

***Dumping of Waste from Juelich, Ahaus on SRS to be Opposed: Waste is in 457 30-tonne CASTOR Casks Holding 895,000 Graphite Balls***

### **5. Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management**

<http://www.iaea.org/Publications/Documents/Infcircs/1997/infcirc546.pdf>

<http://www-ns.iaea.org/conventions/waste-jointconvention.asp>

### 6. SRS memo on the deal

**From:** julie.petersen <julie.petersen@srs.gov>

**To:** undisclosed-recipients;

**Subject:** SRS Stakeholder Update: German Research Reactor Pebble Bed Fuel EA NOI Signed Today

**Date:** Thu, May 29, 2014 4:13 pm

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May 29, 2014

## **DOE-SR Update: German Spheres Notice of Intent (NOI)**

### **Update on German Research Reactor Pebble Bed Fuel**

In our last stakeholder update, we mentioned our potential work with Germany and promised to keep you updated on this topic.

Today, the Department signed a Notice of Intent to prepare an environmental assessment (EA) to analyze the potential environmental impacts from a proposed project to accept used nuclear fuel from the Federal Republic of Germany at DOE's Savannah River Site (SRS) for processing and disposition. **A public scoping meeting will be held on June 24, 2014, at the North Augusta Community Center.**

DOE proposes to accept, process, and disposition used nuclear fuel from Germany containing approximately 900 kilograms (kg) of highly-enriched uranium (HEU) from the United States. The used nuclear fuel is composed of kernels containing thorium and U.S.-origin HEU embedded in thousands of small graphite spheres. DOE would install a capability in H-Canyon at SRS, which would chemically remove the graphite from the fuel kernels via a graphite digestion technology being developed by the Savannah River National Laboratory. The EA will analyze potential environmental impacts of transporting the fuel to SRS, storage and processing at SRS, and alternatives for disposition of the HEU that would be separated from the fuel kernels.

While no decision has been made to accept this fuel, the planned cooperation would support the United States' efforts to reduce and eventually eliminate HEU from civil commerce. By removing U.S.-origin HEU from Germany and returning it to the United States for safe disposition, DOE could render it unusable in a nuclear weapon or an improvised nuclear material dispersal device.

Under the signed Statement of Intent, DOE, the Federal Ministry of Education and Research of the Federal Republic of Germany and the Ministry for Innovation, Science and Research of the State of North Rhine-Westphalia (on behalf of the North Rhine-Westphalian State Government) would jointly work on

activities to further support the scale-up of the graphite digestion technology while DOE prepares the environmental assessment of the proposed project. All work to support DOE's evaluation, including technology development, will be funded by the German government.

In December 2012, Savannah River National Laboratory (SRNL) signed a \$1.5 million "Work for Others Agreement" with the German entity currently managing the subject fuel, initiating the early development of the graphite digestion technology. SRNL has developed a method to digest the graphite while leaving the fuel kernels intact. The SRNL method does not generate graphite fines, typically seen with mechanical graphite removal methods. The technology has proven to be repeatable with 95 percent volume reduction. Research teams at SRNL and the Juelich Laboratory (FZJ) in Germany have independently confirmed results of SRNL's graphite dissolution chemistry on un-irradiated fuel and some sample size irradiated fuel. Continuation of this work is furthered by the recently signed \$8.5 million Work for Others Agreement.

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