



Savannah River Site Watch

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SRS Watch – www.srswatch.org
Columbia, South Carolina
News Release
May 30, 2014

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 to be Opposed: Waste is in 457 30-tonne Casks Holding 895,000 Graphite Balls

--- see text below of May 29 “DOE-SR Update: German Spheres Notice of Intent (NOI)” ---

Columbia, SC – The U.S. Department of Energy (DOE) has announced that it will conduct an environmental review on the import and disposal of a large amount of highly radioactive nuclear waste from Germany. The waste consists of nuclear reactor fuel and would be shipped to the DOE’s Savannah River Site (SRS) in South Carolina for handling.

DOE sent out an email update late on Thursday afternoon, May 23, with the information that an “environmental assessment” would be prepared “to accept used nuclear fuel from the Federal Republic of Germany at DOE’s Savannah River Site (SRS) for processing and disposition.”

For the past year, the public interest group Savannah River Site Watch (SRS Watch), based in Columbia, South Carolina, has been warning about the possible import of the waste. Concern about the import has been expressed by members of the SRS Citizens Advisory Board (SRS CAB), a federal panel overseeing clean-up of SRS, and a draft recommendation against the import has been prepared but not yet voted on.

The radioactive waste consists of 152 30-tonne CASTOR casks containing 290,000 graphite balls from the AVR gas-cooled prototype reactor, stored at the Juelich research center [Forschungszentrum Jülich (FZJ)], and 305 CASTOR casks containing 605,000 graphite balls from the THTR-300 reactor, stored at the Ahaus waste site. While the waste contains some US-origin highly enriched uranium (HEU), the amount is unclear as the material was irradiated and has been in storage for over 20 years since the reactors closed. It is believed that a key driver for the export is lack of proper, licensed storage facility at Juelich and that Germany wants to avoid the cost of the construction of a new facility.

“While claiming that the import of German nuclear waste is being done for nuclear non-proliferation reasons, this scheme is simply nuclear dumping on Germany’s part and business on the part of DOE,” said Tom Clements, director SRS Watch. “While it is unclear if such unusual high-level nuclear waste can even be processed at SRS what is clear is that there is no disposition plan for the waste. Though DOE

claimed that the material would be disposed of safely, there is no disposal plan for such high-level nuclear waste so it's essentially being sent to SRS for long-term storage or dumping."

DOE has set a June 24 date for a meeting in North Augusta, South Carolina to determine the "scope" of the environmental assessment. "SRS Watch encourages the public, organization and elected officials to attend the meeting and speak up against not only the import of the German nuclear waste and but also against SRS becoming an international nuclear dump site," said Clements.

It is not known how transport will be conducted but it appears it would take a number of sea transports, likely on special nuclear carriers owned by Pacific Nuclear Transport Limited (PNTL). As other nuclear shipments have come in via the Charleston (SC) Naval Weapons Station, that port is now on the top of the list for likely port of entry but it is not known is that restricted port has a crane large enough to lift a 110-tonne casks. Shipments of foreign plutonium were secretly brought in via Charleston in February and March of this year. (See Ottawa Citizen article of March 29, 2014 with photo of PNTL transport ship Pacific Egret:

<http://www.ottawacitizen.com/news/Covert+mission+Plutonium+source+might+Canada/9675369/story.html>)

It appears that Savannah River National Lab (SRNL) has imported a small amount of the German waste for examination – see link to FOIA document below – as part of a \$8.5 million "work for others" deal by the la. Given financial strains, SRNL is having to shop around for work. The Aachen, Germany newspaper, in a city near Juelich, reported that Der Spiegel magazine reported that it would cost 450 million Euros to ship the 152 casks at Juelich to the US. "I can imagine that SRS is licking its chops at getting it hands on some of that money but are they doing it while turning SRS into a de facto global nuclear dump?" pondered Clements.

The trend is towards more foreign waste and nuclear materials being imported to SRS for "disposal." SRS is already secretly storing plutonium brought in from other countries (including Canada, Belgium, Italy and Sweden) – none of which has a disposition path - and is now planning to import 23,000 liters of liquid high-level waste from the Chalk River Laboratories in Canada, which would end up in the already stressed high-level waste tank system.

Opposition to overland transport in Germany and via European port is expected to grow. At a March 8, Fukushima commemoration in the city where the Juelich waste is stored, a large public gathering expressed opposition to the export. A statement from SRS Watch – linked below – against the export was translated into German and read to the crowd.

Notes:

1. See "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

2. FOIA partial response on import of German high-level waste to SRS - key documents have been excluded and two have been sent to the infamous "FOIA graveyard" in Albuquerque for disposal;

document indicates that "graphite -coated irradiated U/Th fuel particles" were imported from Germany for examination in "shielded cells" - May 23, 2014

http://www.srswatch.org/uploads/2/7/5/8/27584045/foia_on_german_waste_may_23_2014.pdf

3. Savannah River Site Citizens Advisory Board website:

<http://www.srs.gov/general/outreach/srs-cab/srs-cab.html>

4. Email update from Savannah River Site on preparation of "environmental assessment"

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 c 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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5. Photos of the CASTOR storage casks:

http://www.tes.bam.de/de/umschliessungen/behaelter_radioaktive_stoffe/dokumente_veranstaltung_e_n/patram_2013/PATRAM2013-Droste-Wille-presentation.pdf

Session D Regulatory and Institutional Issues: Dual Purpose Casks
August 20, 2013

MAINTENANCE OF PACKAGE DESIGN SAFETY REPORT EFFECTIVENESS OF SNF/HLW DUAL PURPOSE CASKS

Bernhard Droste, Frank Wille

BAM Federal Institute for Materials Research and Testing, Berlin, Germany

6. 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>

7. SRS Watch news: U.S. Confirms Discussions with Germany regarding Import of Highly Radioactive Spent Nuclear Fuel; FOIA Document Indicates Discussions Began in 2011 for Import of Graphite Spent Fuel from Shuttered Gas-Cooled Experimental Power Reactor – to DOE's Savannah River Site - April 29, 2014

http://www.srswatch.org/uploads/2/7/5/8/27584045/news_german_spent_fuel_april_29_2014.pdf

8. Aachen, Germany newspaper - Castor-Transport wird teuer – September 6, 2013

<http://www.aachener-zeitung.de/lokales/region/castor-transport-wird-teuer-1.651363#plx1945912982>

"Jülich. Die Entsorgung der hoch radioaktiven Brennelement-Kugeln aus dem ehemaligen AVR-Versuchsreaktor wird offenbar sehr teuer. Wie der „Spiegel“ berichtet, dürfte es rund 450 Millionen Euro kosten, die 152 Castorbehälter aus dem Forschungszentrum Jülich (FZJ) in die USA zu transportieren."

Tom Clements

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