SRS WATCH

Savannah River Site Watch

Savannah River Site Watch
http://www.srswatch.org/
Columbia, South Carolina
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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

Columbia, SC – The U.S. Department of Energy (DOE) has confirmed that discussions are underway with Germany concerning import to the DOE's Savannah River Site (SRS) of a large volume of highly radioactive spent fuel from a shuttered gas-cooled nuclear experimental reactor. *(See SRS email of April 29 at end of news release below.)*

The unprecedented export of spent fuel from Germany has been opposed by German environmentalists, who support management of the material in Germany. Likewise, Savannah River Site Watch (SRS Watch), public interest watchdog over activities at DOE's 310-square mile Savannah River Site in South Carolina, has for over a year publicly opposed import of the highly radioactive waste.

"The proposal to import highly radioactive spent fuel from Germany to SRS is simply nuclear dumping dressed up as nuclear non-proliferation," said Tom Clements, Director of SRS Watch. "Germany's challenging dilemma with what to do with its nuclear waste must not become a waste management problem for the Savannah River Site. Germany must deal with its own waste and halt consideration of export of it to SRS, which is struggling to deal with high-level nuclear waste already at the site."

The spent fuel in question is graphite spheres that were used to fuel the AVR gas-cooled experimental reactor, which operated from 1967-1988 and which is now being dismantled. That fuel consists of about 290,000 "pebbles" now stored in 152 Castor casks at the Juelich research center - Forschungszentrum Juelich GmbH - in Germany. The reactor under German law was a experimental power reactor and not a research reactor, as is now being claimed by DOE and German authorities. It is unclear if an additional 305 casks of graphite spent fuel from the THTR gas-cooled reactor, now being stored at the Ahaus nuclear waste facility in Germany, are being considered for import to SRS. The THTR reactor operated from 1986-1989.

A document obtained in January 2014 via a Freedom of Information Act (FOIA) request by Tom Clements reveals that Germany's Federal Ministry of Education and Research [Bundesministerium für Bildung und Forschung] met with DOE officials on December 6, 2011 to discuss the AVR spent fuel. The documents reflects that Germany welcomed DOE's offer "to consider the option of acceptance" of the spent fuel,

with the goal to reach a decision before the Nuclear Security Summit in Seoul, South Korea, which was held on march 26-27, 2012. *(See link to FOIA document below.)*

SRS authorities have confirmed at public meetings that they are looking at processing the German spent fuel in the H-Canyon reprocessing plant but it is unknown if the facility can handle this type of experimental power reactor spent fuel. The resultant high-level waste would likely go into aging nuclear waste tanks at SRS. It is believed that SRS is interested in processing the spent fuel as Germany would pay to get rid of its waste problem.

Savannah River Site Watch (SRS Watch) became aware of the discussions about the spent fuel import in early 2013 and has been publicly expressing concern about it at meetings of the SRS Citizens Advisory Board (SRS CAB) and South Carolina Governor's Nuclear Advisory Council (GNAC) throughout 2013 and in 2014. A statement of opposition to the import was released by SRS Watch in Germany on March 9, 2014 at a Fukushima anniversary commemoration. That statement – *linked below* - was delivered to the GNAC on April 10, 2014 in Columbia, SC, at which time SRS Watch called for a "Programmatic Environmental Impact Statement" (PEIS) to be prepared on proposed import of nuclear waste and plutonium to SRS, including the German spent fuel.

SRS revealed in an email message sent on the evening of Monday, April 28 that a "Statement of Intent" had been signed concerning "DOE's evaluation of German research reactor pebble bed fuel for possible acceptance, processing and disposition at SRS." The statement was signed by DOE and the "Federal Ministry of Education and Research [Bundesministerium für Bildung und Forschung] 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)."

"The proposal to import German experimental reactor spent fuel must be thoroughly analyzed in a Programmatic Environmental Impact Statement and that analysis must include a review of disposal options in Germany," said Clements. Affirming the position that SRS Watch has been advocating at public meetings, the April 29 email from SRS stated that "DOE will prepare appropriate analysis and consult with the public as part of the NEPA process." [NEPA is the National Environmental Policy Act, the U.S. law requiring full environmental review of major decisions by the federal government.]

The graphite fuel originally contained US-supplied highly enriched uranium (HEU) but it is unclear how much HEU remains in the fuel due to irradiation impacts and radioactive decay.

Notes:

Savannah River Site Watch (SRS Watch): **http://www.srswatch.org/**

Link to Freedom of information Act partial response - message from Germanys' Federal Ministry for Education and Research to US DOE – response dated January 13, 2014: http://www.srswatch.org/uploads/2/7/5/8/27584045/foia_german_spent_fuel_to_us_jan_13_2014.pdf

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- **Kein Export von Jülicher Atommüll nach South Carolina** : http://www.westcastor.de/srs.htm

Statement to SC Governor's Nuclear Advisory Council, April 10, 2014:

http://www.energy.sc.gov/files/gnac/PublicCommentApr2014.pdf

German news articles : 1) **Castor-Transport wird teuer –** Aachner Zeitung, September 6, 2013 (with photo of casks): http://www.aachener-zeitung.de/lokales/region/castor-transport-wird-teuer-1.651363 & 2) from November 9, 2013 - **Westcastoren doch nach Ahaus?** - http://www.nrhz.de/flyer/beitrag.php?id=19428

Email message from NNSA's Global Threat Reduction Initiative (GTRI) to Tom Clements, February 27, 2013: "The Global Threat Reduction Initiative (GTRI) is not contemplating the transportation of the AVR gas-cooled research reactor fuel to the United States nor is it contemplating the import of any power reactor fuel under its program. Regarding AVR fuel in Juelich, Germany, the Savannah River Site (under DOE's Office of Environmental Management) is working with the Juelich facility to do a research and development study on possible disposition pathways for the AVR gas-cooled research reactor fuel. At this point, no decision has been made regarding the disposition or acceptance of this material in the U.S."

Scientific paper – ***Long Time Experience with the Development of HTR Fuel Elements in Germany*** – February 2001, http://pbadupws.nrc.gov/docs/ML0215/ML021510209.pdf

Report*: The United States Nuclear Regulatory Commission's Report to Congress on the Disposition of Highly Enriched Uranium Previously Exported from the United States*, January 1993: http://pbadupws.nrc.gov/docs/ML0924/ML092430345.pdf

German groups oppose spent fuel export: ***Should German AVR nuclear waste be exported to the US?*** – December 8, 2013, http://www.westcastor.de/AVR-US.pdf

Savannah River Site email message of the evening of Monday, April 28, about US-Germany "Statement of Intent" concerning gas-cooled reactor spent fuel import to SRS:

From: james-r.giusti <james-r.giusti@srs.gov>
To: undisclosed-recipients:;
Subject: DOE-SRS Update ... April 28, 2014
Date: Mon, Apr 28, 2014 8:16 pm

What a week last week at Savannah River Site!

We started off with a visit by South Carolina Governor Nikki Haley and four members of the Aiken County delegation. The Governor toured the Savannah River National Laboratory's Materials Research Laboratory and then was given an aerial tour of SRS with Dr. David Moody, DOE-SRS manager.

On April 24, SRNL celebrated its first 10 years as a National Laboratory and over 60 years of dedicated service to our country. Over 900 employees and special guests gathered on the grounds of SRNL to mark this important milestone, including Deputy Under Secretary Klaus, and David Huizenga, DOE-EM Acting Assistant Secretary. SC Senators Lindsey Graham and Tim Scott and Representative Joe Wilson also attended the celebration.

SRNL began as the Savannah River Laboratory, designed to lead the Savannah River Site's part in the nuclear defense program. SRNL now has three main areas of focus: National Security, Environmental Stewardship, and Clean Energy. Today, SRNL is the U.S. Department of Energy's only designated Environmental Management laboratory, collaborating with more than 50 foreign countries, engaging with over 90 private companies and universities, and supporting more than 20 different federal agencies.

On April 25, DOE and SRNL hosted the 2014 Research Collaboration Workshop and Poster Session for Historically Black Colleges and Universities. This program is designed to provide resources and promote opportunities for minority students in technology fields of research that are critical to DOE. Approximately 150 students and school representatives attended the workshop to present their research and to learn about the research of others. These students represented nine colleges and universities from across South Carolina with research ranging from the evaluation of pine cones and egg shells to remove heavy metals from the environment to the molecular modeling of grapheme oxide.

On Friday, SRNL was tasked to establish and oversee a panel of external experts to examine hazardous chemical vapors management and related worker protection measures at DOE's Hanford nuclear waste cleanup site in Washington State.

The request for the external review and accompanying recommendations comes after a number of workers received medical attention this spring following apparent exposures to vapors emanating from the waste storage tanks. Washington River Protection Solutions has requested that this new study have an enhanced scope for analysis and recommendation beyond the two previous technical reviews of Hanford tank waste vapor policies and issues in 2008 and 2010.

Overall, it was a week to highlight the important work to come as well as SRS successes. We have a budget and are moving forward to deliver on our mission to reduce risk and continue serving the nation.

On the horizon is our potential work with Germany. 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) have signed a Statement of Intent to support DOE's evaluation of German research reactor pebble bed fuel for possible acceptance, processing and disposition at SRS. All potential work to support DOE's evaluation would be funded by the German government so the Statement of Intent is an important step forward.

Under the Statement of Intent, the feasibility of accepting and dispositioning from Germany graphite pebble fuel elements containing U.S.-origin highly enriched uranium (HEU) would be investigated. While no decision has been made to accept this fuel, the planned cooperation would support the United States' efforts to reduce and

eventually eliminate highly enriched uranium 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 for use in a nuclear weapon or an improvised nuclear material dispersal device.

As this process proceeds, and before making any decisions, DOE will prepare appropriate analysis and consult with the public as part of the NEPA process. I will keep you updated as SRS moves forward with the German HEU project.

As always, if you have any questions about SRS send me an email or give me a call.

James R. Giusti
Director, DOE-SR Office of External Affairs.
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