



Savannah River Site Watch

**Savannah River Site Watch
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German Nuclear Waste Commission Approves Resolution to Ban Export of Spent Fuel, Including AVR Spent Fuel from Juelich to the Savannah River Site

Documents Obtained from via FOIA Request Reveals No Proliferation Risk to German Spent Fuel and that Daunting Risks Face the Import Proposal

SRS Watch: Time to Formally Terminate This Embarrassing, Half-Baked Waste-Dumping Scheme

Columbia, South Carolina -- A commission established in Germany to decide how spent nuclear reactor fuel is be managed has approved a resolution against the export of spent fuel, including spent fuel to the United States from the AVR and THTR experimental reactors. The Savannah River Site has been a target for receipt of this commercial spent fuel, with Savannah River National Lab investigating reprocessing and waste-handling options.

The passage of the resolution by the German High-Level Waste Commission on October 2 does not have the authority of law but sends the strongest of signals that the export of the spent fuel in question to SRS is in serious trouble. The resolution passed by the commission of the German Bundestag (parliament) and made up of elected Bundestag members specifically states that the option of export of the AVR spent fuel to the US no longer remains. Likewise, the resolution states that export of THTR spent graphite fuel, also considered for export to SRS, should not be not permitted. The resolution could be adopted by the full Bundestag and turned into law.

“The decision by the German waste commission against shipment of the German highly radioactive spent fuel to the US should give the public near SRS a sigh of relief as the proposal is now near termination,” said Tom Clements, director of Savannah River Site Watch. “As SRS and German officials did not think clearly about the myriad of technical, legal and cost challenges, the embarrassing proposal to turn SRS into a dumping site for German highly radioactive nuclear waste was doomed to failure from the start and should be promptly abandoned.”

The AVR experimental gas-cooled graphite-fueled reactor was connected to the German electrical grid and operated from 1967-1988. Spent fuel from the AVR is stored in 152 casks at the Juelich research center. The THTR gas-cooled reactor was also connected to the grid and operate from 1983-1988. Spent fuel from the THTR reactor is stored in 305 casks at the Ahaus storage site. Combined, the graphite spent fuel comprises over 900,000 irradiated graphite balls about the size of a billiard ball.

As the likelihood grows that the option to take the AVR and THTR spent fuel to SRS for reprocessing and dumping in the high-level waste tanks will be formally terminated in Germany, documents obtained from DOE under Freedom of Information Act requests by SRS Watch indicates a host of risks that face the SRS option.

A memo obtained via a Freedom of Information Act (FOIA) request and dated August 1, 2013 reveals that the DOE's Office of Threat Science determined that the "material is stored in secure environment in a politically stable country and does not pose a proliferation risk." This determination totally undermines claims by SRS that the material poses a proliferation risk as it originally contained some US-origin highly enriched uranium. SRS has refused to reveal how much, if any, amounts of HEU might remain embedded to the hard-to-process radioactive matrix of the graphite spent fuel.

"The revelation that a determination has been made by DOE that the German spent fuel poses no proliferation risk essentially means that the deal is over," said SRS Watch's Clements. "The public has been misled by SRS statements that material poses a proliferation risk in Germany and this memo ends their efforts to make a false case."

Another SRS document, dated March 2014, and originally marked "Official Use Only," was also obtained via a FOIA request by Savannah River Site Watch, lists possible risks to the proposal. The document, entitled "Graphite Pebble Bed Risk Areas Details," reveals that German officials are "focused on removal of the AVR fuel only" and that handling of the AVR spent fuel at SRS confronts a host of technical, costs and schedule risks, including:

- Unknown is fission products can be removed and isolated from the graphite fuel; this has the "potential to end the project;"
- Number of high-level nuclear waste canisters produced in the Defense Waste Processing Facility at SRS from by-product graphite spent fuel is unknown;
- Unknown is separated uranium can be disposed of at a commercial facility;
- "First of a kind process" to reprocess the graphite fuel presents challenges;
- Thorium in graphite spent fuel may have a "peanut butter consistency" and cause problems for SRS waste tanks;
- Removal of irradiated graphite balls from storage containers has not been done before;
- Removed "kernels" of highly enriched uranium poses security, storage and cost challenges in H-Canyon;
- Processing of graphite fuel in H-Canyon poses schedule problems;
- Challenges presented by construction of a new, covered storage pad at SRS;
- Unknown costs implications at many steps in the process of handling and disposing of the graphite waste and products removed from it.

Another document obtained under a FOIA request indicates that in October 2014 an orders was given to halt construction at SRS of a storage pad for the AVR spent fuel casks and efforts for "operational readiness" were also halted. SRS Watch has asked SRS to conduct a full Environmental Impact Statement on such a costly seismically approved storage facility if its construction moves forward.

Yet another document outlines unrealistic transport scenarios from Germany to the US, including an already failed proposal to ship the spent fuel from Europe to SRS "Spring 2014 to early 2016."

A November 2014 SRS document reviewing the "Work for Others" agreement between SRS and the Juelich research center presented that the "environmental assessment" on the proposal would be finished by June 2015. In reality, no draft EA has even been released and SRS now lists the document as "undergoing internal review" and the DOE headquarters listing of environmental documents has stopped posting a release date for the draft EA. If the proposal moves forward, a full "environmental impact statement" will be needed given the negative impacts to SRS and the high-level waste management system.

To greatly compound technical, cost and schedule problems and the action by the German High-Level Waste Commission, various legal analyses have determined that it is illegal under German law to export the spent fuel in question, especially if it is destined to be reprocessed. Greenpeace Germany has already started legal processing before the European Union and if the export would move to the point of a license request in Germany more legal action is likely to ensue.

"It's quite clear that the option to dump the German graphite spent fuel at SRS is not going to go forward; the only thing that isn't clear is when SRS and German officials will formally terminate the misguided proposal," according to Clements of SRS Watch. "SRS site manager Jack Craig should save SRS from further embarrassment and act affirmatively to the SRS Watch letter of April 21, 2015, in which we requested that the proposal be terminated. Unfortunately, we have not yet had any form of response to our request that aims to protect the SRS environment and the public from German nuclear waste dumping," said Clements.

Notes:

German Commission on Storage of High-Level Radioactive Waste (Kommission Lagerung hoch radioaktiver Abfallstoffe) "decision" document of October 2, 2015:

http://www.bundestag.de/blob/390810/6ea047d665800493f63f4f1b6a3e6f78/drs_131-neu-data.pdf

DOE FOIA documents on German spent fuel dumping at SRS, Summer/Fall 2015

- Memo stating no proliferation risk posed by AVR spent fuel in Germany, August 1, 2013:

http://www.srswatch.org/uploads/2/7/5/8/27584045/doe_no_proliferation_risk_august_1_2013.pdf

- Transport plant document, April 2013:

http://www.srswatch.org/uploads/2/7/5/8/27584045/foia_transport_options_april_2013.pdf

- Risks to dumping scheme - presentation, July 2014:

http://www.srswatch.org/uploads/2/7/5/8/27584045/foia_document_on_risks_received_august_2015-1.pdf

- List of myriad risks to dumping scheme, March 2014:

http://www.srswatch.org/uploads/2/7/5/8/27584045/foia_document_srs_risks_to_german_proposal_march_2014.pdf

- DOE email - halt operational planning and construction of storage pad at SRS for AVR spent fuel, October 2014:

http://www.srswatch.org/uploads/2/7/5/8/27584045/foia_on_halting_work_and_pad_halt_october_2014.pdf

Legal analyses determining export of AVR spent fuel to the US is illegal:

Greenpeace Germany:

http://www.srswatch.org/uploads/2/7/5/8/27584045/greenpeace_germany_rechtsgutachten-juelich_engl.pdf

BUND (Friends of the Earth, Germany):

http://www.srswatch.org/uploads/2/7/5/8/27584045/legal-opinion_export-avr-juelich_rw%C3%84nderungen_manu_bund_freinds_of_the_earth_germany_september_2014.pdf

Delayed Release of Environmental Assessment (EA) on German spent fuel import and dumping:

“ENVIRONMENTAL IMPACT STATEMENTS (EISs) and ENVIRONMENTAL ASSESSMENTS (EAs) INVOLVING THE SAVANNAH RIVER SITE (SRS) July 2015”

www.srs.gov/general/pubs/envbul/documents/EISs_ju

DOE list of NEPA documents and release dates, October 19, 2015 – see page 22:

http://energy.gov/sites/prod/files/2015/10/f27/StatusChart_October2015.pdf

Information from the Juelich Research Center (Forschungszentrum Jülich) on the 152 casks in storage; note that the discussion affirms that that “the nuclear fuel in the spent AVR fuel elements is not weapons-grade.”

http://www.fz-juelich.de/portal/EN/AboutUs/self-conception/responsibility/avr/FAQ_Transport/fragen-und-antworten.html

SRS Watch letter to the Office of Environmental Management, April 21, 2015, requesting that the deal with Germany be terminated – there has been no response as of November 3, 2015

http://www.srswatch.org/uploads/2/7/5/8/27584045/srs_watch_letter_to_doe_withdrawl_german_pl_an_april_21_2015.pdf

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