**Please take this quick action to oppose German spent fuel dumping in the United States!**

**Please copy & paste the “environmental assessment” comment below to the US Department of Energy on the scheme to bring German spent fuel to the DOE’s Savannah River Site – please take a few minutes to send the message, with any edits or additional comments that you may want to add. The comments on the “scope” of an environmental assessment to be prepared by DOE are somewhat technical and complicated so trust me that they raise issues that need to go into the record.**

**This has to be sent in by July 21, so thanks for acting now. Please pass on to others who may be interested. (Apologies for any typos in the text below…if you catch them please let me know.)**

**Contact me if you have questions: Tom Clements, srswatch@gmail.com, tel. 803-834-3084, see more on the issue at www.SRSWatch.org**

Background

The U.S. Department of Energy is currently considering a proposal to import spent nuclear fuel from two closed German gas-cooled reactors. The import into the US of commercial nuclear power fuel is unprecedented and must be opposed. (See more about the proposal at www.SRSWatch.org)

The spent fuel, from the AVR and THTR gas-cooled “pebble bed” reactors, consists of about 900,000 highly graphite spheres each the size of a billiard ball. The spent fuel from the reactors, closed in 1988 and 1989, is currently located at two sites – Juelich and Ahaus – in 457 large storage casks. (The AVR had numerous accidents and incidents, now under investigation: <http://tinyurl.com/pupvdom>)

DOE has already named the Savannah River Site in South Carolina as the destination of the spent fuel, where it could possibly be processed with a new technique being developed by the Savannah River National Lab to remove uranium in the fuel. The uranium, some of which may be US-origin highly enriched uranium, could be disposed of as waste or used as nuclear fuel. It appears that the irradiated graphite byproduct would simply be dumped into the high-level waste tanks at SRS, causing increased strain on the program to manage 37 million gallons of high-level waste at the site (from making 36 tonnes of plutonium for nuclear weapons).

On June 4, DOE published a notice in the Federal Register - *Environmental Assessment for the Acceptance and Disposition of Used Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium From the Federal Republic of Germany* (<http://www.gpo.gov/fdsys/pkg/FR-2014-06-04/pdf/2014-12933.pdf>) -

announcing that it was preparing an “environmental assessment” (EA) on the scheme and that comments on the scope of the EA would be accepted through July 21.

At a June 24 “scoping meeting” on the EA in N. Augusta, SC (near SRS), 17 oral comments were against the plan and 13 in favor (by those allied with contractors who hope to profit from the deal). Groups opposing included Georgia Women’s Action for New Directions (GA WAND), Nuclear Watch South, League of Women Voters of South Carolina, Blue Ridge Environmental Defense League, South Carolina Chapter of the Sierra Club, and Savannah River Site Watch. Conservation Voters of South Carolina is submitting separate comments against the proposal.

See a DOE presentation of July 10, to the South Carolina Governor’s Nuclear Advisory Council - *Potential Acceptance and Disposition of German Pebble Bed Research Reactor Highly Enriched Uranium (HEU) Fuel Environmental Assessment* – at <http://www.energy.sc.gov/files/gnac/DeLeonPres7-10-2014.pdf>. The presentation is incomplete about the proposal, especially as to what happens with processed waste streams and what the schedule is for preparation of the environmental assessment.

I request that you edit, cut and paste the “scoping” comments below for submission into the EA record. Though Germany has not yet figured out how to dispose of this graphite fuel or any other spent fuel from nuclear reactors, they should deal with their own high-level nuclear waste.

**Comment to send - here’s what to do:**

Title line in email message: “Scoping Comment on German Spent Fuel EA”

Edit, copy and paste this in your email message to drew.grainger@srs.gov & add your name and contact information at the end of your message:

Mr. Andrew Grainger

NEPA Compliance Officer

U.S. Department of Energy

Savannah River Site

P.O. Box B

Aiken, South Carolina 29802.

*drew.grainger@srs.gov*

**Comment for the Record on DOE’s *Environmental Assessment for the Acceptance and Disposition of Used Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium From the Federal Republic of Germany***

Dear Mr. Grainger:

I hereby submit the following comments for the record of the U.S. Department of Energy’s plan to import highly radioactive commercial spent fuel from Germany for processing and storage at the Savannah River Site. I request that you add my name to the email list that you are developing on the German spent fuel issue.

First, an Environmental Assessment is wholly inadequate to cover all the issues in depth related to the unprecedented proposal to import, process and dispose of spent nuclear fuel from Germany. I request that the EA process be immediately canceled and that DOE halt all consideration of this problematic proposal.

Realizing that the EA process may be subject to legal challenge but that it is proceeding for now, I make these comments for the record. I request that each point I raise be analyzed in the draft Environmental Assessment (if it can ever be issued).

**I support the “no action alternative,”** which means that the spent fuel should be left in Germany to be managed. The EA must discuss the history of Germany’s intention to dispose of this spent fuel in Germany and their technical capability to do so. The fact that Germany, like the U.S., does not have a geologic repository for spent fuel disposal is Germany’s problem to deal with and not that of the U.S.

The draft EA must discuss the exact number of casks involved and the exact amount of irradiated fuel balls in them. The figures given so far by DOE are not exact. Also, the EA must discuss if any other materials from the reactors, such as carbon bricks inside the reactor, are being considered for shipment from Germany and if anything else besides the graphite “pebbles” are inside the CASTOR storage casks at Juelich and Ahaus.

The draft EA must discuss exactly what radioactive constituents are in the graphite spent fuel, including such things as uranium-233, plutonium-239, thorium-232 and technetium-99. DOE has claimed that each of the fuel spheres contains 1 gram of highly enriched uranium and this claim must be explained. (It appears that this amount of HEU could have been in the fresh fuel balls 25 or more years ago and that the amount of HEU is now greatly reduced or not even present in some of the irradiated fuel.)

The draft EA must discuss the origin of all of the uranium and other constituents (including graphite and thorium) in the spent fuel, including of German origin. If any of the spheres are of German origin what is the justification to ship them to the US? The AVR Expert Group, investigating accidents at the AVR reactor, says that "six to eight different types of fuel elements were used.” (See the expert group summary report: <http://tinyurl.com/pupvdom>) A full inventory of the different types of fuel that were used and in which CASTOR casks they are stored must be given. Will damaged fuel or high burnup fuel pose special problems and be handled differently? A full inventory of types of THTR-300 fuel and in which casks it is stored must also be given.

The EA must discuss disposal of all constituents of the spent fuel, including of any waste streams that are separated from the graphite spheres. As SRS is not a high-level waste disposal site, DOE must present a clear exit path from SRS if the spent fuel is taken to the site and stored and/or processed. DOE presentations of June 24 and July 10 indicate that waste from the fuel would be held at the Savannah River Site in “storage awaiting repository.” This is an affirmation that the waste would be stranded at SRS as there is no repository to which to send it. DOE must clarify in the EA and to the Germans that there is no US repository and that the plan as now proposed essentially dumps the spent fuel at SRS with no exit plan.

The EA must discuss the fact that under US law that spent fuel, high-level nuclear waste, must be disposed of in a geologic repository. As the German waste is spent fuel, DOE must explain how it aims to skirt the Nuclear Waste Policy Act and dispose of any part of the German spent fuel at SRS or at any facility that is not a geologic disposal site. The draft EA must discuss why bringing the spent fuel to SRS constitutes “nuclear dumping” given the fact that the US has no final disposal site for spent fuel.

The two reactors involved, the AVR and THTR-300, were experimental prototype gas-cooled power reactors, and the record clearly establishes that both of the reactors produced electricity and were connected to the electrical grid and were thus commercial reactors. The reactors were not research reactors and Germany never made a claim that they were until recently, as a way to get around the German law that it is illegal to export commercial spent fuel for processing and disposal. As both parties must meet all applicable laws in dealing with the German waste, DOE must explain how it can legally accept spent fuel which is illegal to export from Germany.

DOE must fully examine the proliferation implications development of a new reprocessing technique at the Savannah River National Laboratory about how to remove uranium from the irradiated graphite sphere. While DOE claims that the spent fuel would be brought to the US for nuclear non-proliferation reasons, a concern that was never raised until recently, the proliferation risks of a new reprocessing technique are of new concern.

The draft EA must discuss why Germany would accept the processing of the spent fuel in a DOE reprocessing plant, the aging H-Canyon, that is neither regulated by the Nuclear Regulatory Commission (NRC) nor monitored by the International Atomic Energy Agency (IAEA). As there will be no external monitoring of DOE activities at SRS, what legal, monitored assurance can be given about the fate of the spent fuel, including any separated uranium and all associated waste streams?

If any uranium-235 is separated from the German spent fuel, the draft EA must discuss what radioactive contaminants are present with the uranium-235. Does such separated uranium meet the requirement for purity for reactor fuel? Which utility would use fuel made from uranium that may be contaminated? The draft EA must discuss the role of the Tennessee Valley Authority (TVA) is accepting any fuel fabricated from the separated uranium.

The draft EA must discuss impacts of importing the German waste on management of existing high-level nuclear waste at SRS. Clearly there will be negative impacts to on-going waste management at SRS, which likely will not be acceptable to the public or State of South Carolina. DOE said in the Federal Register notice that shipments from Germany would take place over three years, which implies that there will be an enduring impact on the urgent clean up of existing waste. On June 24, at the “scoping” meeting in N. Augusta, SC, a DOE official said that processing the German waste would add 100 additional containers to be filled with vitrified high-level waste in the Defense Waste Processing Facility (DWPF). Yet, on July 10, a DOE official told the South Carolina Governor’s Nuclear Advisory Council that 200 canisters of vitrified waste would be filled. The EA must clarify how many additional canisters will be needed. It appears that filing 100-200 additional waste canisters will set back the existing program at SRS to vitrify high-level waste by at least a year or more. How much will such a set-back cost and who will pay? Given delays in closing high-level waste tanks at SRS due to receipt of additional waste into the tanks, who will bear the risk of tank leaks or accidents caused by slowing the closure of the tanks? The draft EA must affirm that delaying tank closure will cause additional environmental and public health risks. Responsibility for this increased risk must be placed at the feet of those advocating the plan to import the German high-level waste.

The draft EA must discuss how the legally binding “Federal Facility Agreement,” an agreement between DOE, EPA and the SC Department of Health and Environmental Control (DHEC), about closure of high-level waste tanks at SRS, will be impacted by adding the German waste into the tank system. The draft EA must discuss if the State of South Carolina will accept changes to the waste management program and to the FFA that will result from importing the German waste. The draft EA cannot assume that the state will accept delays caused by importing more waste.

The draft EA must taken into account the new earthquake analysis released by the US Geologic Survey on July 17, 2014 – *Documentation for the 2014 Update of the United States National Seismic Hazard Maps* (<http://pubs.usgs.gov/of/2014/1091/>). The update which shows that the earthquake risk to the Charleston, South Carolina area has been updated. The document states that “the Charleston, S.C., seismic zone…contributes significantly to hazards in the Southeast.” Especially as SRS is fairly close to Charleston, SC, the draft EA must analyze the newly assessed earthquake impacts to the H-Canyon, high-level waste tanks, and storage of the German spent fuel casks and all associated waste streams.

DOE must fully discuss the schedule for: 1) development of the draft Environmental Assessment, 2) public comment meeting on the draft EA, 3) date of expected decision based on the EA, 4) date that research & development for Savannah River National Laboratory (SRNL) will be concluded and if information on the concluded research will be included in the draft EA, with allowance for public comment and 6) schedule in Germany for decisions concerning continued storage of the spent fuel at Juelich and Ahaus or their removal from those sites. At a meeting of the South Carolina Governor’s Nuclear Advisory Council on July 10 in Columbia, SC it became clear that DOE may be on track to exclude the public from making formal comments on a key part of the EA process: the development by SRNL of the new reprocessing technique. If the public cannot formally comment on the reprocessing technique developed by SRNL, this raises questions about the compliance of the EA with the National Environmental Policy Act. Likewise, it came out at the July 10 meeting that the German schedule for decisions concerning storage of the spent fuel at Juelich may be at the end of 2014 and that DOE is rushing the EA process to accommodate the German schedule. The EA must discuss the licenses for storage of the spent fuel at Juelich and Ahaus and if the Juelich license expired at the end of June 2014 and if that expiration is being used to force a decision in the US to accept the spent fuel via a shorted decision-making process.

The draft EA must address the schedule for shipment of the spent fuel from Germany, including how many shipments are involved, if it will arrive at SRS on a schedule that results in storage of the material. The draft EA must discuss what happens if there is no processing of the spent fuel in the H-Canyon reprocessing plant (for technical, policy or funding reasons). If the spent fuel is stored at SRS, what would be the plan to return it to Germany or take it directly to a repository? Which spent fuel would be shipped first, from Juelich or Ahaus?

As the spent fuel in question is from commercial nuclear power reactors, an import license must be obtained from the Nuclear Regulatory Commission and the shipping casks must have appropriate licenses. Explain how DOE will secure casks licenses and import licenses by the NRC. A simple DOE declaration that no NRC licenses are needed and that only DOE will certify the cask will clearly open any import to a full legal challenge. As the reactors involved are not research reactors, as the record clearly shows, NRC licenses are needed.

The overland transport in Germany and associated environmental and public health and safety concerns

must be discussed in the draft EA. Handling in a German port, which must be named, must be discussed in full as well as risk in transport across the Atlantic Ocean. The draft EA must discuss why some German ports have evidently refused to handle the spent fuel. It is unknown if the German port of Nordenham, which has been named as a possibility, has appropriate facilities to handle 30-tonne casks of high-level nuclear waste. How will the German public be informed of the transports through populated areas? What will steps be taken by German authorities to deal with blockages of roadways and port entrances by those concerned with the transport?

The draft EA must discuss who will ship the spent fuel, including the role of Edlow International in making arrangements for the overall deal and for shipping the casks. Does the shipping involve UK-flagged ships owned by Pacific Nuclear Transport Limited (PNTL)? Please describe how transport ships will load and transport the casks containing the spent fuel and protect workers from exposure during loading off loading and en route. Will DOE be involved in the actual handling of the spent fuel or will that be in the hands of contractors?

Risk and problems with oceanic transport must be discussed, along with impacts of a shipping cask breach during transport. Likewise, worker exposure during cask handling operations in Charleston, South Carolina must be discussed, along with risks of rail transport through the South Carolina countryside. As shipment of the type of spent fuel involved and the CASTOR casks has never been undertaken, DOE cannot simply rely on any earlier environmental analysis prepared for shipment of research reactor spent fuel to SRS.

The draft EA must discuss who owns the spent fuel in question. Does the European Atomic Energy Agency (EURATOM) hold license to any of the spent fuel? If so, must EURATOM or EU approval be secured for export to the US? What export licenses are needed in Germany? Does the US aim to take ownership of the spent fuel an associated casks and if so, under what law? When will US ownership occur? Provide documentation that there was a plan before 2011, when Germany raised the issue with the DOE, for the US to take this fuel.

Please discuss implications for processing at SRS of the gas-cooled reactor graphite spent fuel now stored at the Fort St. Vrain site in Colorado and the Peach Bottom spent fuel stored at the Idaho National Laboratory. Is there any discussion to take that spent fuel to SRS for processing? If so, this must be revealed in the draft EA.

Plans for disposing of or reusing the CASTOR shipping and storage casks must be discussed in full. As the casks may constitute nuclear waste, argumentation must be presented as to how German containers can be dumped in the US.

The draft EA must discuss who pays (in a legally binding agreement) for the shipping, transport, handling and any unexpected problems that arise. What guarantees will be given (in a legally binding agreement) that Germany will pay for handling and management of the spent fuel until such time it is placed in a geologic repository and until closure of the repository and far into the future beyond such closure? If processing of the spent fuel is halted at SRS what happens and who pays for return of the spent fuel (as detailed in a legally binding agreement) to Germany or immediate removal from SRS (to an unknown site)?

The costs of each segment of the proposal – shipping, processing, storage – must be discussed in the draft EA, including who pays and what the impact will be to other programs at SRS. If Germany is to pay for some costs, how that is calculated must be discussed and legally binding agreements with Germany for payment must be discussed. Will SRS or DOE receive any money from Germany or will it go into the US treasury?

To reiterate, given a host of problems with the proposal from environmental, public health, safety and proliferation perspectives, it must be withdrawn and the Environmental Assessment process terminated.

Sincerely,

*Name, address, email*