AVR und Fort St. Vrain HTGR für den THTR; diese Anlagen werden auch in den USA als kommerzielle betrachtet. Die miserable Leistungsbilanz der deutschen Kugelhaufen-Reaktoren kann nicht als Argument gegen deren kommerzielle Intentionen dienen: Sie waren kommerzielle Reaktoren!

- Es besteht kein signifikantes Proliferations-Risiko für den AVR-Müll, wie verschiedene Gutachten (z.B. auch von NNSA, 2013) darlegen. Im Allgemeinen enthält der AVR-Müll kein HEU. Eine Konditionierung und Endlagerung in Deutschland wären somit möglich.
- Die Brennelemente wurden hauptsächlich (zu 96%) in Deutschland von der NUKEM hergestellt, lediglich der HEU-Anteil (830 kg) stammt aus den USA.
- Wie eine unabhängige Expertengruppe 2014 darlegte, gab es verschiedene Unfälle im AVR, die über Jahrzehnte verschwiegen worden waren. Die Brennelemente sind daher in einem sehr schlechten Zustand. Ihre Wiederaufarbeitung wird vermutlich große Mengen sekundären Mülls erzeugen, die die beabsichtigte Säuberung der SRS behindern dürften. Ungefähr 4% der THTR-Brennelemente sind zerbrochen, mit vermutlich ähnlichen Konsequenzen.
- Die deutsche Bundesregierung hat in den vergangenen Jahren offiziell erklärt, dass es keine Pläne für den Export der THTR-Brennelemente in die USA gäbe, sondern nur für die des AVR. Ausgehend von der Annahme, dass die deutsche Seite nun doch die Umweltverträglichkeitsprüfung des amerikanischen DOE für die THTR-Brennelemente offiziell unterstützt, vermuten wir dass die deutschen Exportpläne für den AVR-Müll nur der erste Schritt eines ökologisch höchst problematischen Exports allen deutschen Atommülls in andere Länder darstellt. Es gibt bereits entsprechende Angebote durch Russland.

DRAFT ENVIRONMENTAL ASSESSMENT / Umweltverträglichkeitsstudie:
http://energy.gov/sites/prod/files/2016/01/f28/Draft%20DOE%20EA%201977_FOR%20PUBLIC.pdf

With my signature I support these comments against the DEA concerning the processing of German pebble bed NPP fuel elements at SRS.

	Nachname, Vorname Name, prename	Wohnort city	Unterschrift signature
1.	Sparrer, Christoph	Regensburg	
2.	Raith Hilde	Wackersdorf	+
3.	Sparrer Gerlinde	Wackersdorf	
4.	Raith Josef	Wackersdorf	
5.			
6.			
7.			
8.			
9.			
10.			

Eine Aktion des Bündnisses gegen Castor-Exporte (Buegece), Zusammenschluss aus landes- und bundesweiten Anti-Atom-Initiativen und dem BUND NRW www.bund-nrw.de www.westcastor.de

Bitte bis zum **01.03.2016** an den BUND NRW e.V. senden:
Merowingerstraße 88, 40225 Düsseldorf, Fax: 0049 211 302005-26,
V.i.S.d.P.: Buegece, c/o Claudia Baitinger, T 0049 2369 24296
Claudia.Baitinger@bund.net Stand 14.02.16

Bsup101

AVR-55 und Fort St. Vrain HTGR für den THTR; diese Anlagen werden auch in den USA als kommerzielle betrachtet. Die miserable Leistungsbilanz der deutschen Kugelhaufen-Reaktoren kann nicht als Argument gegen deren kommerzielle Intentionen dienen: Sie waren kommerzielle Reaktoren!

- Es besteht kein signifikantes Proliferations-Risiko für den AVR-Müll, wie verschiedene Gutachten (z.B. auch von NNSA, 2013) darlegen. Im Allgemeinen enthält der AVR-Müll kein HEU. Eine Konditionierung und Endlagerung in Deutschland wären somit möglich.
- Die Brennelemente wurden hauptsächlich (zu 96%) in Deutschland von der NUKEM hergestellt, lediglich der HEU-Anteil (830 kg) stammt aus den USA.
- Wie eine unabhängige Expertengruppe 2014 darlegte, gab es verschiedene Unfälle im AVR, die über Jahrzehnte verschwiegen worden waren. Die Brennelemente sind daher in einem sehr schlechten Zustand. Ihre Wiederaufarbeitung wird vermutlich große Mengen sekundären Mülls erzeugen, die die beabsichtigte Säuberung der SRS behindern dürften. Ungefähr 4% der THTR-Brennelemente sind zerbrochen, mit vermutlich ähnlichen Konsequenzen.
- Die deutsche Bundesregierung hat in den vergangenen Jahren offiziell erklärt, dass es keine Pläne für den Export der THTR-Brennelemente in die USA gäbe, sondern nur für die des AVR. Ausgehend von der Annahme, dass die deutsche Seite nun doch die Umweltverträglichkeitsprüfung des amerikanischen DOE für die THTR-Brennelemente offiziell unterstützt, vermuten wir dass die deutschen Exportpläne für den AVR-Müll nur der erste Schritt eines ökologisch höchst problematischen Exports allen deutschen Atommülls in andere Länder darstellt. Es gibt bereits entsprechende Angebote durch Russland.

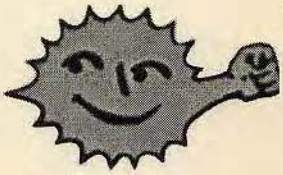
DRAFT ENVIRONMENTAL ASSESSMENT / Umweltverträglichkeitsstudie:
http://energy.gov/sites/prod/files/2016/01/f28/Draft%20DOE%20EA%201977_FOR%20PUBLIC.pdf

With my signature I support these comments against the DEA concerning the processing of German pebble bed NPP fuel elements at SRS.

	Nachname, Vorname Name, prename	Wohnort city	Unterschrift signature
1.	Frieboese, Bernd	Berlin	
2.	Wagner, Heinz	Berlin	
3.	Kunert, Christine	Berlin	
4.	Braune, Ute	Berlin	
5.	HILSER, UWE	BERLIN	
6.	Kuß, Anke	Berlin	
7.	Ziesmer, Rosi	Berlin	
8.	Arslan Yilmaz	Berlin	
9.	Schulze, Regina	Berlin	Regina Schulze
10.	Rebel, Wolfgang	Berlin	

Eine Aktion des Bündnisses gegen Castor-Exporte (Buegece), Zusammenschluss aus landes- und bundesweiten Anti-Atom-Initiativen und dem BUND NRW www.bund-nrw.de www.westcastor.de

Bitte bis zum **01.03.2016** an den BUND NRW e.V. senden:
Merowingerstraße 88, 40225 Düsseldorf, Fax: 0049 211 302005-26,
V.i.S.d.P.: Buegece, c/o Claudia Baitinger, T 0049 2369 24296
Claudia.Baitinger@bund.net Stand 14.02.16



Bsup102

AVR-Rund Fort St. Vrain HTGR für den THTR; diese Anlagen werden auch in den USA als kommerzielle betrachtet. Die miserable Leistungsbilanz der deutschen Kugelhaufen-Reaktoren kann nicht als Argument gegen deren kommerzielle Intentionen dienen: Sie waren kommerzielle Reaktoren!

- Es besteht kein signifikantes Proliferations-Risiko für den AVR-Müll, wie verschiedene Gutachten (z.B. auch von NNSA, 2013) darlegen. Im Allgemeinen enthält der AVR-Müll kein HEU. Eine Konditionierung und Endlagerung in Deutschland wären somit möglich.
- Die Brennelemente wurden hauptsächlich (zu 96%) in Deutschland von der NUKEM hergestellt, lediglich der HEU-Anteil (830 kg) stammt aus den USA.
- Wie eine unabhängige Expertengruppe 2014 darlegte, gab es verschiedene Unfälle im AVR, die über Jahrzehnte verschwiegen worden waren. Die Brennelemente sind daher in einem sehr schlechten Zustand. Ihre Wiederaufarbeitung wird vermutlich große Mengen sekundären Mülls erzeugen, die die beabsichtigte Säuberung der SRS behindern dürften. Ungefähr 4% der THTR-Brennelemente sind zerbrochen, mit vermutlich ähnlichen Konsequenzen.
- Die deutsche Bundesregierung hat in den vergangenen Jahren offiziell erklärt, dass es keine Pläne für den Export der THTR-Brennelemente in die USA gäbe, sondern nur für die des AVR. Ausgehend von der Annahme, dass die deutsche Seite nun doch die Umweltverträglichkeitsprüfung des amerikanischen DOE für die THTR-Brennelemente offiziell unterstützt, vermuten wir dass die deutschen Exportpläne für den AVR-Müll nur der erste Schritt eines ökologisch höchst problematischen Exports allen deutschen Atommülls in andere Länder darstellt. Es gibt bereits entsprechende Angebote durch Russland.

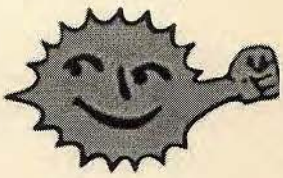
DRAFT ENVIRONMENTAL ASSESSMENT / Umweltverträglichkeitsstudie:
http://energy.gov/sites/prod/files/2016/01/f28/Draft%20DOE%20EA%201977_FOR%20PUBLIC.pdf

With my signature I support these comments against the DEA concerning the processing of German pebble bed NPP fuel elements at SRS.

	Nachname, Vorname Name, prename	Wohnort city	Unterschrift signature
1.	Skoring, Ekkehard	Rheinstraße 12/13 12159 Berlin	Ekkehard Skoring
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Eine Aktion des Bündnisses gegen Castor-Exporte (Buegece), Zusammenschluss aus landes- und bundesweiten Anti-Atom-Initiativen und dem BUND NRW www.bund-nrw.de www.westcastor.de

Bitte bis zum 01.03.2016 an den BUND NRW e.V. senden:
Merowingerstraße 88, 40225 Düsseldorf, Fax: 0049 211 302005-26,
V.i.S.d.P.: Buegece, c/o Claudia Baitinger, T 0049 2369 24296
Claudia.Baitinger@bund.net Stand 14.02.16



Bsup103

AVR und Fort St. Vrain HTGR für den THTR; diese Anlagen werden auch in den USA als kommerzielle betrachtet. Die miserable Leistungsbilanz der deutschen Kugelhaufen-Reaktoren kann nicht als Argument gegen deren kommerzielle Intentionen dienen: Sie waren kommerzielle Reaktoren!

- Es besteht kein signifikantes Proliferations-Risiko für den AVR-Müll, wie verschiedene Gutachten (z.B. auch von NNSA, 2013) darlegen. Im Allgemeinen enthält der AVR-Müll kein HEU. Eine Konditionierung und Endlagerung in Deutschland wären somit möglich.
- Die Brennelemente wurden hauptsächlich (zu 96%) in Deutschland von der NUKEM hergestellt, lediglich der HEU-Anteil (830 kg) stammt aus den USA.
- Wie eine unabhängige Expertengruppe 2014 darlegte, gab es verschiedene Unfälle im AVR, die über Jahrzehnte verschwiegen worden waren. Die Brennelemente sind daher in einem sehr schlechten Zustand. Ihre Wiederaufarbeitung wird vermutlich große Mengen sekundären Mülls erzeugen, die die beabsichtigte Säuberung der SRS behindern dürften. Ungefähr 4% der THTR-Brennelemente sind zerbrochen, mit vermutlich ähnlichen Konsequenzen.
- Die deutsche Bundesregierung hat in den vergangenen Jahren offiziell erklärt, dass es keine Pläne für den Export der THTR-Brennelemente in die USA gäbe, sondern nur für die des AVR. Ausgehend von der Annahme, dass die deutsche Seite nun doch die Umweltverträglichkeitsprüfung des amerikanischen DOE für die THTR-Brennelemente offiziell unterstützt, vermuten wir dass die deutschen Exportpläne für den AVR-Müll nur der erste Schritt eines ökologisch höchst problematischen Exports allen deutschen Atommülls in andere Länder darstellt. Es gibt bereits entsprechende Angebote durch Russland.

DRAFT ENVIRONMENTAL ASSESSMENT / Umweltverträglichkeitsstudie:
http://energy.gov/sites/prod/files/2016/01/f28/Draft%20DOE%20EA%201977_FOR%20PUBLIC.pdf

With my signature I support these comments against the DEA concerning the processing of German pebble bed NPP fuel elements at SRS.

	Nachname, Vorname Name, prename	Wohnort city	Unterschrift signature
1.	EDEBEL, HUBERTUS	MÜNSTER	Hubertus Edebel
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Eine Aktion des Bündnisses gegen Castor-Exporte (Buegece), Zusammenschluss aus landes- und bundesweiten Anti-Atom-Initiativen und dem BUND NRW www.bund-nrw.de www.westcastor.de

Bitte bis zum **01.03.2016** an den BUND NRW e.V. senden:
Merowingerstraße 88, 40225 Düsseldorf, Fax: 0049 211 302005-26,
V.i.S.d.P.: Buegece, c/o Claudia Baitinger, T 0049 2369 24296
Claudia.Baitinger@bund.net Stand 14.02.16

AVR und Fort St. Vrain HTGR für den THTR; diese Anlagen werden auch in den USA als kommerzielle betrachtet. Die miserable Leistungsbilanz der deutschen Kugelhaufen-Reaktoren kann nicht als Argument gegen deren kommerzielle Intentionen dienen: Sie waren kommerzielle Reaktoren!

- Es besteht kein signifikantes Proliferations-Risiko für den AVR-Müll, wie verschiedene Gutachten (z.B. auch von NNSA, 2013) darlegen. Im Allgemeinen enthält der AVR-Müll kein HEU. Eine Konditionierung und Endlagerung in Deutschland wären somit möglich.
- Die Brennelemente wurden hauptsächlich (zu 96%) in Deutschland von der NUKEM hergestellt, lediglich der HEU-Anteil (830 kg) stammt aus den USA.
- Wie eine unabhängige Expertengruppe 2014 darlegte, gab es verschiedene Unfälle im AVR, die über Jahrzehnte verschwiegen worden waren. Die Brennelemente sind daher in einem sehr schlechten Zustand. Ihre Wiederaufarbeitung wird vermutlich große Mengen sekundären Mülls erzeugen, die die beabsichtigte Säuberung der SRS behindern dürften. Ungefähr 4% der THTR-Brennelemente sind zerbrochen, mit vermutlich ähnlichen Konsequenzen.
- Die deutsche Bundesregierung hat in den vergangenen Jahren offiziell erklärt, dass es keine Pläne für den Export der THTR-Brennelemente in die USA gäbe, sondern nur für die des AVR. Ausgehend von der Annahme, dass die deutsche Seite nun doch die Umweltverträglichkeitsprüfung des amerikanischen DOE für die THTR-Brennelemente offiziell unterstützt, vermuten wir dass die deutschen Exportpläne für den AVR-Müll nur der erste Schritt eines ökologisch höchst problematischen Exports allen deutschen Atommülls in andere Länder darstellt. Es gibt bereits entsprechende Angebote durch Russland.

DRAFT ENVIRONMENTAL ASSESSMENT / Umweltverträglichkeitsstudie:
http://energy.gov/sites/prod/files/2016/01/f28/Draft%20DOE%20EA%201977_FOR%20PUBLIC.pdf

With my signature I support these comments against the DEA concerning the processing of German pebble bed NPP fuel elements at SRS.

	Nachname, Vorname Name, prename	Wohnort city	Unterschrift signature
1.	Dr. Schrage, Elke	Pestalozzistr. 6 38114 Braunschweig	
2.	Willy Hardes	Braasche 9 29499 Zernien	
3.	Horns, Axel	29451 Dannenberg	
4.	Peter, Hartmut	29481 Lemgow	
5.	Pretzmann, Renate	30161 Hannover	
6.	Schank, Ulrich	29451 Dannenberg	
7.	Schank, Karin	29451 Dannenberg	
8.	Grasser, Klaus	30161 Hannover	
9.	Olosianowski, Elisabeth	29481 Lemgow	
10.	Lowin, Werner	29496 Waddeweitz	

Eine Aktion des Bündnisses gegen Castor-Exporte (Buegece), Zusammenschluss aus landes- und bundesweiten Anti-Atom-Initiativen und dem BUND NRW www.bund-nrw.de
www.westcastor.de

Bitte bis zum **01.03.2016** an den BUND NRW e.V. senden:
Merowingerstraße 88, 40225 Düsseldorf, Fax: 0049 211 302005-26,
V.i.S.d.P.: Buegece, c/o Claudia Baitinger, T 0049 2369 24296
Claudia.Baitinger@bund.net Stand 14.02.16

Bsup105

AVR und Fort St. Vrain HTGR für den THTR; diese Anlagen werden auch in den USA als kommerzielle betrachtet. Die miserable Leistungsbilanz der deutschen Kugelhaufen-Reaktoren kann nicht als Argument gegen deren kommerzielle Intentionen dienen: Sie waren kommerzielle Reaktoren!

- Es besteht kein signifikantes Proliferations-Risiko für den AVR-Müll, wie verschiedene Gutachten (z.B. auch von NNSA, 2013) darlegen. Im Allgemeinen enthält der AVR-Müll kein HEU. Eine Konditionierung und Endlagerung in Deutschland wären somit möglich.
- Die Brennelemente wurden hauptsächlich (zu 96%) in Deutschland von der NUKEM hergestellt, lediglich der HEU-Anteil (830 kg) stammt aus den USA.
- Wie eine unabhängige Expertengruppe 2014 darlegte, gab es verschiedene Unfälle im AVR, die über Jahrzehnte verschwiegen worden waren. Die Brennelemente sind daher in einem sehr schlechten Zustand. Ihre Wiederaufarbeitung wird vermutlich große Mengen sekundären Mülls erzeugen, die die beabsichtigte Säuberung der SRS behindern dürften. Ungefähr 4% der THTR-Brennelemente sind zerbrochen, mit vermutlich ähnlichen Konsequenzen.
- Die deutsche Bundesregierung hat in den vergangenen Jahren offiziell erklärt, dass es keine Pläne für den Export der THTR-Brennelemente in die USA gäbe, sondern nur für die des AVR. Ausgehend von der Annahme, dass die deutsche Seite nun doch die Umweltverträglichkeitsprüfung des amerikanischen DOE für die THTR-Brennelemente offiziell unterstützt, vermuten wir dass die deutschen Exportpläne für den AVR-Müll nur der erste Schritt eines ökologisch höchst problematischen Exports allen deutschen Atommülls in andere Länder darstellt. Es gibt bereits entsprechende Angebote durch Russland.

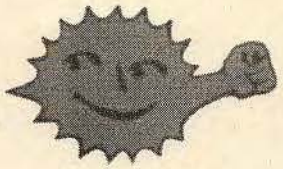
DRAFT ENVIRONMENTAL ASSESSMENT / Umweltverträglichkeitsstudie:
http://energy.gov/sites/prod/files/2016/01/f28/Draft%20DOE%20EA%201977_FOR%20PUBLIC.pdf

With my signature I support these comments against the DEA concerning the processing of German pebble bed NPP fuel elements at SRS.

	Nachname, Vorname Name, prename	Wohnort city	Unterschrift signature
1.	Eibe, Thomas	Braunschweig	Th. Eibe
2.	Krause, Lothar	Salzgitter	Lothar Krause
3.	Bosse, Martin	Salzgitter	Martin Bosse
4.	Schönberger, Ursula	Salzgitter	U. Schönberger
5.	Wasmus, Ludwig	Salzgitter	Ludwig Wasmus
6.			
7.			
8.			
9.			
10.			

Eine Aktion des Bündnisses gegen Castor-Exporte (Buegece), Zusammenschluss aus landes- und bundesweiten Anti-Atom-Initiativen und dem BUND NRW www.bund-nrw.de www.westcastor.de

Bitte bis zum **01.03.2016** an den BUND NRW e.V. senden:
Merowingerstraße 88, 40225 Düsseldorf, Fax: 0049 211 302005-26,
V.i.S.d.P.: Buegece, c/o Claudia Baitinger, T 0049 2369 24296
Claudia.Baitinger@bund.net Stand 14.02.16



Mustereinwendungen – Sammeleinwendungen

To: Ms. Tracy Williams, NEPA Compliance Officer
U.S. Department of Energy, P.O. Box B
Aiken, South Carolina 29802.
e-Mail: GermanSpentNuclearFuelEA@leidos.com

Comments on "Draft Environmental Assessment for the Acceptance and Disposition of Used Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany" (DEA) dealing with processing of German pebble bed NPP fuel elements at SRS

Dear Ms. Williams

we are deeply concerned about the US/German plans to reprocess and store about 200,000 kg of commercial German pebble fuel elements from the nuclear power plants AVR Juelich (15 MWel) and THTR-300 (300 MWel) at SRS. Our reasons are:

- European Union and German laws do not allow the export of nuclear waste, except for proliferation relevant waste from neutron generating research reactors. The reasonable general rule is that the waste has to remain in the country of its origin. AVR and THTR are obviously no research reactors and are not listed as research reactors by the International Atomic Energy Agency, but as nuclear power plants. There are several legal expertizes, which underline this position. For that German environmental organisations as BUND (friends of the earth) and Greenpeace have announced legal actions in case of a transport of the German fuel to SRS.
- Reprocessing of fuel elements is prohibited by law in Germany for commercial fuel elements. Both, AVR and THTR were both owned and operated by commercial utilities (and THTR still is) and produced electricity (4.4 bn kWh) to the grid. For both German NPPs sister plants existed in the US: Peach Bottom HTGR for AVR and Fort St. Vrain HTGR for THTR, and these US plants are considered as commercial in the US. The very poor performance of these German pebble bed NPP may not be taken as argument for non existing commercial intentions: They were commercial NPPs.
- There is no significant proliferation risk for the AVR waste, as several expertizes (e.g. from the NNSA 2013) indicate. In average the spent AVR waste does not contain HEU. A conditioning and final storage in Germany is possible.
- The fuel elements were mainly (96 %) fabricated in Germany at Nukem, US origin is only the HEU content (830 kg).
- As an independent official experts group outlined 2014, there were several severe accidents in AVR reactor (which were hushed up for decades). The fuel elements are thus in a very bad shape. Their reprocessing will probably produce huge amounts of secondary waste, which will hinder the intended cleaning of the SRS site. About 4 % of the THTR fuel elements are broken with probably similar consequences.

The German government has officially announced here in the past years that there are no plans to export the waste from THTR to the US, but only for the AVR and that they wonder about an "Draft

Environmental Assessment" (DEA) by DOE for THTR waste. Having in mind that it seems that the German side has officially supported the DEA for THTR waste too, we guess that the German export plans for the AVR waste are only the first step of an ecologically highly problematic export of all German nuclear waste to other countries.

TRANSLATION:

Sehr geehrte Frau Williams

wir sind zutiefst besorgt über die amerikanisch-deutschen Pläne zur Lagerung und Wiederaufarbeitung von etwa 200 000 kg kommerziell genutzter deutscher Kugelbrennelemente aus den Atomkraftwerken AVR Jülich (15 MW eL) und THTR-300 (300 MW eL) in Savannah River Site. Die Gründe für unsere Bedenken:

- *Die deutschen Gesetze und die der Europäischen Union erlauben den Export von radioaktiven Abfällen nicht, mit Ausnahme von proliferationsgefährliche Abfällen aus Neutronen erzeugenden Forschungsreaktoren. AVR und THTR sind aber offenkundig keine Forschungsreaktoren und sind auch nicht als solche gelistet bei der IAEA, sondern es sind kommerzielle Atomkraftwerke.*
- *Die Aufarbeitung von Brennelementen aus kommerziellen Reaktoren ist nach deutschem Recht verboten. Sowohl der AVR als auch der THTR wurden betrieben und waren im Besitz (der THTR auch jetzt noch)von kommerziellen Betreibern; sie produzierten Strom für das öffentliche Netz (4,4Mrd. kWh). Für beide deutschen Anlagen existierten Schwesteranlagen in den USA: PEACH Bottom HTGR für den AVR und Fort St. Vrain HTGR für den THTR; diese Anlagen werden auch in den USA als kommerzielle betrachtet. Die miserable Leistungsbilanz der deutschen Kugelhaufen-Reaktoren kann nicht als Argument gegen deren kommerzielle Intentionen dienen: Sie waren kommerzielle Reaktoren!*
- *Es besteht kein signifikantes Proliferations-Risiko für den AVR-Müll, wie verschiedene Gutachten (z.B. auch von NNSA, 2013) darlegen. Im Allgemeinen enthält der AVR-Müll kein HEU. Eine Konditionierung und Endlagerung in Deutschland wären somit möglich.*
- *Die Brennelemente wurden hauptsächlich (zu 96%) in Deutschland von der NUKEM hergestellt, lediglich der HEU-Anteil (830 kg) stammt aus den USA.*
- *Wie eine unabhängige Expertengruppe 2014 darlegte, gab es verschiedene Unfälle im AVR, die über Jahrzehnte verschwiegen worden waren. Die Brennelemente sind daher in einem sehr schlechten Zustand. Ihre Wiederaufarbeitung wird vermutlich große Mengen sekundären Mülls erzeugen, die die beabsichtigte Säuberung der SRS behindern dürften. Ungefähr 4% der THTR-Brennelemente sind zerbrochen, mit vermutlich ähnlichen Konsequenzen.*
- *Die deutsche Bundesregierung hat in den vergangenen Jahren offiziell erklärt, dass es keine Pläne für den Export der THTR-Brennelemente in die USA gäbe, sondern nur für die des AVR. Ausgehend von der Annahme, dass die deutsche Seite nun doch die Umweltverträglichkeitsprüfung des amerikanischen DOE für die THTR-Brennelemente offiziell unterstützt, vermuten wir dass die deutschen Exportpläne für den AVR-Müll nur der erste Schritt eines ökologisch höchst problematischen Exports allen deutschen Atommülls in andere Länder darstellt. Es gibt bereits entsprechende Angebote durch Russland.*

DRAFT ENVIRONMENTAL ASSESSMENT / Umweltverträglichkeitsstudie:
http://energy.gov/sites/prod/files/2016/01/f28/Draft%20DOE%20EA%201977_FOR%20PUBLIC.pdf

More Information / Weitere Informationen:

http://www.energy.sc.gov/files/gnac/DeLeonPres7-10-2014.pdf
http://energy.gov/sites/prod/files/2014/06/f16/EA-1977-NOI-2014.pdf

https://www.federalregister.gov/articles/2016/01/25/2016-01371/environmental-assessment-for-the-acceptance-and-disposition-of-spent-nuclear-fuel-containinghttps://s3.amazonaws.com/public-inspection.federalregister.gov/2016-01371.pdf

http://www.srswtch.org/

http://www.bund-nrw.de/themen_und_projekte/energie_klima/atomenergie/avr_juelich/

Comments on DEA dealing with processing of German pebble bed NPP fuel elements at SRS

	Nachname, Vorname Name, prename	Wohnort city	Unterschrift signature
1.	Wibbelt Marie-Luise	Gescher	
2.	Helmski, Klaus-Dieter	Gescher	
3.	Ruwe, Felix	Ahaus	
4.	Flachsland, Thomas	Ahaus	
5.	Gombert, Christiane	Ahaus	
6.	Bauerbach Brigitte	Ah.	
7.	Böddeker, Helmuth	Ahaus	
8.	Feller Heinz	Ahaus	
9.	Julius Redtke	Ahaus	
10.	JESCHAR, GERD	Ahaus	
11	Liebermann, Hartmut	Ahaus	
12.			

DRAFT ENVIRONMENTAL ASSESSMENT / Umweltverträglichkeitsstudie:
http://energy.gov/sites/prod/files/2016/01/f28/Draft%20DOE%20EA%201977_FOR%20PUBLIC.pdf

More Information / Weitere Informationen:

→ 11.3.16

http://www.energy.sc.gov/files/gnac/DeLeonPres7-10-2014.pdf
http://energy.gov/sites/prod/files/2014/06/f16/EA-1977-NOI-2014.pdf

https://www.federalregister.gov/articles/2016/01/25/2016-01371/environmental-assessment-for-the-acceptance-and-disposition-of-spent-nuclear-fuel-containinghttps://s3.amazonaws.com/public-inspection.federalregister.gov/2016-01371.pdf

http://www.srswtch.org/

http://www.bund-nrw.de/themen_und_projekte/energie_klima/atomenergie/avr_juelich/

Comments on DEA dealing with processing of German pebble bed NPP fuel elements at SRS

	Nachname, Vorname Name, prename	Wohnort city	Unterschrift signature
1.	Albrecht, Christina	Weinstadt	[signature]
2.	Schmeißner, Karsten	Detmold	[signature]
3.	Schuch, Annette	Kassel	[signature]
4.	Waldherr, Erich	97469 Gochsheim	E. Waldherr
5.	Günther, Edo	97469 Gochsheim	[signature]
6.	GÜNTHER, BABS	"	B. Günther
7.	Höhmann, Dörle	25785 Nordhastedt	[signature]
8.	Beate Paulat-Such	25792 Neuenkirchen	[signature]
9.	Angela Berth	25782 Gaushorn	[signature]
10.	TS WOLF	89343 Jettingen-Scheppach	M. Wolf
11	Baitinger, Claudia	Dorsten	C. Baitinger
12.	Baitinger, Willy	Dorsten	W. Baitinger

From:
Sent: Tuesday, March 22, 2016 1:40 PM
To: germanspentnuclearfuelEA@leidos.com
Subject: [Germanspentnuclearfuelea] Updated Supplemental Comments LWVSC

Also attached:

UPDATED SUPPLEMENTAL COMMENTS ON DOE PROPOSAL TO IMPORT GERMAN SPENT FUEL TO SRS
LEAGUE OF WOMEN VOTERS OF SOUTH CAROLINA
MARCH 22, 2016

The League of Women Voters of South Carolina opposes the proposal to send German spent fuel to SRS for the following reasons:

NEW: The LWVSC can find no substantial reason for separating the German wastes.

a. The recovered uranium will be waste.
b. The waste suitable for a permanent repository may be less in volume, but there is no repository, and new waste streams will be generated. SRS will act as a repository for the foreseeable future, and SRS is not a suitable location for even a temporary repository.
056-1
c. The waste before separation retains non-proliferation characteristics, which may or may not be lost after separation.
d. The very significant technical abilities of SRS staff have already been established, and do not need further demonstration.

Therefore, the LWVSC asks DOE to explain the rationale for shipping the German wastes to the SRS.

PREVIOUS COMMENTS:

1. There are national and international laws requiring countries to manage their own nuclear wastes.1
056-2
2. There is a German law that disallows the export of spent fuel for the purpose of reprocessing.2
3. According to a recent NRC document entitled Nuclear Reactors3 research and test reactors by definition do not produce electricity. The US has about 31 research and test reactors, for a variety of objectives. The German reactor was not included on German listings of German research reactors until it was proposed to move those wastes to SRS. The German reactor produced a net output of 34 MW electricity intermittently over its 20-year operating period, generating revenue of about 3 million DM.4
056-3
4. The US currently has 99 operating commercial reactors. We have about 50 more reactors - many experimental; some preliminarily licensed, and operated relatively briefly, if at all - including one similar to the German

reactor. Although the industry has learned from many of these reactors, we do not call them research reactors, and neither should Germany.

5. German willingness to pay the US to experiment with separations is not a good reason for SRS to pursue this proposed project. There is no necessity for the product or new waste streams. The Germans should proceed with previous plans to entomb the spent fuel, as the US plans to do with our similar reactor wastes in Colorado.

056-4

6. Germany, the UK, France and Japan should be providing leadership in national and regional nuclear waste management planning and implementation, per international law. There is no good reason for these leading countries to be in the process of secretly proposing to dump their wastes at SRS, and especially not with the assistance of the US DOE and NRC.

056-5

7. SRS technical staff has proven its ability to take care of a wide variety of wastes, but SRS should not be expected to do this for the world. On the other hand, if SRS can assist overseas waste management efforts in their overseas methods, we would all be winners.

056-6

8. SRS wastes are very likely to remain at SRS for the foreseeable future. In addition, any wastes imported to SRS can be expected to also remain at SRS.

[1]http://www.world-nuclear.org/information-library/nuclear-fuel-cycle/nuclear-wastes/international-nuclear-waste-disposal-concepts.aspx
[2]http://www.bmub.bund.de/fileadmin/bmuimport/files/pdfs/allgemein/application/pdf/ueberpruefungskonferenz_4_faq_en_bf.pdf -
[3]http://pbadupws.nrc.gov/docs/ML1525/ML15254A456.pdf, page 17, undated but apparently published in 2015
[4]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 page iv

Contact info: Suzanne Rhodes, LWVSC Nuclear Waste Project Manager

March 4, 2016, updated March 22, 2016

From: gnuclearvisionconsulting@gmail.com
Sent: Tuesday, March 22, 2016 8:06 PM
To: germanspentnuclearfuelea@leidos.com
Cc:
Subject: [Germanspentnuclearfuelea] Public Comment on German Spent Nuclear Fuel

Find attached my public comment on the Environmental Assessment.

Thank you,

Charles R. "Chuck" Goergen
Nu-Clear Vision Consulting, LLC

Charles R. "Chuck" Goergen
President & Chief Executive Officer

4 Longwood Drive
Aiken, SC 29803-5352

Phone: 803-649-4097
Fax: 803-649-4097
Mobile: 803-215-9099

NuClearVisionConsulting@gmail.com

Nu-Clear Vision Consulting

"Where Nuclear Technology and Operations Intersect"

March 22, 2016

Charles R. "Chuck" Goergen Comments on Environmental Assessment for the Acceptance and Disposition of Used Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium From the Federal Republic of Germany

I was glad to see the progress documented in the Draft EA. SRNL has again proven their moniker, "We put science to work". SRNL discovered and developed an innovative flowsheet to process material that has 30 years of research to find a methodology to treat this type of spent fuel.

057-1 I am in favor of the HEU material being brought from Germany to the Savannah River Site for interim storage, processing, and disposition. I see this as an international and U.S. security issue. The United States has a policy objective to reduce and eventually eliminate HEU from civil commerce. We, the United States, were the supplier of this HEU and bear some responsibility. At the recent Nuclear Security Summits, over 50 heads of state also support elimination of commercial HEU.

Highly Enriched Uranium can relatively easily be converted into an improvised nuclear device (i.e. atom bomb), a radiological device, or other radiological exposure device. Uranium can be shielded and more easily smuggled across borders than plutonium. The unclassified amount of U-235 to make a nuclear weapon is 25 kg. The ~900 kgs of HEU represented in this material from Germany, is enough to potentially make 35 weapons, equivalent to the Hiroshima bomb. As a frame of reference, the Manhattan Project was so confident of the HEU "gun assembly" technique that they did not consider a need to test Little Boy.

057-1 Receipt of this material will repatriate US origin HEU. Processing will isotopically dilute the HEU to LEU, rendering it no longer usable as a nuclear weapon. That is something the world benefits from. SRS has the security to protect this material until processing to a waste form. SRS has the capability to design

equipment that protects nuclear criticality safety and the environment. SRS has the knowledgeable and experienced people to accomplish this mission who have demonstrated performance by already safely blending down nearly 20MT of HEU to LEU.

I have resided in Aiken since 1975. I have a degree in chemistry with 40 years of experience in the nuclear materials processing field. I worked at Savannah River Site for 36 years before retiring in 2011. I am president of Nu-Clear Vision Consulting, LLC.

Charles R. Goergen

From: glovato@ndep.nv.gov
Sent: Thursday, March 24, 2016 12:35 PM
To: 'GermanSpentNuclearFuelEA@leidos.com'
Subject: [Germanspentnuclearfuelea] Nevada Comments on EA-1977 German Spheres

Please find attached comments from the Nevada Division of Environmental Protection on EA-1977.

Thank you,
Greg Lovato

NEVADA DIVISION OF
ENVIRONMENTAL PROTECTION

STATE OF NEVADA
Department of Conservation & Natural Resources
Brian Sandoval, Governor
Leo M. Drozdoff, P.E., Director
David Emme, Administrator

March 24, 2016

Tracy Williams
NEPA Compliance Officer
U.S. Department of Energy
P.O. Box B
Aiken, SC 29802

SUBJECT: DOE/EA-1977, Draft EA for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany ("Draft EA")

Dear Tracy Williams:

Under agreement with the US Department of Energy ("DOE"), the Nevada Division of Environmental Protection ("NDEP") provides oversight of Low Level Radioactive Waste (LLW) disposal at the Nevada National Security Site ("NNSS") (formerly the Nevada Test Site) located in Nye County, Nevada. The Draft EA analyzes alternatives for accepting U.S. origin Highly Enriched Uranium (HEU) at the Savannah River Site (SRS) in South Carolina for processing and disposition. We are providing comments on the Draft EA because several of the options associated with the two action alternatives identify the NNSS as an option for disposal of LLW in the form of empty casks and inner canisters and secondary LLW waste streams derived from down-blended HEU after processing at SRS.

058-1 As acknowledged in the Draft EA, the potential technologies proposed for processing the HEU are not yet mature and require significant development activities. These development activities include, but are not limited to: remote handling of casks and prototype equipment, digestion system design, process data collection, and waste disposal. The Draft EA also contains general assumptions about the characteristics of secondary waste that may be generated as a result of the action alternatives and then potentially disposed of at NNSS. After completion of technology development, when further information is available on the final process design and the characteristics, variation and amount of waste material proposed to be disposed of at NNSS; NDEP has determined that additional NEPA reviews associated with proposed LLW disposal at NNSS should be completed.

058-2 The Draft EA should contain a more specific description of how down-blending will alter the concentration and volume of material proposed for disposal.

058-3 In several portions of the Section 4.1.3.4, the Draft EA indicates that waste materials generated may be disposed of onsite, at offsite commercial disposal facilities, or at NNSS, provided

901 S. Stewart Street, Suite 4001 • Carson City, Nevada 89701 • p: 775.687.4670 • f: 775.687.5856 • ndep.nv.gov

058-3 applicable waste acceptance criteria are met. NDEP requests the Draft EA be amended to include further information on what criteria will be used to determine whether waste material generated will be disposed of onsite or at commercial disposal facilities rather than NNSS. Table 4-28 indicates transportation risks for NNSS disposal options are greater than other disposal options.

058-4 NDEP requests additional information be presented in the Draft EA to describe the Nevada transportation route and population characteristics in Nevada that were used to evaluate risk associated with transportation for the NNSS disposal options. The Final EA should clarify whether the routes selected are the approved LLW shipment routes to the NNSS (see at http://www.nv.energy.gov/emprograms/environment/pdfs/DRIVER_QUESTIONNAIRE.pdf) and whether the larger CASTOR casks shipment on selected routes would meet DOT route requirements for Highway Route Controlled Quantity shipments.

NDEP appreciates the opportunity to provide comments on the Draft EA. Please contact me at glovato@ndep.nv.gov or 775-687-9373 to discuss this matter further.

Sincerely,

Greg Lovato
Deputy Administrator

ec: Scott Wade, Assistant Manager EM, NNSA Nevada Field Office
Leo Drozdoff, Director, NV Department of Conservation and Natural Resources
Dave Emme, Administrator, NDEP
Chris Andres, Chief, Bureau of Federal Facilities, NDEP
Robert Halstead, Executive Director, Nevada Agency for Nuclear Projects
Phil Klevorick, Program Manager, Clark County Department of Comprehensive Planning

From: sylvia.kotting-uhl.ma02@bundestag.de
Sent: Thursday, March 24, 2016 7:22 AM
To: GermanSpentNuclearFuelEA@leidos.com
Subject: [Germanspentnuclearfuelea] Comment of Sylvia Kotting-Uhl (MP) on Draft EA for the Acceptance and Disposition of spent nuclear fuel from the Federal Republic of Germany

Dear Tracy Williams,

please find attached the comment of Sylvia Kotting-Uhl (Member of German Parliament) on the Draft Environmental Assessment for the „Acceptance and Disposition of spent nuclear fuel containing U.S.-origin highly enriched uranium from the Federal Republic of Germany".

Kind regards,
Sina Lippmann

Sina Lippmann

wiss. Mitarbeiterin Sylvia Kotting-Uhl MdB
Atompolitische Sprecherin
Bundestagsfraktion BÜNDNIS 90/ DIE GRÜNEN

Platz der Republik 1

www.kotting-uhl.de

Sylvia Kotting-Uhl
Member of the German Bundestag
Alliance 90/The Greens

Sylvia Kotting-Uhl MP · German Bundestag · 11011 Berlin

Bundestag building
Femke Hustert
Sina Lippmann
Bastian Zimmermann
Platz der Republik 1
11011 Berlin
Germany
0049 (30) 227 – 747 40
0049 (30) 227 – 767 42
sylvia.kotting-uhl@bundestag.de

Constituency Karlsruhe
Babette Schulz
Sophienstraße 58
76133 Karlsruhe
Germany
0049 (721) 1518 687
0049 (721) 1518 690
sylvia.kotting-uhl.wk01@bundestag.de

Berlin, 24th of March 2016

Comment of Sylvia Kotting-Uhl (Member of German Parliament) on the Draft Environmental Assessment for the acceptance and disposition of spent nuclear fuel containing U.S.-origin highly enriched uranium from the Federal Republic of Germany

Dear Tracy Williams,

I am writing you as a member of the German Parliament and spokeswoman on nuclear policy for the Alliance 90/The Greens parliamentary group with responsibility for issues relating to nuclear safety, final disposal sites, non-ionising radiation (electrosmog) and energy research during the current 18th electoral term. I am also member of the Commission on the Storage of High-Level Radioactive Waste.

059-1

With its decision in favour of a general export ban for highly radioactive nuclear waste, which is now also to apply to research reactors, the Commission on the Storage of High-Level Radioactive Waste has sent a clear message: it is committed to national disposal as a universal principle and to Germany assuming responsibility for all of its highly radioactive legacies.

At its meeting on 2 October 2015, the Commission on the Storage of High-Level Radioactive Waste voted in favour of a general ban on the export of highly radioactive nuclear waste by a large majority. It called on the Federal Government to develop a new legal provision for an export ban for irradiated fuel elements from research reactors, too. The decision states that this law should take into account "the essential points of non-proliferation and the enablement of top-level research (in particular FRM II)". This means that exemptions continue to be possible, for instance if the export ban endangers the manufacture of radiopharmaceutical agents for use in cancer treatment, or there are fears that the international nuclear non-proliferation treaty might be breached.

A ban on the export of fuel elements from commercial power production has already been in place since 2005. The Site Selection Act (*Standortauswahlgesetz* - StandAG) furthermore states in Section 1 (1) that the aim of the selection procedure is to find a

Sylvia Kotting-Uhl
Mitglied des Deutschen Bundestages
Bündnis 90/Die Grünen

final repository site in Germany and that no contracts or agreements are to be concluded with third countries to store the nuclear waste outside of Germany. It is only logical therefore that the export ban is now being extended to include fuel elements from the field of research as well. The Federal Ministry for the Environment also shares this view. There is headwind from the Ministry for Economic Affairs, the Ministry for Research and the Federal Foreign Office.

059-1

It is hard to understand this resistance from the ministries. In its recommendations, the commission concedes plenty of scope for exemptions – in our view too great a scope. Nonetheless, its decision does send a clear message against the exportation of the fuel spheres from the Jülich experimental AVR reactor to the US. The Federal Ministry for the Environment had already indicated at an earlier meeting of the group that compared to the options of constructing an interim storage facility in Jülich or transportation of the nuclear waste to the Ahaus interim storage facility, the option of exporting waste was the least likely. The commission's recommendation has now sent out a clear political signal.

What is important now is that the Federal Government implements the general export ban swiftly. We call for a prompt Act, which avoids exemptions in the vast majority of cases. The possibility of an exemption for the research reactor FRM II in Garching being used as a pretext to further delay the conversion of the research reactor so that it can use fuel elements with less enriched, non-weapons-grade uranium must be ruled out. Instead, a general export ban must be used to further increase the pressure on the FRM II reactor to swiftly switch to the less enriched fuel elements. In Garching, radiopharmaceutical agents are currently being produced for cancer treatment using highly enriched, weapons-grade uranium, for instance. Under the conditions stipulated by the Federal Ministry for the Environment (BMUB), the conversion of the reactor was actually already meant to take place in 2010. Under agreements between the Federal Government and the federal state of Bavaria, the conversion is now planned to take place by 2018, a final decision will only be taken at the end of 2016, however.

The commission also conducted a hearing on the issue of the recoverability of nuclear waste from a final repository. It invited experts from France, Sweden and Switzerland to this. Representatives from the Federal Office for Radiation Protection (BfS), DBE Technology GmbH and a scientist from the Research Institute of Philosophy (*Forschungsinstitut für Philosophie*) in Hannover were also present. For the commission, the hearing confirmed its position that the future final repository concept should contain a recoverability or retrievability option. Alongside socio-political and ethical arguments this is also the international standard. But it also became apparent that the individual countries and institutions are assuming very different time horizons for retrieval and for the life spans of the nuclear waste containers.

..3

Sylvia Kotting-Uhl
Mitglied des Deutschen Bundestages
Bündnis 90/Die Grünen

Switzerland, for instance, is planning a small pilot storage facility next to the main repository, which will test monitoring methods and should enable the main storage facility to be improved. In addition to this, two monitoring phases are planned for the main repository, during which the repository is actively monitored and fairly easy retrieval is possible. After phase I (about 10 years) the repository chambers will be closed, after phase II (about 50 years) the final repository will then be sealed. France is planning a period of 100 years for monitoring and possible retrieval, after which the final repository should then, in the opinion of the experts, be sealed off for safety reasons. The French government will present a law on this by the end of 2016.

Regarding the disposition of nuclear waste from German AVR and THTR reactors I would like to point out that the USA doesn´t have a storage for high-level radioactive waste and that transporting such waste is also always associatetd with great risks.

059-1 The Commission on the Storage of High-Level Radioactive Waste of the German Parliament has sent a strong signal with its decision for a general export ban for highly radioactive nuclear waste also applying to research reactors. I therefore call upon you not to pursue the option of disposition of spent nuclear fuel containing U.S.-origin highly enriched uranium from the Federal Republic of Germany.

Yours sincerely,

Sylvia Kotting-Uhl MP

From:
Sent: Thursday, March 24, 2016 10:32 AM
To: GermanSpentNuclearFuelEA@leidos.com
Subject: [Germanspentnuclearfuelea] Comment of Clements on draft EA on German spent fuel, March 24

To: Tracy Williams, NEPA Compliance Officer, U.S. Department of Energy, P.O. Box B, Aiken, South Carolina 29802. GermanSpentNuclearFuelEA@leidos.com.

Re: Additional Comments Submitted by Tom Clements, SRS Watch, for the Record of the Draft Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium From the Federal Republic of Germany (DOE/EA-1977)

Attached you will find my additional comments. Thank you for confirming receipt of this email and the attached document.

Thank You.

Tom Clements
SRS Watch
Columbia, SC

SRS WATCH

Savannah River Site Watch

March 23, 2015

To: Tracy Williams, NEPA Compliance Officer, U.S. Department of Energy, P.O. Box B, Aiken, South Carolina 29802. GermanSpentNuclearFuelEA@leidos.com.

Re: Additional Comments Submitted by Tom Clements, SRS Watch, for the Record of ***the Draft Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium From the Federal Republic of Germany*** **(DOE/EA-1977)**

060-1 These comments are primarily on a key document in the reference section of the draft EA but they are being submitted as comment on the draft EA as well. Thus, items marked "comment" below are on specific issues raised in the document named below and are officially submitted in their totality as an additional comment into the record.

The majority of the "comments" below are related to this Savannah River National Laboratory (SRNL) document: ***Feasibility and Alternatives for Receipt, Storage, and Processing of HTGR Pebble Fuel at SRS***, October 2014, SRNL-TR-2014-00184, Revision 0.

I want to highlight that the SRNL document ***Scale-Up Maturation Plan for Digestion of Graphite Fuel Pebbles*** (SRNL-RP-2014-00464, Revision 0) states "**The processing method developed is expected to be applicable or adaptable to other missions beyond irradiated fuel from the German AVR and THTR-300 reactors.**" (page 2) As we have raised before - but DOE has not fully answered our comment - any "other missions" for the processing techniques being developed must be revealed in an amended EA. Under the National Environmental Policy Act (NEPA), breaking a larger projects into smaller bits, so-called "segmentation," is not permitted. Thus, what are the larger project missions beyond the AVR and THTR commercial graphite fuel in question?

060-2 Due to many things left out of the draft EA, we hereby request that an amended draft EA be issued that is more comprehensive than the document that has been presented to the public. If this can't be done, why not? There is no schedule pressure in the US to avoid a more thorough analysis. The only schedule pressure is in Germany, for a decision on what will happen to the AVR spent fuel, but the German schedule must not impact US decisions and the public's involvement in them. In the event the project moves forward and a new draft EA is not issued then a full EIS is called for given the complexity of the issue at hand and the host of potential environmental impacts associated with the ill-defined and complex project.

060-3 After reading a number of reference documents on which the draft EA is based, it is abundantly clear that the program to receive, process and dump the graphite spent fuel from the AVR and THTR reactors is rife with potential hazards, and technical, scheduling, political and funding problems. This highly speculative research project should not go forward. While an amended draft EA or EIS is called for if R&D proceeds, we support the "no action" alternative - to leave the waste in Germany. This does not preclude DOE helping German entities in their management of the material in Germany.

Comments:

Extracted portions of the mentioned document are posted, followed by a specific comment:

"This project has developed data to support National Environmental Policy Act (NEPA) activities to expedite the transport of the fuel for receipt and storage at SRS." (page v)

Comment: No urgency on DOE's part has been established to expedite any aspect of the project in question, including spent fuel transport to SRS. DOE must clarify if the Forschung Zentrum Juelich (FZJ) or any other German entity is driving the US schedule or if DOE is making decisions by a foreign-imposed schedule.

"Receipt and processing of the fuel will provide for return of the HEU material to the United States, increase the stability of the material by conversion of the constituents to more robust waste forms, and potentially allow down blending of the uranium for reuse in commercial applications." (page v)

060-4

Comment: This sentence indicates that part of the reason for import of the material is for waste-management purposes. As the non-proliferation argument has been weakened or eliminated, the draft EA has not provided a defense of why the material (especially the LEU portion of it) would be brought to the US to be managed as waste and not left in Germany. If the goal is waste management or reduction in the volume of HLW, then this could be done in Germany, if a need was ever established to do so. DOE has claimed that there is 900 kilograms of HEU in the AVR and THTR spent fuel but one DOE document released as part of the NEPA process states: "There is 397 kg fissile (233U and 235U) in the HTGR fuel." What is the actual amount of uranium in the AVR and THTR spent fuel and what are the isotopics?

"The cask tie downs and impact limiters will be removed, and the cask will be lifted horizontally, upended to the vertical position, and transferred to a gravel storage pad." (page v)

060-5

Comment: No defense is presented in the draft EA as to why a "gravel storage pad" is adequate. If left in Germany, the spent fuel casks would be stored in a covered, seismically qualified facility, either a new facility at Juelich or the existing Ahaus facility. This standard should apply in the US as well. If a gravel pad implies short-term storage, the project has so many unknowns after the spent fuel is proposed to be imported that storage could end up

060-5 (Cont.) being for the long term in the event or project failure or termination. Thus, a gravel storage pad must be eliminated from consideration and plans presented for a robust storage building.

060-6 "The form of the material (Attractiveness Level E) requires only a Property Protection Area for security." (page v)

Comment: This admission that the material is only Attractiveness Level E confirm that the project is not being done for nuclear non-proliferation purposes, as indicated in the August 2013 NNSA memo on this matter (which SRS Watch submitted for the record on February 4, 2016). The question must be addressed in the EA as to why the project is being pursued if there is no nuclear non-proliferation reason for it. If nuclear waste is being imported apart from a nuclear proliferation program, proper import licenses from the Nuclear Regulatory Commission must be secured. Why is there no discussion of need for such licenses?

060-5 (Cont.) "Analyses of potential hazards and material-at-risk will be performed to develop safety basis modifications required for cask storage." (page v)

Comment: Where is the detail hazards and material-at-risk analysis for public review?

"Material balances and conceptual equipment arrangements were developed for each of the preferred options assuming a processing rate of ~1,000 pebbles per day, or a 3.5 year campaign." (page vi)

Comment: What happens if this processing rate can't be met, if it interferes with other H-Canyon activities or H-Canyon is shut down? What would happen to material that was within the H-Canyon processing system upon shut-down?

There is mention of "off gas flow rates and compositions." (page vii)

Comment: What are the flow rates, composition of off-gas and proposals to capture the gases (off-gas treatment) to avoid discharge directly into the environment (and per EPA regulations)?

"A technology maturation plan has been developed to address the risks inherent in process scale up to full remote operations. Completion of the plan, which includes pilot plant construction and operation, can be achieved within five years. Process start up can then be achieved after an additional five years." (page vii)

Comment: The "technology maturation plan" must be provided for public review before issuance of any final EA. As "completion" of the plan could take five years and "process start up" could take another five years, this means ten years will pass before implementation of those two things. A more detailed schedule must be presented, with all necessary steps to carry out these goals. Likewise, how this schedule fits with H-Canyon cessation of operation must be clearly presented.

060-7

"Preliminary cost estimates for both Total Project Cost and Life Cycle Cost were prepared for each option, as shown in Table ES-2." (page vii)

Comment: As the costs were developed by a DOE contractor in order to utilize facilities that DOE will own, they must be released for public review.

060-5 (Cont.)

"Completion of the Safety Basis Modification packages to identify process hazards, required engineered controls, and criticality safety limits for receipt, storage, handling, and processing." (page 15)

Comment: The Safety Basis Modification package must be completed and available for public review before a new draft EA is issued.

"Development of an MC&A plan, and identification of equipment to be provided to satisfy nuclear material accountability requirements for fuel processing." (page 15)

Comment: A declassified MC&A plan must be made available for public review before a final EA can be issued.

060-8

"Due to regulatory commitments, receipt of fuel from the Jülich facility must be completed by September 2016. Fuel processing can be deferred until existing facilities are available, or modifications can be made without impact to existing missions." (page 15)

Comment: What are the regulatory commitments in the US that drive any schedule, much less completion of spent fuel receipt by September 2016 (an impossibility)? What is the new date for spent fuel receipt? Stating that "fuel processing can be deferred" until facilities are available confirms that SRS could be left holding this spent fuel with no path forward if plans do not work out. Even the risk of that situation - German spent fuel being stranded at SRS - is unacceptable. DOE must explain how the spent fuel will be returned to Germany if it is received and processing does not go forward or if processing is halted due to any reason.

060-9

"Project Objectives" of the spent fuel import and processing project are stated on page 16.

Comment: Why is not one objective to help Germany deal with the spent fuel in question in Germany? The NNSA's August 2013 affirms that help can be provided for dealing with this material. Such help can be in Germany and not at SRS.

060-10

"Fuel canisters containing pebbles are welded, and will require cutting to open." (page 17)

Comment: Handling of the CASTOR casks, opening of them and removal of the spent fuel pebbles is a complex operation that must be more fully explained. Removal of the pebbles and the determination to isolate those that contain only LEU, for return to Germany, must be explained. If DOE proposes to process pebbles only containing LEU, then a full discussion must be include as to why import of LEU spent fuel is being considered and what is the justification

060-10 (Cont.) for this. Given that some balls are in poor condition, what are potential unique impacts on opening cans, such as graphite dispersal or increased worker exposure?

060-11 "Kernel processing in H Canyon will occur after completion of all other programmatic missions." (page 17)

Comment: What is the planning basis for H-Canyon completing other missions? Who has made this determination? What is the schedule for kernel processing and what happens with the kernels if H-Canyon is closed?

"Pebble digestion in H Canyon can occur coincidentally with other missions, but will require interim in-cell storage of recovered kernels." (page 17)

Comment: What is the assumption for the type of other missions in H-Canyon and how can they be carried out, both during normal operation and in case of accidents, while also processing the irradiated pebbles?

060-12 "All wastes generated will have a defined disposition path." (page 17)

Comment: There must be a full explanation about specific facilities in which all waste streams will be disposed of. For high-level waste, what is the geologic disposal facility and when will disposal occur?

"Facility process design will require a minimum TRL of 6, requiring pilot facility operations and process demonstration with irradiated materials." (page 17)

060-5 (Cont.) Comment: Explain how the necessary "Technology Readiness Level" can be achieved and explain what happens if it is not. Explain why spent fuel would be imported before the necessary TLR is achieved, before pilot facilities are built and before pilot facilities are demonstrated to operate as planned and designed.

Explain how DOE regulations in DOE G 413.3-4, *Technology Readiness Assessment Guide*, will be met and how TRLs above TRL 6 will be met and what is the schedule for facilities above TRL 6.

"14C is also produced from activation of the elemental carbon present in the fuel pebble." (page 21)

Comment: How will carbon-14 be removed from the aerial discharge stream and is this possible so as to comply with EPA regulations and other regulations?

060-10 (Cont.) **Table 5-1 HGTR Fuel Characterization** reveals what DOE says to be the U-235 plus U-233 content levels currently in the graphite spent fuel pebbles. The average U-235 plus U-233 uranium content for all the AVR spent fuel is 15.4% and a significant portion has only a 8.4% uranium content. The THTR average U-235 and U-233 content is 74.4%.

060-10 (Cont.)

Comment: It was stated by a FZJ official during an FZJ tour by SRS Watch director Tom Clements that irradiated LEU balls and balls of higher uranium content are mixed in the casks. How will DOE sort the LEU material from the HEU material? How will the LEU balls be packaged for return to Germany and why isn't the sorting set to take place in Germany? Why are casks with balls that are under the HEU enrichment level of 20% even being considered for shipment to SRS? As much of the spent fuel balls are far below the HEU level and as they are contaminated with U-233, U-232 and other isotopes, the attractiveness of the material is at the lowest level, Level E. Given this and that the NNA has affirmed that this waste poses no proliferation risk if it remains in Germany, it remains unclear why this project is going forward as it is not being done as a non-proliferation program. EM (and not NNSA) has pitched this is a nuclear non-proliferation program but it reality it's a waste management program (that will add to the nuclear waste burden in the US) and may well have the unstated goals of using the knowledge gained to process other irradiated graphite fuel materials.

060-5 (Cont.)

"Treatment of off gas - In addition to volatile radionuclides (isotopes of krypton, iodine, tritium, and carbon), the off gas will contain significant quantities of cesium and strontium, as well as uranium and entrained salt. The off-gas system must provide capture of these materials, as well as cooling of the stream prior to discharge to the stack." (page 24)

Comment: The legal and regulatory requirements for off-gas capture must be explained in detail. How the gasses will be captured and stored and for what period of time (for radioactive decay) must be discussed in detail. How requirements of **40 CFR Part 191** will be met must be explained in detail. As is noted in number 16 on page 27, the off-gas capture problem may drive the decision to process the material or not, thus underscoring the necessity of an in-depth discussion of technologies and methods to be used to capture and isolate or package the gas, including C-14.

Comment: Concerning the list of numbered items on page 27, many of them need additional explanation, especially points that are speculative or that raise questions needing answers. LLW acceptance criteria and volumes for WCS and NSS need to be explained.

060-10 (Cont.)

"Option 1. Disposition of All Constituents via High Level Waste System (Figure 5-6)
This option transfers the CASTOR cask from storage to H Canyon, where the inner cans are removed and transferred to an unloading station." (page 28)

Comment: Please explain how the irradiated balls will be removed if they are in a deteriorated state. Does DOE know which casks contain balls in poor shape? How will uranium composition be measured in a high radiation environment so as to determine LEU balls that must be repackaged and shipped back to Germany? What are plans for return to Germany?

060-13

"The permit authorizing storage at the Jülich facility expires in September 2016. Based on the number of casks and the projected shipping schedule, shipments must begin by June 2015 to complete the site deinventory by the regulatory deadline." (page 33)

060-13 (Cont.)

Comment: As the projected shipping schedule has been badly missed and will be further delayed, please explain how the project can go forward if there is urgent need in Germany to make a near-term decision on what happens to the AVR spent fuel now at FZJ. As there is no indication that the project will go forward or that pilot facilities will ever be constructed, there needs to be much more detailed schedules than those presented in the draft EA. Those schedules need to take into account problems in R&D and potential failure to move as planned to pilot and full-scale facilities.

"Environmental permitting was rated the most important criterion because regulatory delay could jeopardize the milestone for deinventory of the Jülich facility." (page 34)

Comment: Explain why the schedule in Germany is the "most important criterion" for US permitting. There is no explained "need" to receive this material by a schedule established in Germany. If the German schedule eliminates the US-export option so be it.

060-12 (Cont.)

"Waste management was also a significant criterion because of the range of forms and quantities of waste produced by the various options, and the relative impacts to the Waste Management facilities. In general, options producing lower volumes of liquid waste, smaller incremental numbers of HLW canisters, and established waste forms with accepted paths to disposition were rated more favorably." (page 34)

Comment: Why can't these things be done in Germany if they are so important in management of the spent fuel in question? The US and Germany are both stymied about what to do with HLW and bringing German HLW here only exacerbates our problem and does nothing to help Germany solve their bigger spent fuel disposal problem.

060-5 (Cont.)

"The CASTOR casks are authorized for both transportation and storage, and have been in indoor storage service for many years. Because cask storage at SRS will be outside, they will be fitted (either individually or collectively) with an engineered cover to protect the casks from the elements." (page 41)

Comment: How was it determined that the SRS cask storage facility will be outside? The FZJ facility is inside and any new facility at FZJ would be an indoor facility and built to high standards. Why is it that the SRS facility is to be constructed to apparently lower standards than any new facility in Germany? High standard are warranted for a new SRS facility and the site workers and public deserve a facility that would be built to state-of-the-art standards likely to be applied in Germany (if they build a new facility for AVR storage at FZJ or elsewhere). As processing of the spent fuel could not go forward or be halted at any point, any facility constructed must be as if it were to be used for long-term storage.

060-4 (Cont.)

Concerning the options listed in "5.3 Range of Possible Process Options" (page 24)

060-4 (Cont.)

Comment: It remains unclear why the graphite balls need to be processed by SRS and this demands full explanation and justification. If the balls do need to be processed for any legitimate waste management or safety purpose why this can't take place in Germany needs explanation. If the goal is to reduce the HLW volume bringing the material here actually increases the HLW burden in the US and results in other waste streams that would have to be managed in the US. Please present a defense of increasing the US nuclear waste burden if the AVR and THTR spent fuel is imported.

060-5 (Cont.)

"Additional work is required to better understand reaction kinetics, off-gas composition and treatment requirements, and potential hazards." (page 39)

Comment: Details need to be given about potential "reaction kinetics" and how this might impact the project. What type of such reactions have been observed during research work and what type of such reactions might be expected? Additionally, what is described as "potential hazards" must be explained.

060-12 (Cont.)

"The security objective for fuel processing is to maintain the SNM at Attractiveness Level D." (page 45)

Comment: Please explain why it is beneficial to process the graphite spent fuel, at Attractiveness Level E, and take it to Attractiveness Level D. Leaving it at Level E, of lower concern, would seem to be a preferred end goal. While waste streams are said to end up at Level E, what about separated products that are of higher security concern?

060-5 (Cont.)

These things, among others, will need to be considered in a Safety-in-Design approach: "Reaction kinetics, material balances, and energy balances not fully defined" and "Potential for additional or exacerbated accident scenarios." And, these potential hazards" are possible: Uncontrolled exothermic reaction" and "Explosives/Pyrophorics" situations. (page 47)

Comment: As little is understood about the processes involved and potential hazards and dangers lurk, these things need more analysis now so as the pubic knows the extent of risks involved. Potential thermal excursion hazards are of concern and must be fully explained. What is the role of the oxidation process in liquid nitrates or other chemicals in any potential thermal excursions?

060-12 (Cont.)

A "major goal" is to minimize high level waste (HLW), low level waste (LLW) or transuranic (TRU) waste streams associated with the graphite spent fuel processing. (page 48)

Comment: Explain how such minimization is not best accomplished by leaving the spent fuel in Germany. As all additional waste streams will add to the SRS and US waste burdens, the waste streams are not minimized.

"The *Liquid Waste System Plan* will require modification to incorporate the waste streams resulting from the processing of HTGR used fuel." (page 49)

060-12 (Cont.)

Comment: Explain how an updated *Liquid Waste System Plan* for SRS can and will be modified and how graphite waste will impact system plans, DWPF operation, SWPF operation and tank closure. Describe how a Waste Incidental to Reprocessing (WIR) determination will be sought and how any part of the waste can be determined to be WIR and what the role of the Nuclear Regulatory Commission will be (as their role is required by law).

"No TRU waste streams are anticipated to be generated from processing HTGR used fuel; however, if any are generated and they are considered defense related waste then they also would be processed through the SRS solid radioactive waste management facilities for final disposal at WIPP." (page 49)

Comment: Explain how any waste streams or product from the graphite spent fuel, from experimental commercial reactors in Germany, could be determined to be US "defense waste." Under what laws and regulations can foreign commercial HLW be reclassified as US defense waste? How can such foreign waste be disposed of in a US defense waste disposal facility, especially if a stand-alone facility is constructed or utilized for DOE defense waste?

060-11 (Cont.)

"For H Canyon alternatives, facility startup is assumed to commence after H Canyon programmatic missions are complete." (page 52)

Comment: When is H-Canyon assumed to have completed other programmatic missions? Why is FY2024 presented as the start-up date in "Figure 14-1 Project Schedule for Process Implementation?" What happens if H-Canyon is used for a longer period of time or if H-Canyon is permanently closed prior to FY 2024? If H-Canyon is not available what happens to the project and any spent fuel brought from Germany to SRS? Will plans be in place to store or return opened and unopened CASTORS casks if the project falters and/or fails?

060-14

DOE document "**Scale-Up Maturation Plan for Digestion of Graphite Fuel Pebbles**" (SRNL-RP-2014-00464, Revision 0) states "The processing method developed is expected to be applicable or adaptable to other missions beyond irradiated fuel from the German AVR and THTR-300 reactors." (page 2)

Comment: Describe which "other missions" are being considered for the process intended to be developed. Do such mission involve foreign and/or domestic graphite fuels or yet-to-be-fabricated fuel? The draft EA has dodged this issue despite earlier comments asking if Fort St. Vrain (where Fuel Storage Canisters are stored, with each holding up to six graphite fuel elements) or Peach Bottom spent fuel was being considered for processing.

060-15

In the document "**Scale-Up Maturation Plan for Digestion of Graphite Fuel Pebbles,**" "It is noted, however, that the collection, transport, and receipt of an irradiated pebble is likely to be problematic. Therefore, this task is considered to be longer term both because of the challenges associated with obtaining the irradiated pebble, and more significantly, because the

near term tasks described above are likely to provide much of the data needed to support maturation of the technology." (page 20)

060-15 (Cont.)

Comment: Describe how an irradiated pebble or pebbles are part of the R&D project and how they will be secured at FZJ and transported and which regulations apply to import of irradiated pebbles into the US.

The SRNL document "**PRELIMINARY SCOPING-LEVEL HAZARD ANALYSIS FOR THE PROCESSING OF HGTR PEBBLE FUEL AT SRS**" (S-CHA-H-00026) mentions these "hazards":

"EXPLOSIONS
The preliminary hazard analysis of processing of HTGR Pebble Fuel in H-Canyon did identify a potential for an uncontrolled chemical reaction that could result in a rapid over-pressurization of a process vessel. It is expected that the new process is designed to prevent process upsets that could lead to process explosions. In the event of postulated explosions the current H-Canyon structure and exhaust system are adequate to mitigate consequences. H-Canyon has existing analysis for hydrogen deflagration, TBP-nitric acid runaway reactor (red oil explosion) and ammonium nitrate explosions."

060-16

"RADIOLOGICAL
The HTGR Pebble Fuel analyzed in this HA presents a radiological and exposure hazard for the facility."

Comment: Explain these risks in detail, the impact of them if they are realized and how they can be mitigated. In the case of any treatment of the graphite balls by liquid sodium nitrate and what the impact of heat production, explosivity and rapid oxidation would be.

Final observation: Please explain if DOE is "negotiating" with the FZJ and/or German Government to import only the AVR spent fuel or if there are negotiations about importing the THTR spent fuel, as implied in the 2012 letter of Dr. Georg Schütte. The German Government has stated in Germany that only the AVR export is in question and that the THTR spent fuel would not in any case be exported. Legal questions and legal challenges aside concerning the AVR spent fuel export (especially once licenses are applied for), why is DOE even pondering receipt of the THTR spent fuel when it has been excluded from export from Germany?

060-17

Comments submitted by:
Tom Clements
Director, Savannah River Site Watch
1112 Florence Street
Columbia, South Carolina 29201
http://www.srswatch.org/
https://www.facebook.com/SavannahRiverSiteWatch
tel. 803-834-3084
srswatch@gmail.com

PC-061

From: germanspentnuclearfuelea-bounces@listserv.leidos.com on behalf of [redacted]
To: GermanSpentNuclearFuelEA
Subject: [Germanspentnuclearfuelea] WG: No nuklear Export to USA
Date: Monday, March 28, 2016 9:10:07 AM
Attachments: Sammeleinwendungen1.pdf
Sammeleinwendungen.pdf
ATT00001.txt
Importance: High

-----Original-Nachricht-----
Betreff: No nuklear Export to USA
Datum: 2016-03-24T02:58:15+0100
Von: [redacted]
An: "GermanSpentNuclearFuelEA@leidos.com" <GermanSpentNuclearFuelEA@leidos.com>

Dear Ms. Williams,

with my signatur, I support these Comments against the DEA concerning the processing of German pebble bed NPP fuel elements at SRS.
Yours sincerely

Irene Quast

PC-061

Sammeleinwendungen – Keine Castor-Exporte in die USA

To: Ms. Tracy Williams, NEPA Compliance Officer, U.S. Department of Energy, P.O. Box B Aiken, South Carolina 29802. e-Mail: GermanSpentNuclearFuelEA@leidos.com

Comments on "Draft Environmental Assessment for the Acceptance and Disposition of Used Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany" (DEA) dealing with processing of German pebble bed NPP fuel elements at SRS. Final date for comments: 11.03.2016

Dear Ms. Williams

We are deeply concerned about the US/German plans to reprocess and store about 200,000 kg of commercial German pebble fuel elements from the nuclear power plants AVR Juelich (15 MWel) and THTR-300 (300 MWel) at SRS. The reasons for our comments are:

- European Union and German laws do not allow the export of nuclear waste, except for proliferation relevant waste from neutron generating research reactors. The reasonable general rule is that the waste has to remain in the country of its origin. AVR and THTR are obviously no research reactors and are not listed as research reactors by the International Atomic Energy Agency, but as nuclear power plants. There are several legal expertizes, which underline this position. For that German environmental organisations as BUND (friends of the earth) and Greenpeace have announced legal actions in case of a transport of the German fuel to SRS.
- Reprocessing of fuel elements is prohibited by law in Germany for commercial fuel elements. Both, AVR and THTR were both owned and operated by commercial utilities (and THTR still is) and produced electricity (4.4 bn kWh) to the grid. For both German NPPs sister plants existed in the US: Peach Bottom HTGR for AVR and Fort St. Vrain HTGR for THTR, and these US plants are considered as commercial in the US. The very poor performance of these German pebble bed NPP may not be taken as argument for non existing commercial intentions: They were commercial NPPs.
- There is no significant proliferation risk for the AVR waste, as several expertizes (e.g. from the NNSA 2013) indicate. In average the spent AVR waste does not contain HEU. A conditioning and final storage in Germany is possible.
- The fuel elements were mainly (96 %) fabricated in Germany at Nukem, US origin is only the HEU content (830 kg).
- As an independent official experts group outlined 2014, there were several severe accidents in AVR reactor (which were hushed up for decades). The fuel elements are thus in a very bad shape. Their reprocessing will probably produce huge amounts of secondary waste, which will hinder the intended cleaning of the SRS site. About 4 % of the THTR fuel elements are broken with probably similar consequences.
- The German government has officially announced here in the past years that there are no plans to export the waste from THTR to the US, but only for the AVR and that they wonder about an "Draft Environmental Assessment" (DEA) by DOE for THTR waste. Having in mind that it seems that the German side has officially supported the DEA for THTR waste too, we guess that the German export plans for the AVR waste are only the first step of an ecologically highly problematic export of all German nuclear waste to other countries. Russia has already similar offers.

TRANSLATION/ Übersetzung:

Sehr geehrte Frau Williams,

wir sind zutiefst besorgt über die amerikanisch-deutschen Pläne zur Lagerung und Wiederaufarbeitung von etwa 200 000 kg kommerziell genutzter deutscher Kugelbrennelemente aus den Atomkraftwerken AVR Jülich (15 MW eL) und THTR-300 (300 MW eL) in Savannah River Site. Die Gründe für unsere Bedenken:

- Die deutschen Gesetze und die der Europäischen Union erlauben den Export von radioaktiven Abfällen nicht, mit Ausnahme von proliferationsgefährliche Abfällen aus Neutronen erzeugenden Forschungsreaktoren. AVR und THTR sind aber offenkundig keine Forschungsreaktoren und sind auch nicht als solche gelistet bei der IAEA, sondern es sind kommerzielle Atomkraftwerke.
- Die Aufarbeitung von Brennelementen aus kommerziellen Reaktoren ist nach deutschem Recht verboten. Sowohl der AVR als auch der THTR wurden betrieben und waren im Besitz (der THTR auch jetzt noch) von kommerziellen Betreibern; sie produzierten Strom für das öffentliche Netz (4,4Mrd. kWh). Für beide

deutschen Anlagen existierten Schwesteranlagen in den USA: PEACH Bottom HTGR für den AVR und Fort St. Vrain HTGR für den THTR; diese Anlagen werden auch in den USA als kommerzielle betrachtet. Die miserable Leistungsbilanz der deutschen Kugelhaufen-Reaktoren kann nicht als Argument gegen deren kommerzielle Intentionen dienen: Sie waren kommerzielle Reaktoren!

- Es besteht kein signifikantes Proliferations-Risiko für den AVR-Müll, wie verschiedene Gutachten (z.B. auch von NNSA, 2013) darlegen. Im Allgemeinen enthält der AVR-Müll kein HEU. Eine Konditionierung und Endlagerung in Deutschland wären somit möglich.
- Die Brennelemente wurden hauptsächlich (zu 96%) in Deutschland von der NUKEM hergestellt, lediglich der HEU-Anteil (830 kg) stammt aus den USA.
- Wie eine unabhängige Expertengruppe 2014 darlegte, gab es verschiedene Unfälle im AVR, die über Jahrzehnte verschwiegen worden waren. Die Brennelemente sind daher in einem sehr schlechten Zustand. Ihre Wiederaufarbeitung wird vermutlich große Mengen sekundären Mülls erzeugen, die die beabsichtigte Säuberung der SRS behindern dürften. Ungefähr 4% der THTR-Brennelemente sind zerbrochen, mit vermutlich ähnlichen Konsequenzen.

Die deutsche Bundesregierung hat in den vergangenen Jahren offiziell erklärt, dass es keine Pläne für den Export der THTR-Brennelemente in die USA gäbe, sondern nur für die des AVR. Ausgehend von der Annahme, dass die deutsche Seite nun doch die Umweltverträglichkeitsprüfung des amerikanischen DOE für die THTR-Brennelemente offiziell unterstützt, vermuten wir dass die deutschen Exportpläne für den AVR-Müll nur der erste Schritt eines ökologisch höchst problematischen Exports allen deutschen Atommülls in andere Länder darstellt. Es gibt bereits entsprechende Angebote durch Russland.

DRAFT ENVIRONMENTAL ASSESSMENT / Umweltverträglichkeitsstudie:

http://energy.gov/sites/prod/files/2016/01/f28/Draft%20DOE%20EA%201977_FOR%20PUBLIC.pdf

With my signatur, I support these comments against the DEA concerning the processing of German pebble bed NPP fuel elements at SRS.

	Nachname, Vorname Name, Prename	Wohnort City	Unterschrift Signature
1.	Joosten, Hanny	47495 Rheinberg	
2.	Niessner, Tim	47053 Duisburg	
3.	Langenfeld, Marion	47829 Krefeld	
4.	Pankau, Michael	47051 Duisburg	
5.	[illegible]	47533 Kleve	
6.	[illegible]	47055 Duisburg	
7.	Hartmann, Jörg	46487 Wesel	
8.	Mihy, Georg	47495 Rheinberg	
9.			
10.			

Eine Aktion des Bündnisses gegen Castor-Exporte (Buegece), Zusammenschluss aus landes- und bundesweiten Anti-Atom-Initiativen und dem BUND NRW www.bund-nrw.de www.westcastor.de

Bitte bis zum **01.03.2016** an den BUND NRW e.V. senden:
Merowingerstraße 88, 40225 Düsseldorf, Fax: 0049 211 302005-26,
V.i.S.d.P.: Buegece, c/o Claudia Baitinger, T 0049 2369 24296
Claudia.Baitinger@bund.net

Hinweis zum Datenschutz: Abgesehen von der Übersendung der Unterschriften an den Adressaten findet eine Weitergabe der Daten an Dritte nicht statt. Stand 18.02.2016

deutschen Anlagen existierten Schwesteranlagen in den USA: PEACH Bottom HTGR für den AVR und Fort St. Vrain HTGR für den THTR; diese Anlagen werden auch in den USA als kommerzielle betrachtet. Die miserable Leistungsbilanz der deutschen Kugelhaufen-Reaktoren kann nicht als Argument gegen deren kommerzielle Intentionen dienen: Sie waren kommerzielle Reaktoren!

- Es besteht kein signifikantes Proliferations-Risiko für den AVR-Müll, wie verschiedene Gutachten (z.B. auch von NNSA, 2013) darlegen. Im Allgemeinen enthält der AVR-Müll kein HEU. Eine Konditionierung und Endlagerung in Deutschland wären somit möglich.
- Die Brennelemente wurden hauptsächlich (zu 96%) in Deutschland von der NUKEM hergestellt, lediglich der HEU-Anteil (830 kg) stammt aus den USA.
- Wie eine unabhängige Expertengruppe 2014 darlegte, gab es verschiedene Unfälle im AVR, die über Jahrzehnte verschwiegen worden waren. Die Brennelemente sind daher in einem sehr schlechten Zustand. Ihre Wiederaufarbeitung wird vermutlich große Mengen sekundären Mülls erzeugen, die die beabsichtigte Säuberung der SRS behindern dürften. Ungefähr 4% der THTR-Brennelemente sind zerbrochen, mit vermutlich ähnlichen Konsequenzen.

Die deutsche Bundesregierung hat in den vergangenen Jahren offiziell erklärt, dass es keine Pläne für den Export der THTR-Brennelemente in die USA gäbe, sondern nur für die des AVR. Ausgehend von der Annahme, dass die deutsche Seite nun doch die Umweltverträglichkeitsprüfung des amerikanischen DOE für die THTR-Brennelemente offiziell unterstützt, vermuten wir dass die deutschen Exportpläne für den AVR-Müll nur der erste Schritt eines ökologisch höchst problematischen Exports allen deutschen Atommülls in andere Länder darstellt. Es gibt bereits entsprechende Angebote durch Russland.

DRAFT ENVIRONMENTAL ASSESSMENT / Umweltverträglichkeitsstudie:

http://energy.gov/sites/prod/files/2016/01/f28/Draft%20DOE%20EA%201977_FOR%20PUBLIC.pdf

With my signatur, I support these comments against the DEA concerning the processing of German pebble bed NPP fuel elements at SRS.

	Nachname, Vorname Name, Prename	Wohnort City	Unterschrift Signature
1.	G. Ortenhostert	47445 Moers	Ortenhostert
2.	G. Quast	47495 Rheinberg	
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Eine Aktion des Bündnisses gegen Castor-Exporte (Buegece), Zusammenschluss aus landes- und bundesweiten Anti-Atom-Initiativen und dem BUND NRW www.bund-nrw.de www.westcastor.de

Bitte bis zum **01.03.2016** an den BUND NRW e.V. senden:
Merowingerstraße 88, 40225 Düsseldorf, Fax: 0049 211 302005-26,
V.i.S.d.P.: Buegece, c/o Claudia Baitinger, T 0049 2369 24296
Claudia.Baitinger@bund.net

Hinweis zum Datenschutz: Abgesehen von der Übersendung der Unterschriften an den Adressaten findet eine Weitergabe der Daten an Dritte nicht statt. Stand 18.02.2016

PC-062

From:	germanspentnuclearfuelea-bounces@listserv.leidos.com on behalf of martina haase
To:	GermanSpentNuclearFuelEA
Cc:	Klaus Heber; Bündnis gegen Castror-Exporte
Subject:	[Germanspentnuclearfuelea] other comments on "Draft Environmental Assessment for the Acceptance and Disposition of Used Nuclear Fuel..." part 3
Date:	Thursday, March 24, 2016 6:31:37 PM
Attachments:	8.jpeg 9.jpeg ATT00001.txt

Hello

We are sending hereby 137 signatures against the planned nucl.fuel transports from Jülich/Germany to your country.

All are from the region around Aachen/Northrhine-Westfalia.
3Mails in total.

Martina Haase [redacted]

Erstellt mit Operas E-Mail-Modul: [redacted]

PC-062

Comments on NEIA dealing with processing of German pebble bed NPP fuel elements at SRS

Dear Mrs/Mr,

we are deeply concerned about the US/German plans to reprocess and store about 200,000 kg of commerical German pebble fuel elements from the nuclear power plants AVR Juelich (15 MWel) and THTR-300 (300 MWel) at SRS. Our reasons are:

- European Union and German laws do not allow the export of nuclear waste, except for proliferation relevant waste from neutron generating research reactors. The reasonable general rule is that the waste has to remain in the country of its origin. AVR and THTR are obviously no research reactors and are not listed as research reactors by the International Atomic Energy Agency, but as nuclear power plants. There are several legal expertizes, which underline this position. For that German environmental organisations as BUND (friends of the earth) and Greenpeace have announced legal actions in case of a transport of the German fuel to SRS.
- Reprocessing of fuel elements is prohibited by law in Germany for commercial fuel elements. Both, AVR and THTR were both owned and operated by commercial utilities (and THTR still is) and produced electricity (4,4 bn kWh) to the grid. For both German NPPs sister plants existed in the US: Peach Bottom HTGR for AVR and Fort St. Vrain HTGR for THTR, and these US plants are considered as commerical in the US. The very poor performance of these German pebble bed NPP may not be taken as argument for non existing commerical intentions: They were commerical NPPs.
- There is no significant proliferation risk for the AVR waste, as several expertizes (e.g. from the NNSA 2013) indicate. In average the spent AVR waste does not contain HEU. A conditioning and final storage in Germany is possible.
- The fuel elements were mainly (96 %) fabricated in Germany at Nukem, US origin is only the HEU content (830 kg)
- As an independent official experts group outlined 2014, there were several severe accidents in AVR reactor (which were hushed up for decades). The fuel elements are thus in a very bad shape. Their reprocessing will probably produce huge amounts of secondary waste, which will hinder the intended cleaning of the SRS site. About 4 % of the THTR fuel elements are broken with probably similar consequences.
- The German government has officially announced here in the past years that there are no plans to export the waste from THTR to the US, but only for the AVR and that they wonder about an NEIA by DOE for THTR waste. Having in mind that it seems that the German side has officially supported the NEIA for THTR waste too, we guess that the German export plans for the AVR waste are only the first step of an ecologically highly problematic export of all German nuclear waste to other countries: There are already respective offers of Russia.

Kein Atommüllexport von Jülich nach South Carolina Einwendungsliste

PC-062

An US-Department of Energy . (englische Übersetzung wird mitgesandt.)

Sehr geehrte Damen und Herren,

wir sind zutiefst besorgt über die amerikanisch-deutschen Pläne zur Lagerung und Wiederaufarbeitung von etwa 200 000 kg kommerziell genutzter deutscher Kugelbrennelemente aus den Atomkraftwerken AVR Jülich (15 MW eL) und THTR-300 (300 MW eL) in Savannah River Site. Die Gründe für unsere Bedenken:

- Die deutschen Gesetze und die der Europäischen Union erlauben den Export von radioaktiven Abfällen nicht, mit Ausnahme von proliferationsgefährdeten Abfällen aus Neutronen erzeugenden Forschungsreaktoren. AVR und THTR sind aber offenkundig keine Forschungsreaktoren und sind auch nicht als solche gelistet bei der IAEA, sondern es sind *kommerzielle* Atomkraftwerke.
- Die Aufarbeitung von Brennelementen aus kommerziellen Reaktoren ist nach deutschem Recht verboten. Sowohl der AVR als auch der THTR wurden betrieben und waren im Besitz (der THTR auch jetzt noch)von kommerziellen Betreibern; sie produzierten Strom für das öffentliche Netz (4,4Mrd. kWh). Für beide deutschen Anlagen existierten Schwesteranlagen in den USA: PEACH Bottom HTGR für den AVR und Fort St. Vrain HTGR für den THTR; diese Anlagen werden auch in den USA als kommerzielle betrachtet. Die miserable Leistungsbilanz der deutschen Kugelhaufen-Reaktoren kann nicht als Argument gegen deren kommerzielle Intentionen dienen: Sie waren kommerzielle Reaktoren!
- Es besteht kein signifikantes Proliferations-Risiko für den AVR-Müll, wie verschiedene Gutachten (z.B. auch von NNSA, 2013) darlegen. Im Allgemeinen enthält der AVR-Müll kein HEU. Eine Konditionierung und Endlagerung in Deutschland wären somit möglich.
- Die Brennelemente wurden hauptsächlich (zu 96%) in Deutschland von der NUKEM hergestellt, lediglich der HEU-Anteil (830 kg) stammt aus den USA.
- Wie eine unabhängige Expertengruppe 2014 darlegte, gab es verschiedene Unfälle im AVR, die über Jahrzehnte verschwiegen worden waren. Die Brennelemente sind daher in einem sehr schlechten Zustand. Ihre Wiederaufarbeitung wird vermutlich große Mengen sekundären Mülls erzeugen, die die beabsichtigte Säuberung der SRS behindern dürften. Ungefähr 4% der THTR-Brennelemente sind zerbrochen, mit vermutlich ähnlichen Konsequenzen.
- Die deutsche Bundesregierung hat in den vergangenen Jahren offiziell erklärt, dass es keine Pläne für den Export der THTR-Brennelemente in die USA gäbe, sondern nur für die des AVR. Ausgehend von der Annahme, dass die deutsche Seite nun doch die Umweltverträglichkeitsprüfung des amerikanischen DOE für die THTR-Brennelemente offiziell unterstützt, vermuten wir dass die deutschen Exportpläne für den AVR-Müll nur der erste Schritt eines ökologisch höchst problematischen Exports allen deutschen Atommülls in andere Länder darstellt. Es gibt bereits entsprechende Angebote durch Russland.

Felizitas Himmel, Münsterstr. 380, 40470 Düsseldorf / Himmel
Dirk Markowski, Zehnthofweg 44, 52068 Aachen / D. Markowski

Unterzeichner befinden sich auf der Rückseite

Dagmar Eberhard, Kölnerstr. 355, 40227 Düsseldorf D. Eberhard
Monika Sweets, Jordanstr. 1, 40545 Düsseldorf M. Sweets

Ich unterstütze die auf der Rückseite befindliche Stellungsnahme

PC-062

Name, Vorname	PLZ	Wohnort, Strasse	Unterschrift
Cepik-Keukert Carola	B-4723	Roter Bühl 15	Cepik-Keukert
Ullrich, Irmgard	52066	Eupenerstr. 21	I. Ullrich

Ich unterstütze die auf der Rückseite befindliche Stellungsnahme

Name, Vorname	PLZ	Wohnort, Strasse	Unterschrift
Schmitz-Köppel Hedwig	52076	Aachen - Schleidener Straße	H. Köppel
Brinkmeier, Bernd	52076	AC, Sonnenberg 19	[illegible]
Hille, Albrecht	52076	AC - Mauerweg 5	Hille
Schirmer, Manfred	52070	AC Kammerwiese	[illegible]
Köppel, Eckart	52076	AC, Schleidener Str. 99	E. Köppel
Weber, H-Josef	52072	AC, Pizzaallee	Weber

Bsup139

Axel [illegible] [illegible]

Ich unterstützte die auf der Rückseite befindliche Stellungsnahme

PC-062

Lange, Volrjan [illegible] | 40627 | D-Heinrich-Könnitz 135 | [signature]

Name,Vorname	PLZ	Wohnort,Strasse	Unterschrift
Engelhardt, Manfred	52078	AC Frankenland 1a	[signature]
Mommber Hubertine	47331	Eschatten [illegible]	[signature]
Altpeter Dirk	50171	Kerpen	[signature]
Baranczyk, Klaus-W.	52146	Würselen Waldstr. 1	[signature]
Pittel, Norbert	52072	AC Rütsch. 5[illegible]	[signature]
Quaster, Ralph	52080	AC, Wamb.Str.	[signature]
SOMMER, ANETTE	52070	AC FRIEDRICHSTR 63	[signature]
Hack, Hubert	52074	AC, Lütticher Str.	[signature]
[illegible]ller-Hauber, Ulrike	52074	AC, Kronenberg 3	[signature]
[illegible], ALFRED	52[illegible]	AC [illegible]PLATZ 10	[signature]
Sutiner, Frank	B-4728	Kelmis, Haag 12	[signature]
Dellen, [illegible]	B-4730	[illegible]	[signature]
Schlagloth, Christina	52066	Aachen, Viktoriastr.	[signature]
DÖPFINGER, UWE	52076	Gymnasiumweg 2	[signature]
Schröter, Rita	6291	NL VAALS [illegible]	[signature]
Klepper Odette	52064	Aachen	[signature]
[illegible] [illegible]	52072	[illegible]	[signature]
Jansten [illegible]	41564	Kaarst	[signature]
Krabbendam Gert-Jan	NL 6223 HA	Maastricht	[signature]
Schumalz, Wolf	52074	Aachen	[signature]
Kosenberger Ulrich	40479	Düsseldorf	[signature]
Frühholz, Peter	40472	Düsseldorf	[signature]
Imhorst, Carmen	40231	D'dorf	[signature]
Kussmann, Katharina	40[illegible]	D'dorf	[signature]
Nethaus, Peggy	40210	D'dorf	[signature]
Radermacher, Martin	40468	D'dorf	[signature]

Bsup140

Ich unterstütze die auf der Rückseite befindliche Stellungsnahme

PC-062

Name, Vorname	PLZ	Wohnort, Strasse	Unterschrift
Haase Anke-Martina	D-52076	Aachen Wilbank str. 133	A Haase
Heber Klaus	052076	Aachen Wilbankstr. 133	Klaus Heb
Kar Ursula	52068	Aachen	
		Eintrachtstr. 1	Ursula Kar
Schmitz [illegible]	D 52066	AACHEN	[illegible]
Michael [illegible]	53125	Bonn	[illegible]
Konisch, Dettlef	44577	Castrop-Rauxel	[illegible]
Nau, [illegible]	45721	Haltern	[illegible]
D. Henrichs, Ralf	48145	[illegible] 99 48145 Münster	[illegible]
J. Poweck	45327	Imbuschweg 50 45327 Essen	Polweck
Simon Suchy	42499	Hückeswagen	[illegible]
Akbayir, Hamide	51061	Köln, Lindenstr. 28	[illegible]
[illegible]	48143	Münster	[illegible]
[illegible]	52080	Aachen	[illegible]
Uli Glasemann	52076	Aachen	U. Glasemann
Maria Haik	52072	Aachen	M. Haik
Buchholz Robert	52076	Aachen	[illegible]
Sperling, Axel	52072	Aachen	A. [illegible]
Wiegand, Volker	52153	Roetgen	[illegible]
Murawetz, Josef	44894	Bo-Werne	[illegible]
[illegible], A[illegible]	46397	Bocholt Fortunastr. 7	[illegible]
Braun Sebastian	52074	Aach, Jean-[illegible] 16	[illegible]
Paul Elisabeth	52074	Vaalser Str.	E Paul
Böcking Albrecht	52074	[illegible] 1 Ac	X. Böcking
Heindl, Wolfgang	52076	[illegible] 44	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

Bsup141

Ich unterstütze die auf der Rückseite befindliche Stellungsnahme

PC-062

Name, Vorname	PLZ	Wohnort, Strasse	Unterschrift
[illegible], Dirk	52068	Zeternutbastweg 44	[illegible]
Roentgen, Ruth	52159	Roetgen	R. Roetg
Thiel, Sabrina	4730	Raeren	S. Thiel
Kratt, Juliane	52156	Monschau	[illegible]
Mandel, Steffen	52156	Monschau	[illegible]
[illegible], [illegible]	52159	Roetgen	[illegible]
Heilbron, Olga	52159	Roetgen	Heilbron
Roentgen, [illegible]	52159	Roetgen	[illegible]
Roentgen, Maria	52066	Viehhofstr Aachen	M Roentgen
Gabert, Lena	52159	Roetgen Brunnenweg	Lena Gabert
Lamm, [illegible]	52159	Roetgen [illegible] 16	[illegible]
Sandfort, Daniela	52396	Heimbach-Hergarten	D. Sandfort
Frost, Gabriele	[illegible]143	[illegible]	[illegible]
[illegible], Bettina	52249	Eschweiler	[illegible]
Eilenbach, Raimund	52159	Roetgen	R. Eilenbach
Kreiger, Liselotte	52159	[illegible] Roetgen	Kreiger
Block, Peter	52159	Roetgen	P. Block
Peffeller, Daniel	52159	Roetgen	[illegible]
Carsten, Wilfried	52159	Roetgen	[illegible]
[illegible], [illegible]	52076	Aachen	[illegible]
Roby, Laura	52062	Aachen, [illegible]	[illegible]
Brasse, [illegible]	52159	Roetgen [illegible]	[illegible]

Bsup142

Ich unterstütze die auf der Rückseite befindliche Stellungsnahme

PC-062

Name, Vorname	PLZ	Wohnort, Strasse	Unterschrift
PROCHNOW, IDA	52066	Aachen Bismarckstr.	Prochnow
Schramm, Silja	52078	AC, Am Kellenberg 35	O. Schramm
SCHRAMM, NILS	52078	"	N. Schramm
Kirch, Margret	52078	AC, [illegible]	Kirch
Michel, Ol.	52078	AC, Marktplatz 18	[illegible]
Kuchen, Irene	52076	AC, Benediktinerweg 51	[illegible]
Krott Ursula	52078	Nordstr. 30, AC	U. Krott
Dietzel, Carola	52076	[illegible] 8	[illegible] 52076 AC
Dente Ulrich	88090	Immenstaad	R. [illegible]
Klütgens, Ange	52223	Am Hahnenkreuz	Klütgens
Strang, V.	52076	Aachen Oberforstbach	[illegible]
MENNENGA, ANJA	52078	AC, Im Wiesengrund 30	Heine
Gerhards, Lydia	B4731	Raeren-Lichtenbusch	L. Gerhards
LEUCHTER, Roswitha	52076	AACHEN	[illegible]
JUNGBLUT CLAUDIA	52076	AACHEN	[illegible]
Forstreuter, Carolin	52078	Aachen	C. Forstreuter
Bothe, Philippe	52076	Aachen	P. Bothe
Vogel Gerd	B4700	EUPEN	[illegible]
Schneiders, Elke	52224	Stolberg	Schneiders
Sell, Jul.	52078	Aachen	Sell
Uwe Weller	52223	Stolberg	Weller

Bsup143

Ich unterstütze die auf der Rückseite befindliche Stellungsnahme

PC-062

Name, Vorname	PLZ	Wohnort, Strasse	Unterschrift
Dorenkamp Dora	52066	Aachen Rehmdestr. 12	[signature]
Blatt-Ammer, Rose	52159	Roetgen, Hauptstr. 26	[signature]
Heilbron, Olga	52159	Roetgen, Offermann 22a	[signature]
Wyes Jutta	52159	Roetgen Vennstr. 21	[signature]
Quick Helga	52159	Roetgen Vogelsangstr. 47	[signature]
[illegible]	52159	Rott [illegible] 3	[signature]
Rester, Martina	52068	Aachen, [illegible]	[signature]
Amoah, Conni	52159	Wiesenstr. 1	[signature]
[illegible], Christiane	52159	Roetgen / [illegible] 9	[signature]
Majewsky, Aggi	52152	Simmerath	[signature]
Küpper Claudia	52159	Roetgen	[signature]
[illegible]	52159	Roetgen	[signature]
Kietz [illegible]	52159	Roetgen [illegible]	[signature]
Deussen, [illegible]	52159	Roetgen, [illegible]	[signature]
Reiners Andrea	52159	Roetgen	[signature]
Helga Heinz	52159	Roetgen	[signature]
[illegible]	52159	Roetgen	[signature]
Höfer, Angela	52159	Roetgen	[signature]
Otto, Monika	52159	Roetgen	[signature]
Spindel, Elke	52159	Roetgen	[signature]
Weißenberg, Kirsten	52159	Roetgen	[signature]
Sommer, Miriam	52156	Monschau	[signature]
Marscha, Doris	52159	Roetgen, Eichenstr.	[signature]
Vages, Petra	52159	Roetgen	[signature]
Gärtner, [illegible]	52159	Roetgen	[signature]
Becker Louise	52159	Roetgen	[signature]

Bsup144

Dr. Rainer Moormann
Aachen/Germany

March 24, 2016

Tracy Williams
NEPA Compliance Officer
U.S. Department of Energy
P.O. Box B
Aiken, South Carolina 29802
GermanSpentNuclearFuelEA@leidos.com

Draft Spent Nuclear Fuel from Germany EA

Dear Mr. Williams,

first I intend to comment one aspect of the Draft Environmental Assessment on German HEU I was dealing with for almost 40 years of my career, the burning of graphite of pebble bed reactors. You can find many publications of myself to this problem, see e.g.:

http://www.hindawi.com/journals/stni/2011/589747/

I have to say that all DOE/SRS documents try to hide details of the burning process being part of the reprocessing of German pebble fuel elements (L-area option): The composition of the liquid salt is made invisible in all papers. After reading of the respective documents I came for several reasons to the conclusion that oxidation of the pebble graphite is probably intended to take place in liquid sodium nitrate. This would be a highly dangerous process, because the composition is similar to that of gunpowder (which contains charcoal – consisting as graphite mainly of carbon – and an alkaline nitrate). Pebble burning in sodium nitrate is thus very difficult to control and – as even mentioned in the documents – accidents with thermal runaway have to be taken into account. That may even lead to a total destruction of the facility with severe contamination of the environment.

063-1 In order to avoid the impression that DOE/SRS hide the details of the intended graphite burning in the L-area option because of its very dangerous character I strongly recommend as follows: Please make available to the public more information on the burning process, particularly on the oxidizing medium in the liquid salt. I request that this be done as part of the issuance of an amended Environmental Assessment to be released for another round of public comments or that it be released as part of an Environmental Impact Statement process

063-2 Second I wonder why DOE/SRS wants to accept many AVR castors, although they obviously do not contain HEU any longer (see table 5.1 in in SRNL-TR-2014-000184: 55 "AVR A" castors contain Uranium with a fissile content of only 8.4 %). This seems not to fit well with the main reason of DOE "*to reduce, and eventually to eliminate, HEU from civil commerce*". Please explain why DOE is considering the import of spent AVR pebbles that do not contain HEU.

063-3 Third I intend to point out that I did not find a comment how to remove long-lived radioactive C-14 from the off-gas of the burning processes. In Europe burning of pebbles without retention of C-14 (which means a closed cycle) is not permitted. The expected annual C-14 emissions during pebble treatment are – following SRS values - far more than an order of magnitude larger than those of a typical large size German LWR and even larger than those of the large scale British reprocessing

063-3 plant Sellafield in 2009. Please make available detailed information on removal of C-14 from the off-gas and allow the public to comment on the removal method via an amended EA or an EIS.

Best regards

From: Mcconney.Ramona@epa.gov
Sent: Friday, March 25, 2016 10:44 AM
To: germanspentnuclearfuelea@leidos.com
Cc: Militscher, Chris; Generette, Lloyd
Subject: [Germanspentnuclearfuelea] EPA comments re Draft EA Acceptance & Disposition of Spent Nuclear Fuel containing US-Origin HEU from Germany DOE/EA-1977

Comments on the Draft Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany

General comment

The DOE should further clarify the plans to minimize the generation of radioactive waste during the processing of the spent fuel. The Draft EA, (Table 4-33, Total Cumulative Waste Generation at the Savannah River Site), lists estimated waste generation of LLW, hazardous waste, and solid nonhazardous waste for the H-Area and L-Area alternatives, and indicates that the L-Area alternative generates less cubic meters of waste in comparison to the H-Area alternative.

064-1

Overview

Alternatives for processing the waste at H-Area and L-Area are being considered. Two options are available for digesting the carbon encasing the HEU fuel kernels: molten salt digestion and vapor digestion options. These options are the first step in the process, and would be common to both areas. The EA should clarify whether the molten salt digestion option or the vapor digestion option would result in less additional waste, and the amount of waste processing that would be required for waste generated from either of these processes.

The H-Area processing alternatives include vitrification, which involves dissolving the embedded fuel kernels and transferring the solution to liquid waste facilities; the low enriched uranium (LEU) option, which involves dissolving kernels followed by solvent extraction of the uranium; and the low enriched uranium (LEU)/thorium option, which involves dissolving HEU kernels in solvent, followed by the separation of uranium and thorium.

The L-Area processing alternative involves down-blending the HEU kernels and converting them to a uranium-aluminum alloy in a melt and dilute process. The EA notes that the processing timeline for the H-Area alternatives would be approximately 5 years, as compared to approximately 7 years for the L-Area alternative.

Specific comments

064-1 Table 4-33, Total Cumulative Waste Generation at the Savannah River Site, Draft EA action alternatives, shows that the L-Area alternative includes a lower amount of estimated waste generation in comparison with the H-Area alternative. Section 2.1.6.2, Cask Disposition under the L-Area Alternative, states that "If disposed, the casks and canisters would result in a disposal waste volume of approximately 67,000 cubic feet". This section further states that "If the casks were reused, the inner canisters would be disposed of separately as LLW in the SRS E-Area trenches. The canisters would represent approximately 8,000 cubic feet of LLW." It is unclear whether plans include reusing the casks to the maximum extent feasible, and whether or not reusing the inner canisters is feasible.

Section 4.1.3.4, Waste Management, notes that "…additional analysis and facility design or operational modifications may be required to accommodate disposal of solidified LEU or LEU/Thorium waste under the H-Area Alternative". We note that this represents additional work that would not be required if the L-Area alternative is selected.

Table 4-31, Annual Cumulative Population Health Effects of Exposure to Radioactive Contaminants at the Savannah River Site, German Fuel EA action alternatives, indicates that radiation doses to the general population and maximally exposed individual would be slightly less under the L-Area alternative.

Thank you for the opportunity to comment on this project.

Ramona K. McConney

Atlanta GA 30303

PC-065

From:
Sent: Friday, March 25, 2016 5:26 PM
To: GermanSpentNuclearFuelEA@leidos.com
Subject: [Germanspentnuclearfuelea] Comment letter on EA for Acceptance and disposition of spent nuclear fuel from Germany

My comment letter is attached. I attempted to email this earlier but got a message saying it was waiting moderator approval. So I am trying again.
Marolyn Parson

Bluffton, SC 29910

Dr. Marolyn Parson

Bluffton, SC 29910

Tracy Williams
NEPA Compliance Officer
U.S. Department of Energy
P.O. Box B
Aiken, SC 29802

Submitted via email to GermanSpentNuclearFuelEA@leidos.com

Re: Comments on Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium From the Federal Republic of Germany

The following comments are being submitted in response to the U.S. Department of Energy's Notice of Intent, "Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany," published on January 25, 2016, *Federal Register* (Vol. 81, No. 15). The comments are limited to the Environmental Assessment and do not discuss the legality of this project.

The spent nuclear fuel that is the focus of this Environmental Assessment has been stored in two Germany cities, Jülich and Ahaus, since the Arbeitsgemeinschaft Versuchsreaktor and the Thorium High Temperature Reactor-300, were shut down and defueled in 1988 and 1989, respectively. This spent fuel is in the form of small graphite spheres, called pebbles, which are stored in 455 CASTOR casks. The pebbles contain different amounts of uranium and thorium, with uranium enrichments up to 81 percent. The total weight of the highly enriched uranium is almost a ton.

It is worth noting at the beginning of these comments that the Department of Energy states that its purpose for the acceptance and disposition of the spent nuclear fuel described above is "to support the U.S. policy objective to reduce, and eventually to eliminate, HEU from civil commerce." (p. S-2, "Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany," January 25, 2016, *Federal Register* (Vol. 81, No. 15))

Further, when the Department of Energy was approached by the Federal Republic of Germany in February 2012 to consider the acceptance and disposition of the spent nuclear fuel described above, the Department of Energy considered the request for the following reasons:

> "the spent fuel contains U.S.-origin HEU;
> success of the above-mentioned research on a laboratory scale;
> SRS expertise in nuclear engineering and the management of nuclear materials; and
> availability of hardened SRS facilities that could be used as is or modified to process and disposition this type of spent nuclear fuel." (p. S-2, "Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly

> Enriched Uranium from the Federal Republic of Germany," January 25, 2016, *Federal Register* (Vol. 81, No. 15))

As a result, this proposed project is not being considered by the Department of Energy to further the nuclear nonproliferation goal of the United States, which is in line with the results of a technical evaluation of the proliferation attractiveness of the spent nuclear fuel from Germany by Jackson Q. Crocker, Director of Nuclear Threat Science, Department of Energy, National Nuclear Security Administration. In Mr. Crocker's August 1, 2013, letter (attached at the end of these comments), he states:

> "We assess the material as low attractiveness (Attractiveness level "E", which requires only Category IV security protection. We also assess the material is not attractive to sub-state/terrorist entities in its current state. Since the material is stored in a secure environment in a politically stable country, it is not of a proliferation concern."

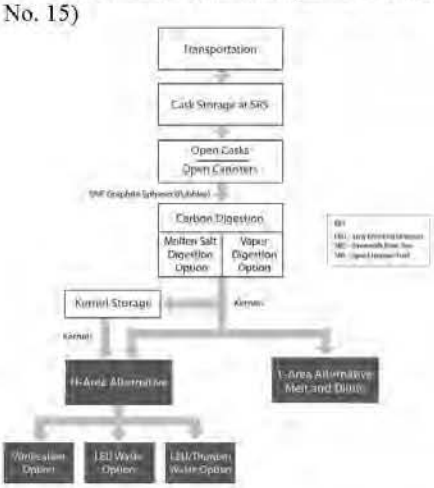
The Department of Energy is evaluating two alternatives for acceptance and disposition of the spent nuclear fuel as required by the National Environmental Policy Act, a No Action Alternative and an action alternative. Under the No Action Alternative, the spent nuclear fuel would not be shipped to the United States for processing and disposition. Under the action alternatives, the spent nuclear fuel would be shipped to the United States and processed at Savannah River Site for final disposition.

If an action alternative is selected, The Federal Republic of Germany will pay for the shipment of the CASTOR casks to the United States as well as the processing and disposition of the spent nuclear fuel. The Department of Energy is proposing to process the spent nuclear fuel at the Savannah River Site and then disposing most of the low level nuclear waste on site and storing the rest the high level nuclear waste at the Savannah River Site until a national repository is available to receive it. According to the Environmental Assessment, the casks would be shipped across the Atlantic Ocean to the Joint Base Charleston-Weapons Station, near Charleston, South Carolina, and then carried on dedicated trains to the Savannah River Site. A maximum of sixteen casks would be carried on a transport ship, so it will take 30 or more shipments to get all of the 455 casks to the United States.

Each cask contains spent nuclear fuel in the form of small graphite spheres, called "pebbles." All total, there is approximately 1,980 pounds of highly enriched uranium in the 455 casks. The uranium enrichment is up to 81%.

Once received at the Savannah River Site, there are two action alternatives being considered. The first is referred to as the H-Area alternative, which has three processing options—the Vitrification Option, the Low Enriched Uranium Waste Option, and the LEU/Thorium Waste Option. The second is referred to as the L-Area Alternative. As the name of the alternatives suggests, the location of the processing of the spent nuclear fuel would take place in two different locations, either in H-Area or L-Area. The figure below shows the action alternatives and associated processing options.

Figure S-2: H-Area and L-Area Alternatives (p. S-6, , "Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany," January 25, 2016, *Federal Register* (Vol. 81, No. 15)



Under the H-Area alternatives, the results of the three process options will require different disposition paths.

1. The Vitrification Option would result in 101 canisters of high level waste glass, which would be stored at the Savannah River Site until a national repository is available; plus about 190,000 cubic feet of low level waste saltstone, which would be deposited in one of the saltstone vaults at the Savannah River Site forever.
2. The LEU Waste Option would result in 32 canisters of high level waste glass, which would be stored at the Savannah River Site until a national repository is available; 220,000 cubic feet of low level waste saltstone, which would be deposited in one of the saltstone vaults at the Savannah River Site forever, and 3,600 cubic feet of grouted low enriched uranium low level waste, which would be disposed of in the E-Area at the Savannah River Site forever or sent offsite to a low level waste disposal facility.
3. The LEU/Thorium Waste Option would result in 15 canisters of high level waste glass, which would be stored at the Savannah River Site until a final disposition path for high level waste is available; 220,000 cubic feet of low level waste saltstone, which would be deposited in one of the saltstone vaults at the Savannah River Site forever, and 10,100 cubic feet of grouted low enriched uranium low level waste. (The final disposition path for the grouted low enriched uranium low level waste is not stated in the current draft environmental assessment document.)

Under the L-Area alternative, the results of the process would require two disposition paths. First, the digested spent fuel pebbles would be blended with other uranium and combined with aluminum to produce an alloy that would be cast into ingots. The ingots would be loaded into 82

multi-canister overpacks, which would be placed in storage casks in the L-Area at the Savannah River Site until a final disposition path for high level waste is available. Second, 130,000 cubic feet of low level waste saltstone would be produced and deposited in one of the saltstone vaults at the Savannah River Site forever.

As a result of the acceptance of the spent nuclear fuel from Germany, both low level and high level radioactive waste will be generated. Most of the low level waste will remain onsite forever, and realistically, all of the high level waste will remain at the Savannah River Site for many years, if not forever.

As I read the draft environmental assessment and listened to Maxine Maxted (Department of Energy) and community members at the public meeting, I formulated some questions that I decided to use to formulate my opinion on the action that the Department of Energy should take with regards to the acceptance and disposition of the spent nuclear fuel from Germany.

065-1 1. First, is it possible for the project to be conducted without harm to workers and the public?

065-2 2. Second, is there a significant economic benefit to the communities surrounding the Savannah River Site?

065-3 3. Third, is there a disposition path for the radiological waste generated from the project?

065-4 4. Fourth, will the project delay the most important cleanup mission, the closing of the high level waste tanks, at the Savannah River Site?

The answers to these questions are discussed below.

065-1 1. First, is it possible for the project to be conducted without harm to workers and the public?

As a former member of the Savannah River Site Citizens Advisory Board, I had many opportunities to visit the site during my six year tenure. Based on my experiences and after reading "Section 4.1.3 Impacts on the Savannah River Site", I believe that there is a high probability that Department of Energy staff and contractors at the Savannah River Site would be able to carry out the alternatives described above in a manner that would minimally impact the public and keep radiological exposures of the involved workers within regulatory and industry limits.

For example, from "Table 4-16: Table 4-16: Radiological Doses and Risks for Members of the Public by Major Operational Activity Involving Spent Nuclear Fuel from Germany", it can be seen that there would be no expected latent cancer fatalities for members of the public within 50 miles of the Savannah River Site. (p. 4-28, "Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany," January 25, 2016, *Federal Register* (Vol. 81, No. 15) From "Table 4-17: Involved Worker Radiation Doses and Risks from Receipt, Storage, and Processing Spent Nuclear Fuel from Germany at H-Area or L-Area", it can be seen that there would be no expected latent cancer fatalities for workers involved with receipt, storage for processing the spent nuclear fuel. (p.4-29, "Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany," January 25, 2016, *Federal Register* (Vol. 81, No. 15) And, from "Table 4-18: Involved Worker Radiation Exposures from Processing Waste at DWPF and the Saltstone Facilities",

it can be seen that there are no latent cancer fatalities expected from workers involved with processing the waste at DWPF or the Saltstone facilities. (p. 4-30, "Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany," January 25, 2016, *Federal Register* (Vol. 81, No. 15)

Unfortunately, there is always a chance, albeit very small, that the unthinkable accident will occur or an intentional destructive act will be carried out that would harm workers and the public. Possible accidents identified in "Table 4-19: Potential Accident Impacts for Processing H-Canyon under the H-Area alternative", include criticality, leaks and spills, fires, explosions, design-basis earthquakes, and beyond-design-basis earthquakes. (p. 4-43, "Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany," January 25, 2016, *Federal Register* (Vol. 81, No. 15) The probability of all of these accidents is listed as extremely unlikely, and the impact on workers and the public is described as being negligible.

Possible accidents identified in "Table 4-20: Potential Accident Impacts for Processing under the L-Area Alternative" include fire in process cell, beyond-design-basis earthquake, melter fire, full facility fire, furnace extreme overheating, helicopter crash, melter eruption with loss of ventilation, and earthquake induced spill with loss of ventilation. (p. 4-47, "Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany," January 25, 2016, *Federal Register* (Vol. 81, No. 15) The probability of all of these accidents is listed as either extremely unlikely or beyond extremely unlikely, and the impact on workers and the public is not zero, but the doses (rem) are very low and the probability of latent cancer fatalities is very low.

It is worth noting that is it difficult for members of the public to determine whether or not the risk analyses presented in the above mentioned tables and discussed in "Section 4.1.3 Impacts on the Savannah River Site" are actually relevant to processing the German spent nuclear fuel, because the risks and associated impacts on workers and the public are based upon former studies done at Savannah River Site or from information extrapolated from the University of Missouri Materials Test Reactor. As a result, there is a leap of faith that the public must take to trust these analyses. For me, I am taking that leap of faith, because I cannot see any plausible reason that the Department of Energy would want to underestimate the potential harm to workers, including themselves, or the public, including their families. To do so would be unthinkable.

065-1

In terms of an intentional destructive act and the potential harm to workers and the public, it is impossible to make an educated judgment from the information presented in the Environmental Assessment. While "Section 4.1.3.2.3 Intentional Destructive Acts" supposedly addresses this issue, the narrative states that "At SRS, the spent nuclear fuel from Germany would be protected and processed such that an intentional destructive act that would threaten the public or workers would be extremely unlikely." (p. 4-50, "Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany," January 25, 2016, *Federal Register* (Vol. 81, No. 15)) Instead of describing these improbable threats and the potential impacts, former analyses are referenced from classified documents. As a result, the public is left again having to take a leap of faith that the Department of Energy would not consider accepting and processing this spent nuclear fuel from Germany if

an intentional destructive act has the potential to create a catastrophic impact on the workers at the Savannah River Site and the surrounding communities.

065-1

After careful consideration, I reiterate what I stated above, which is, I believe that it is possible for the project to be conducted without harm to workers and the public.

2. Second, is there a significant economic benefit to the communities surrounding the Savannah River Site?

065-2

Clearly, the answer is no. In "Section 4.1.3.3 Socioeconomics", it is stated "Although both alternatives would result in some job creation, the number of jobs and the duration of employment are not expected to result in a noticeable impact to the existing socioeconomic or demographic characteristics of the region." (p. 4-54, "Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany," January 25, 2016, *Federal Register* (Vol. 81, No. 15)) Under the L-Area alternative, there is a very small benefit, which is the preservation of approximately 135 existing jobs for 16 days.

3. Third, is there a disposition path for the radiological waste generated from the project?

Clearly, the answer is no. Under the H-Area Alternative, 101 high level waste canisters would be generated, for which there is currently no known disposition path. It is shown in "Table 4-23: Waste Generation and Percent of SRS Waste Management Facility Capacity", that the 101 canisters only represent 2% of the high level waste canisters projected to be produced at

065-3

the Savannah River Site during the clean up mission. (p. 4-55, "Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany," January 25, 2016, *Federal Register* (Vol. 81, No. 15)) However, all of these additional highly radioactive canisters would also remain at the Savannah River Site indefinitely or until the United States government decides how to disposition such waste.

Under the L-Area Alternative, 82 multi-pack overpacks would be stored in the L-Area and would remain at the Savannah River Site indefinitely or until the United States government decides how to disposition such highly radioactive waste.

4. Fourth, will the project delay the most important cleanup mission, the closing of the high level waste tanks, at the Savannah River Site? (The Environmental Assessment does not directly address a delay in the closure of the high level waste tanks, but it does address the closure of the Savannah River Site.)

065-4

The answer is yes. However, according to the Environmental Assessment "the maximum impact on SRS site closure is estimated to be 1 year." (p. 4-78, "Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany," January 25, 2016, *Federal Register* (Vol. 81, No. 15)) The short delay on the closure of the Savannah River Site is due to the additional time that facilities would have to operate to process and prepare the spent nuclear fuel for disposition.

065-4 For example, it is estimated that under the H-Area Alternative, Vitrification Option, DWPF would have to operate an additional 100 days and the saltstone facilities an extra 24 days. For the H-Area Alternative, LEU or LEU/Thorium Waste Option, it is estimated that H-canyon operations would be extended 1 year. And under the L-Area Alternative, the saltstone facilities would have to operate an additional 16 days.

Conclusion

065-5 After careful consideration, I believe that the Department of Energy should choose the No Action Alternative at this time, because the acceptance of the spent nuclear fuel from Germany will result in the production of high level radioactive waste for which there is no disposition path. As a result, this newly generated waste will have to remain at the Savannah River Site until a disposition path is formulated and initiated by the United States. As stated by Mr. Jackson Q. Crocker, Department of Energy, the spent nuclear fuel is not a terrorist threat and is being safely stored in a politically stable country. When a disposition path for high level radioactive waste has been initiated in the United States, then and only then should the Department of Energy consider the acceptance and disposition of spent nuclear fuel from the Federal Republic of Germany.

I appreciate the opportunity to comment on this important issue and hope you will give my comments serious consideration.

Sincerely,

Marolyn J. Parson, Ph.D.

Marolyn J. Parson, Ph.D.

Attachment

Department of Energy
National Nuclear Security Administration
Washington, DC 20585

August 1, 2013

MEMORANDUM FOR KENNETH PICHA
DEPUTY ASSISTANT SECRETARY
OFFICE OF TANK WASTE AND NUCLEAR MATERIAL

ARTHUR G. ATKINS
ACTING ASSISTANT DEPUTY ADMINISTRATOR
OFFICE OF GLOBAL THREAT REDUCTION

FROM: JACKSON Q. CROCKER
DIRECTOR
OFFICE OF NUCLEAR THREAT SCIENCE

SUBJECT: Proliferation Attractiveness of Jülich Graphite Spheres

We have completed a technical evaluation of the High Temperature Gas-Cooled Reactor graphite fuel assemblies currently stored at Forschungzentrum Jülich (GmbH) to assess its material attractiveness. The graphite spheres each weigh approximately 200 g. The concentration of uranium (^{233}U) is 0.5% by weight, as dioxide. Thorium dioxide is also present at 5% by weight along with a small amount of SiC (2.3 g). We assess the material as low attractiveness (Attractiveness level "E"), which only requires Category IV security protection. We also assess the material is not attractive to sub-state/terrorist entities in its current state. Since the material is stored in a secure environment in a politically stable country, it is not of a proliferation concern.

However, because the material is of U.S. -origin, the NNSA believes that the Department does have an unofficial responsibility to assure the material is adequately dispositioned. Therefore, NNSA supports "Work for Other" activities by DOE's Office of Environmental Management to help Germany develop and implement an appropriate disposition pathway for this material. Although not a nonproliferation activity, it does serve to minimize the amount of U.S. HEU at civilian facilities worldwide.

cc: Jay Tilden, NA-80
Deleon Edgardo, EM-22

~~[illegible] from public release under the Freedom of Information Act [illegible] Department of Energy [illegible] public release. [illegible] Crocker, NA-82 Date: 07/23/13~~

~~OFFICIAL USE ONLY~~

Printed with soy ink on recycled paper

From: becky@georgiawand.org
Sent: Friday, March 25, 2016 6:12 PM
To: GermanSpentNuclearFuelEA@leidos.com
Subject: [Germanspentnuclearfuelea] German Spent Nuclear Fuel EA Public Comments

Ms Williams,

Please accept the enclosed public comments and questions regarding the Draft Spent Nuclear Fuel from Germany EA.

Thank you and enjoy your weekend-
Becky Rafter

Becky D. Rafter, MPA // Executive Director // Georgia Women's Action for New Directions (Georgia WAND) // [redacted] // www.georgiawand.org

GEORGIA WAND
Women's Action for New Directions
250 Georgia Ave, Suite 202, Atlanta, GA 30312 | Phone: (404) 524-5999 | www.georgiawand.org

March 25, 2016

Ms Tracy Williams
NEPA Compliance Officer
Department of Energy
PO Box B
Aiken, SC 29802

Dear Ms Williams:

066-1 Georgia WAND would like to state for public comment that we are against the US importing HEU from Germany's AVR and THTR-300 reactors for disposal at SRS. We support the no action alternative, and if possible I would like answers to the following questions:

066-2 1. The EA began in 2014, based on a partnership that began in 2012. It never came up at SRS CAB meetings until it was discovered by a community stakeholder. Is there a protocol for alerting the public after a certain stage about projects SRS is considering/planning?

066-3 2. Will any of the German fuel be re-used for any reason besides disposal?

066-4 3. L-Area seems to have halted back in the early 2000s – why? And why consider re-starting now? Just for this batch of HEU or is there an expectation of future demand?

066-5 4. The information we've received seems all over the map in terms of tonnage. How much spent fuel exactly would be coming into SRS?

066-6 5. Why has the reason for this exchange been changed from nonproliferation (in the EA) to waste management (at the Feb 4 hearing)?

066-7 6. Is there evidence or interest in future application in terms of reprocessing spent nuclear fuel at SRS or elsewhere that would relate back to processing and disposing the HEU from Germany? Are you aware of anything regarding reprocessing at SRS?

066-8 7. If it's illegal for Germany to export this fuel, what impact would that have on this potential project, and what would the plans be to move forward?

Thank you for considering our questions and accepting our comments. If you would like to reach me, I am available at

With respect,

Becky D. Rafter, MPA
Executive Director

PC-067

From:	germanspentnuclearfuelea-bounces@listserv.leidos.com on behalf of [redacted]
To:	GermanSpentNuclearFuelEA
Subject:	[Germanspentnuclearfuelea] WG: No nuklear Export to USA
Date:	Monday, March 28, 2016 9:10:07 AM
Attachments:	Sammeleinwendungen1.pdf Sammeleinwendungen.pdf ATT00001.txt
Importance:	High

-----Original-Nachricht-----
Betreff: No nuklear Export to USA
Datum: 2016-03-24T02:58:15+0100
Von: [redacted]
An: "GermanSpentNuclearFuelEA@leidos.com" <GermanSpentNuclearFuelEA@leidos.com>

Dear Ms. Williams,

with my signatur, I support these Comments against the DEA concerning the processing of German pebble bed NPP fuel elements at SRS.
Yours sincerely

Irene Quast

Sammeleinwendungen – Keine Castor-Exporte in die USA

To: Ms. Tracy Williams, NEPA Compliance Officer, U.S. Department of Energy, P.O. Box B Aiken, South Carolina 29802. e-Mail: GermanSpentNuclearFuelEA@leidos.com

Comments on "Draft Environmental Assessment for the Acceptance and Disposition of Used Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany" (DEA) dealing with processing of German pebble bed NPP fuel elements at SRS. Final date for comments: 11.03.2016

Dear Ms. Williams

We are deeply concerned about the US/German plans to reprocess and store about 200,000 kg of commercial German pebble fuel elements from the nuclear power plants AVR Juelich (15 MWel) and THTR-300 (300 MWel) at SRS. The reasons for our comments are:

- European Union and German laws do not allow the export of nuclear waste, except for proliferation relevant waste from neutron generating research reactors. The reasonable general rule is that the waste has to remain in the country of its origin. AVR and THTR are obviously no research reactors and are not listed as research reactors by the International Atomic Energy Agency, but as nuclear power plants. There are several legal expertizes, which underline this position. For that German environmental organisations as BUND (friends of the earth) and Greenpeace have announced legal actions in case of a transport of the German fuel to SRS.
- Reprocessing of fuel elements is prohibited by law in Germany for commercial fuel elements. Both, AVR and THTR were both owned and operated by commercial utilities (and THTR still is) and produced electricity (4.4 bn kWh) to the grid. For both German NPPs sister plants existed in the US: Peach Bottom HTGR for AVR and Fort St. Vrain HTGR for THTR, and these US plants are considered as commercial in the US. The very poor performance of these German pebble bed NPP may not be taken as argument for non existing commercial intentions: They were commercial NPPs.
- There is no significant proliferation risk for the AVR waste, as several expertizes (e.g. from the NNSA 2013) indicate. In average the spent AVR waste does not contain HEU. A conditioning and final storage in Germany is possible.
- The fuel elements were mainly (96 %) fabricated in Germany at Nukem, US origin is only the HEU content (830 kg).
- As an independent official experts group outlined 2014, there were several severe accidents in AVR reactor (which were hushed up for decades). The fuel elements are thus in a very bad shape. Their reprocessing will probably produce huge amounts of secondary waste, which will hinder the intended cleaning of the SRS site. About 4 % of the THTR fuel elements are broken with probably similar consequences.
- The German government has officially announced here in the past years that there are no plans to export the waste from THTR to the US, but only for the AVR and that they wonder about an "Draft Environmental Assessment" (DEA) by DOE for THTR waste. Having in mind that it seems that the German side has officially supported the DEA for THTR waste too, we guess that the German export plans for the AVR waste are only the first step of an ecologically highly problematic export of all German nuclear waste to other countries. Russia has already similar offers.

TRANSLATION/ Übersetzung:

Sehr geehrte Frau Williams,

wir sind zutiefst besorgt über die amerikanisch-deutschen Pläne zur Lagerung und Wiederaufarbeitung von etwa 200 000 kg kommerziell genutzter deutscher Kugelbrennelemente aus den Atomkraftwerken AVR Jülich (15 MW eL) und THTR-300 (300 MW eL) in Savannah River Site. Die Gründe für unsere Bedenken:

- Die deutschen Gesetze und die der Europäischen Union erlauben den Export von radioaktiven Abfällen nicht, mit Ausnahme von proliferationsgefährliche Abfällen aus Neutronen erzeugenden Forschungsreaktoren. AVR und THTR sind aber offenkundig keine Forschungsreaktoren und sind auch nicht als solche gelistet bei der IAEA, sondern es sind kommerzielle Atomkraftwerke.
- Die Aufarbeitung von Brennelementen aus kommerziellen Reaktoren ist nach deutschem Recht verboten. Sowohl der AVR als auch der THTR wurden betrieben und waren im Besitz (der THTR auch jetzt noch) von kommerziellen Betreibern; sie produzierten Strom für das öffentliche Netz (4,4Mrd. kWh). Für beide

deutschen Anlagen existierten Schwesteranlagen in den USA: PEACH Bottom HTGR für den AVR und Fort St. Vrain HTGR für den THTR; diese Anlagen werden auch in den USA als kommerzielle betrachtet. Die miserable Leistungsbilanz der deutschen Kugelhaufen-Reaktoren kann nicht als Argument gegen deren kommerzielle Intentionen dienen: Sie waren kommerzielle Reaktoren!

- Es besteht kein signifikantes Proliferations-Risiko für den AVR-Müll, wie verschiedene Gutachten (z.B. auch von NNSA, 2013) darlegen. Im Allgemeinen enthält der AVR-Müll kein HEU. Eine Konditionierung und Endlagerung in Deutschland wären somit möglich.
- Die Brennelemente wurden hauptsächlich (zu 96%) in Deutschland von der NUKEM hergestellt, lediglich der HEU-Anteil (830 kg) stammt aus den USA.
- Wie eine unabhängige Expertengruppe 2014 darlegte, gab es verschiedene Unfälle im AVR, die über Jahrzehnte verschwiegen worden waren. Die Brennelemente sind daher in einem sehr schlechten Zustand. Ihre Wiederaufarbeitung wird vermutlich große Mengen sekundären Mülls erzeugen, die die beabsichtigte Säuberung der SRS behindern dürften. Ungefähr 4% der THTR-Brennelemente sind zerbrochen, mit vermutlich ähnlichen Konsequenzen.

Die deutsche Bundesregierung hat in den vergangenen Jahren offiziell erklärt, dass es keine Pläne für den Export der THTR-Brennelemente in die USA gäbe, sondern nur für die des AVR. Ausgehend von der Annahme, dass die deutsche Seite nun doch die Umweltverträglichkeitsprüfung des amerikanischen DOE für die THTR-Brennelemente offiziell unterstützt, vermuten wir dass die deutschen Exportpläne für den AVR-Müll nur der erste Schritt eines ökologisch höchst problematischen Exports allen deutschen Atommülls in andere Länder darstellt. Es gibt bereits entsprechende Angebote durch Russland.

DRAFT ENVIRONMENTAL ASSESSMENT / Umweltverträglichkeitsstudie:

http://energy.gov/sites/prod/files/2016/01/f28/Draft%20DOE%20EA%201977_FOR%20PUBLIC.pdf

With my signatur, I support these comments against the DEA concerning the processing of German pebble bed NPP fuel elements at SRS.

	Nachname, Vorname Name, Prename	Wohnort City	Unterschrift Signature
1.	Joosten, Hanny	47495 Rheinberg	[signature]
2.	Nießner, Tim	47053 Duisburg	[signature]
3.	Langenfeldt, Martin	47829 Krefeld	[signature]
4.	Pankrai, Michael	47051 Duisburg	[signature]
5.	[illegible]	[illegible] Krefeld	[signature]
6.	Rice, Lena	47055 Duisburg	[signature]
7.	Hartmann, Jörg	46487 Wesel	[signature]
8.	Miny, Georg	47495 Rheinberg	[signature]
9.			
10.			

Eine Aktion des Bündnisses gegen Castor-Exporte (Buegece), Zusammenschluss aus landes- und bundesweiten Anti-Atom-Initiativen und dem BUND NRW www.bund-nrw.de www.westcastor.de

Bitte bis zum **01.03.2016** an den BUND NRW e.V. senden:
Merowingerstraße 88, 40225 Düsseldorf, Fax: 0049 211 302005-26,
V.i.S.d.P.: Buegece, c/o Claudia Baitinger, T 0049 2369 24296
Claudia.Baitinger@bund.net

Hinweis zum Datenschutz: Abgesehen von der Übersendung der Unterschriften an den Adressaten findet eine Weitergabe der Daten an Dritte nicht statt. Stand 18.02.2016

deutschen Anlagen existierten Schwesteranlagen in den USA: PEACH Bottom HTGR für den AVR und Fort St. Vrain HTGR für den THTR; diese Anlagen werden auch in den USA als kommerzielle betrachtet. Die miserable Leistungsbilanz der deutschen Kugelhaufen-Reaktoren kann nicht als Argument gegen deren kommerzielle Intentionen dienen: Sie waren kommerzielle Reaktoren!

- Es besteht kein signifikantes Proliferations-Risiko für den AVR-Müll, wie verschiedene Gutachten (z.B. auch von NNSA, 2013) darlegen. Im Allgemeinen enthält der AVR-Müll kein HEU. Eine Konditionierung und Endlagerung in Deutschland wären somit möglich.
- Die Brennelemente wurden hauptsächlich (zu 96%) in Deutschland von der NUKEM hergestellt, lediglich der HEU-Anteil (830 kg) stammt aus den USA.
- Wie eine unabhängige Expertengruppe 2014 darlegte, gab es verschiedene Unfälle im AVR, die über Jahrzehnte verschwiegen worden waren. Die Brennelemente sind daher in einem sehr schlechten Zustand. Ihre Wiederaufarbeitung wird vermutlich große Mengen sekundären Mülls erzeugen, die die beabsichtigte Säuberung der SRS behindern dürften. Ungefähr 4% der THTR-Brennelemente sind zerbrochen, mit vermutlich ähnlichen Konsequenzen.

Die deutsche Bundesregierung hat in den vergangenen Jahren offiziell erklärt, dass es keine Pläne für den Export der THTR-Brennelemente in die USA gäbe, sondern nur für die des AVR. Ausgehend von der Annahme, dass die deutsche Seite nun doch die Umweltverträglichkeitsprüfung des amerikanischen DOE für die THTR-Brennelemente offiziell unterstützt, vermuten wir dass die deutschen Exportpläne für den AVR-Müll nur der erste Schritt eines ökologisch höchst problematischen Exports allen deutschen Atommülls in andere Länder darstellt. Es gibt bereits entsprechende Angebote durch Russland.

DRAFT ENVIRONMENTAL ASSESSMENT / Umweltverträglichkeitsstudie:

http://energy.gov/sites/prod/files/2016/01/f28/Draft%20DOE%20EA%201977_FOR%20PUBLIC.pdf

With my signatur, I support these comments against the DEA concerning the processing of German pebble bed NPP fuel elements at SRS.

	Nachname, Vorname Name, Prename	Wohnort City	Unterschrift Signature
1.	G. Ortenhostert	47445 Moers	Ortenhostert
2.	G. Quast	47495 Rheinberg	
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Eine Aktion des Bündnisses gegen Castor-Exporte (Buegece), Zusammenschluss aus landes- und bundesweiten Anti-Atom-Initiativen und dem BUND NRW www.bund-nrw.de www.westcastor.de

Bitte bis zum **01.03.2016** an den BUND NRW e.V. senden:
Merowingerstraße 88, 40225 Düsseldorf, Fax: 0049 211 302005-26,
V.i.S.d.P.: Buegece, c/o Claudia Baitinger, T 0049 2369 24296
Claudia.Baitinger@bund.net

Hinweis zum Datenschutz: Abgesehen von der Übersendung der Unterschriften an den Adressaten findet eine Weitergabe der Daten an Dritte nicht statt. Stand 18.02.2016

From: water@southeastpeoples.org
Sent: Friday, March 25, 2016 10:32 PM
To: GermanSpentNuclearFuelEA@leidos.com
Subject: [Germanspentnuclearfuelea] Free Prior and Informed Consent policy

Greetings to all our Relations,

068-1 We write regarding the USDOE proposal to accept spent nuclear fuel from the Federal Republic of Germany at USDOE's Savannah River Site for processing and disposition. We write to learn what US DOE's practice is in implementing the US policy of obtaining Free Prior and Informed Consent from Indigenous Peoples' governments before bringing nuclear materials to our winds, lands, and waters.

As the US has endorsed the UN Charter and Universal Declaration of Human Rights, as explained in the UN Declaration on the Rights of Indigenous Peoples, we inquire how the USDOE plans to work with Indigenous Peoples to obtain Free Prior and Informed Consent for the development of indigenous winds, lands, and waters.

068-2 We inquire if the US is creating or planning to create nuclear weaponry or nuclear submarine fuel with Savannah River Site. We request updated USGS reports on the condition and potential impacts to the water tables in this area. We request updated projection models regarding land subsidence or other changes due to climate change that might in any way impact nuclear material near Savannah River Site and the nuclear plants existing and proposed.

068-1 We request health studies with neighboring Peoples, especially Indigenous Peoples regarding high cancer rates and toxic body loads, including maternal health impacts. We request information on all proposals to bring nuclear material to the southeast for any reason. Please send a list or spreadsheet that you might have handy that tells us what type of nuclear material in what amount is proposed to come when to which lands, winds, or waters in the Southeast and who the Indigenous Peoples are that you are working with to obtain Free Prior and Informed Consent for the development.

068-3 We request environmental impact statements for every step in the proposed journey between Germany and for every portion of the nuclear materials' resting places. The process of obtaining Indigenous Peoples Free Prior and Informed Consent would have brought these environmental impact statements to public light in a more timely manner. Because the US does not currently have an effective practice for its policy of obtaining FPIC, these environmental impact statements are not available to help inform the views of others impacted. Indigenous Peoples have much to share with our neighbors and our knowledge can benefit the US.

068-4 Further, we ask the US to consider the precarious situation the humans in the region of SRS currently are in with too much nuclear material already contaminating existing areas with little protection from nuclear material or those who seek it. The US has not settled with Indigenous Peoples in the immediate area of Savannah River Site and along the Savannah river and other impacted areas of the proposed route of the nuclear material. This nuclear material is described as potentially weapons-grade and southeast Indigenous Peoples have already witnessed much unsolicited violence from the US and Europe for many generations. This area requires an assessment from the US regarding the status of violence in the area, measures to address paramilitary activities in the area (including human, weapon, human, mineral, and money trafficking), functionality of indigenous and non-indigenous governments, social health, and assessment and impact of heightened security measures required to contain nuclear weaponry.

068-2 We solicit a US response to the dangerous situation that we are in as we face climate change with no settlement between the US and many Indigenous Peoples across much of the Southeast

068-2 while the US proposes to import nuclear waste to remain with Indigenous Peoples, lands, winds, waters, and cultures in perpetuity with no discernible concern for the health and survival of life in the area. Indigenous Peoples can do much to help the US mitigate and survive climate change when the US works with us to implement US endorsement of the Declaration on the Rights of Indigenous Peoples, especially regarding decision-making.

068-1 We request that the USDOE wait to decide on bringing nuclear material to the Southeast until after it has implemented the US policy of obtaining Free Prior and Informed Consent from Indigenous Peoples and developed effective protocols for communicating with and working with Southeast Indigenous Peoples to address security, health, and environmental-economic issues to benefit all life in the Southeast now and for generations to come.

--

Southeast Indigenous Peoples' Center
PO Box 4003
Eatonton Georgia 31024
706.461.6244
SoutheastPeoples.org
twitter: @1stsoutherners

Comment:

069-1

I am **in** favor of this environmental assessment. Nuclear energy is still a big part of the pie in American energy. Germany has become a up and coming friend of the United States, and is the economic power of Europe. These two states are essential to the global economy, and as such, this assessment should be put into action by the Department of Energy. Recently, Germany's political leaders have swayed away from Nuclear energy, but not the research. So getting rid of their spent fuel is necessary, especially since the U.S. has much more unoccupied space. Germany's land is much more populated, and it makes sense for Germany to keep away from Nuclear, as long as they do not rely on fossil fuels. I do not believe Germany has fossil fuel energy in their scope, rather Germany would focus on alternative energy. The United States should focus on alternative, and I believe Nuclear energy and research. This action will only strengthen America's relationship with Germany.

First Name: Dan

Middle Name:

Last Name: Wo1tiska

City: Casco

State or Province: Wisconsin

ZIP/Postal Code: 54205

Comment:

070-1 This idea has to be scratched. DO NOT import ANY nuclear waste, high level or low level INTO the United States or its territories. WIPP, the only waste management area is out of commission. Plans to re-open it are short-sighted as the salt walls and ceilings are already caving in from the poorly packaged materials inside. The WIPP stored waste is eating

070-2 through the metal drums - as shown in the photos from the facility. Soon Department of Energy officials and nuclear facility officials and nuclear energy officials will be facing criminal charges for the people they have killed by their pollution all these years. The health officials scam of wrongly attributing place-of-living to cancer patients to hide cancer clusters near and downwind from nuclear facilities is coming to a fast end. They are not exempt either from criminal charges.

First Name: Anonymous

Middle Name:

Last Name: Anonymous

City: Anonymous

State or Province: New York

ZIP/Postal Code: 10977

Comment:

071-1 Use the No Action alternative. Leave the waste in Germany. We have more than enough high level nuclear waste onsite at nuclear power facilities, which should all be shuttered and decommissioned. Let us not produce anymore of these poisons while safe, clean, green energy sources are technologically available and financially superior right now. *©

First Name: Eileen

Last Name: Mahood-Jose

City: Little Ferry

Country: United States

State or Province: New Jersey

Comment:

072-1 We do not want Germany's Nuclear Waste. The people of North and South Carolina, have Nuclear waste from current nuclear plants and bomb factories to deal with "No action alternative- leave the waste in Germany". We want these Nuclear Plants Shut Down! "No more Radioactive Waste, It is Unacceptable!

First Name: Laurie

Middle Name:

Last Name: Rieman

City: Robbinsville

Country: United States

State or Province: North Carolina

ZIP/Postal Code: 28771

Comment:	073-1	Leave the waste in Germany
First Name:		Julie
Middle Name:		
Last Name:		Wert
City:		Camden
Country:		United States
State or Province:		Michigan
ZIP/Postal Code:		49232

PC-074

Comment:

074-1

Wait a minute here NRC. How is it that NO ONE has commented on this issue as of 2/5/16? This is crazy. It means you are not doing your jobs correctly. You have failed to inform the public of this public health hazard per your federal job descriptions. Obviously. Otherwise, you would have more than ZERO comments on this matter. This is outrageous. And disgusting. How in the hell is this country, my country, the USA, opting to bring in other countries HEU when we don't even know what to do with the 70 years of stockpiled wastes that have no permanent home or permanent plan for the stockpiles from our own country? There is no disposal site for this waste, meaning there is no room for waste from other countries coming into the US, now or ever. You can't or won't track what's being illegally dumped in places like Canon City, CO, or St. Louis, MO...for decades, and you cannot be trusted, or maybe even legally allowed anymore, to make decisions about nuclear material like this when you have clearly demonstrated that you, the NRC, have a lax moral, ethical and legal standard for how these wastes have been dealt with for the past 70 years. And now you want to add more fuel to the fire? Literally? No freaking way. The NRC has contributed to hundreds if not thousands, or tens of thousands of deaths, and future deaths, and mind-blowingly high rates of brain, lymph and lung cancers in my home town of Canon City, Colorado. As documented. For years. Decades. With no legitimate response from the NRC. Or Congress. Or from Colorado and the Agreement State status you have let it maintain year after year, even in the face of crime after crime committed in the name of nuclear material. And this is documented. On record. And I'm over it. And so is my boss. It means in some capacity the NRC is guilty of murder. The NRC should be dismantled by Congress. Or the DOJ. This is a RICO run entity and you have found your greatest foe in me NRC. Meghan Christine Belaski Ashe. I know why the NRC is proposing this...it's for the lunatics who think there is future in nuclear power in this country. I hate to tell you...there's not. And soon I will tell you all why. The DOJ knows why. The SEC Office of the Whistleblower knows why...because I know what they've done...and how they did it...if "they" are trying to convince the public that we should take this waste from other countries, other countries that are perfectly capable of dealing with their own wastes, and have the 1st-world means to do so, then the NRC should consider what it means to have our publicly corrupt politicians involved in a commodities futures scam so massive, that soon most of our sitting Congress members will find themselves in a similar situation that the "leadership" in Brazil are finding themselves in. A massive graft scandal that ends in federal prison terms. No one is above the law, and this one starts with you NRC. Thus far you know that in Feb., 2014, I became a whistleblower who gave the SEC-OWB and DOJ et al., per NRC docket# 2015-0057-649, with the wrong letter attached, thanks for dropping the ball there too NRC, detailing a uranium fraud case for the ages, connected to RMBS fraud, that's connected to oil and gas derivative fraud, connected to uranium and water fraud, connected to the illegal transpott of uranium to unknown entities and their countries of origin for many years now. Meaning, you have a bigger problem coming your way than you ever could imagine. You think MOX is a problem now? Wait until I'm done with these nuts.Think Petrobras...only bigger. Ask how it is that 2 companies who are under international investigation for fraud and corruption, AREYA and CBI, are getting more funding from our Congress with my tax dollars to build a plant that will over-run its budget by about 50 billion dollars? You think Petrobras is something...wait until you hear what they did with this MOX build.they are going down. But they are too insulated to see the obvious, so they won't see it until

pulled off schemes like this when he was a federal prison warden. My mom used to listen to their conversations in prison when she worked as a sis investigator for the feds. I grew up around people like this, and I know how they think. Which is why I told the SEC OWB et al., what "they" were thinking when they planned this... Lastly, as noted in my public comment on Yucca Mountain on 11/20/15, I'm the great-granddaughter of John Tilford of Nevada, and I said in that comment I would find out "why" the story didn't add up. FYI...I was bluffing. 1 already knew "why" when I wrote that. I know WHY. And so does the SEC OWB et al. And soon the world will too...which means pretty soon your jobs will encompass the federally mandated activities your agency was created for, to serve the health and well-being of the public, not private industry.

074-1 Start now by saying no to this ridiculous proposal. Thank you.

First Name: Meghan

Middle Name:

Last Name: Belaski

City: Fort Collins

Country: United States

State or Province: Colorado

Zip: 80521

Comment:	075-1	As an American Citizen I am 100% against this. Allowing the dumping of nuclear waste from another country is absurd. Burying in concrete containers that will leak. This is beyond comprehension that this would even be considered. No to any proposition of accepting nuclear waste from any country, for any reason.
First Name:		Anonymous
Middle Name:		Anonymous
Last Name:		Anonymous
City:		Foresthill
Country:		United States
State or Province:		California
Zip:		95631

Comment:	076-1	We don't need to be the dumping ground for any more nuclear waste.
First Name:		William
Middle Name:		
Last Name:		Blackman III
City:		Round
Country:		United States
State or Province:		South Carolina
ZIP/Postal Code:		29474

Comment:

077-1 This radioactive material being proposed to be shipped thousands of miles and dumped in the US is not an acceptable plan. All nuclear waste materials need to be safely stored at the location where it is generated. Germany has been using and expanding the volume of waste; therefore, the radioactive materials need to be safely disposed of in Germany. To compound the dangers and increase the probability of the materials getting loose into the environment through the shipping process should not be undertaken.

077-2

077-1

First Name: Barry

Middle Name:

Last Name: Miller

City: Hinsdale

Country: United States

State or Province: New York

ZIP/Postal Code: 14743

Comment:

078-1 Bad plan. Very bad plan. We don't even have a means of dealing with our own highly dangerous spent fuel and radioactive waste. The WIPP project has proven to be a dismal failure, the Yucca Mtn. Project was killed. Reprocessing hasn't been proven to be a safe method for dealing with nuclear waste. Besides, why is all the Plutonium needed? Aren't there already more than enough nuclear weapons and nuclear waste lying around (accidents waiting to happen) to kill every living thing on the planet many times over. Nuclear is a FAILED TECHNOLOGY. Money would be better spent trying to figure out how to GET

078-1 RlD OF THIS MESS. What a ridiculous plan. Let Germany deal with its own nuclear waste. Or has the U.S. become the nuclear waste dump for the world? What kind of animal spoils its own nest? Don't you think your DNA is valuable enough to try and protect it by trying to get rid of all the harmful nuke waste? Or your children? Your wife, husband, parents, grandchildren? Everything else alive on earth with no voice and no input into this process? I smell money, lots of money. This must be someone's idea for getting lots of lucrative contracts. Foilow the money.

First Name: Nancy

Middle Name:

Last Name: Stennes

City: Sacramento

Country: United States

State or Province: California

Zip: 95834

Comment:	To those persons responsible, You people are categorized as "those who would destroy the earth", and im here to tell yous Jesus is coming to destroy you all. Your time is coming to its End REAL QUICK. And make no mistake about it, money cant save you, satan cant save you, lucifer cant save you. Whatever name its calling itself, IT CANT SAVE YOU. Repent and turn to Jesus while your soul can still be salvaged. You people are ABSOLUTELY OUT YOU FREAKIN MINDS!!! You ALL ARE partakers in this mass murder and will be Judged accordingly. The Lord rebuke you satan and all your gimps IN JESUS NAME-AMEN
No Comments	
First Name:	Pauline
Middle Name:	
Last Name:	Hogness
City:	Lincoln park
Country:	United States
State or Province:	Michigan
Zip:	48146

Comment:

080-1 I am writing in suppott of the "2.2 NO ACTION ALTERNATIVE Under the No Action Alternative, the spent nuclear fuel containing U.S.-origin uranium from the AVR and THTR would not be transported to the United States for management and disposition. The spent nuclear fuel would remain in storage in Germany and the impacts described in Chapter 4 of this Draft EA would not occur."

http:/!energy.gov/sites/prod/files/20I6/01/f28/Draft%20DOE%20EA%201977_FOR%20PUBLIC.pdf Why would I want German nuclear waste to be dumped on my country? Why do you want it dumped on my country and to be buried there, only to leach into the waterways and corrode and blow-up? Clearly you do not consider America your country or homeland or you wouldn't accept this. Clearly you hate the land and the environment. Most of my ancestors fought in the American Revolution. Some were American Indians. My ancestors are documented as in America for at least 400 years. You have no right to destroy my land. 99.5 to 100% of this nuclear waste isn't even US origin waste. This is a literal Nazi con-game. I protest the attempt to deceive everyone into thinking that this is the return of 900 pounds of HEU. This is false. This is the dumping of 200 tonnes of highly radioactive nuclear waste.

080-2 You have not adequately clarified that the original HEU would have been only 1 gram out of 200 grams per nuclear fuel ball. That means 99.5% of this waste is definitely NOT US made. One million spent fuel balls at 200 g each works out to be 200 tonnes, which is the figure which German parliamentarian Oliver Krischer gives. And, yet, I do not find it in your document. You give the 200 grams as the graphite and imply that the HEU is much larger. However, the truth is found in the European Commission's "SIGMA-R: AN IMPROVED VERSION OF THE DELAYED NEUTRON COUNTING DEVICE FOR "THTR" FUEL ELEMENT VERIFICA' by P. AGOSTINI, et. al This describes the contents of new AYR and THTR fuel balls in detail. They weigh 200 grams and only 1 gram was HEU. It is also found here: http://oliver-krischer.eu/fileadmin/user _upload/gruene_btf_kris cher/20 I 6/Brief_USA_NEPA_Atommuell.pdf. Mr. Krischer

080-3 explains that some of these fuel balls are damaged and crushed due to nuclear accidents at the AVR and THTR facilites. He states that the waste balls are 96% German made. However, simple math tells us that 99.5% is NOT American made. Furthermore, NUKEM, which made the fuel, was one of the founding owners of URENCO, which does uranium enrichment. Why would a company which does uranium enrichment import HEU? This tells me that little or none of the HEU in these nuclear waste balls is US origin. Thus, 99.5% to 100% is NOT American origin. Europe has had centrifuge enrichment since the 1960s so it is all probably European origin. Additionally, Juelich Research center, which currently houses part of the nuclear waste, is involved in research on uranium enrichment-building enrichment facilities. This reveals the con-game. You wish to remove spent nuclear fuel, which once contained 1 gram of HEU per 200 grams of fuel ball, from a place which is involved in uranium enrichment, and pretend that this is non-proliferation. Then you will eventually dilute and bury it in America. This is madness and it is a crime. You need to turn from your wicked, wicked ways, before it is too late for you and for the country. There are plants and animals in America. They cannot vote. They cannot protest against your environmental crimes. Ultimately it is God's land and you have no

080-1 right to try to destroy it like this. I protest the Draft EA's proposed plan to use dangerous substances and processes to melt the radioactive waste and dilute it for burial. The proposal to mix uranium and aluminum into ingots appears very bad, as well. Aluminum is very reactive. All of you need to go get psychological help. You are not right in the head or you are evil. I protest the US government's efforts to turn America into a nuclear waste dump for the world. I furthermore protest your failure to care responsibly for American radioactive waste. Burial of radioactive waste is unacceptable. It must be monitored above ground and not buried or backfilled. Corrosion, corrosion, corrosion of metal drums and of their metallic contents. Concrete has a life-span and cracks.

First Name: anonymous

Middle Name:

Last Name: anonymous

City: anonymous

Country: United States

State or Province: South Carolina

ZIP/Postal Code: 77777

Comment:

081-1 I oppose the importation and transport of spent nuclear waste from Germany to be stored or otherwise "disposed" in the United States. We have more than enough nuclear waste already - with many attendant concerns and hazards - and we certainly do not need to be importing more from other countries. Also, the

081-2 transport of such large amounts of nuclear waste poses public health and environmental risks. I support the NO ACTION option

081-1 of leaving it in Germany and keeping it out of the United States!!!

First Name: Diane

Middle Name:

Last Name: Beeny

City: Westfield

Country: United States

State or Province: New Jersey

ZIP/Postal Code: 07090

Comment:	082-1	ID: DOE_FRDOC_OOOl-3020 I support we use the No action alternative – leave the waste in Germany! This is an outrageous plan that should not and does not need to take place. Germany already has that waste secured and it should stay there. We already have enough of our own highly radioactive waste in the USA, that we don't even have solutions for and the DOE already has plenty of clean up projects here they need to focus on and complete. Erica Gray
First Name:		Erica
Middle Name:		
Last Name:		Gray
City:		Henrico
Country:		United States
State or Province:		Virginia
ZIP/Postal Code:		23229

Comment:	083-1	Leave the spent fuel in Germany, this is the best option for both environmental and community health.
First Name:		Pamela
Middle Name:		
Last Name:		Schimmelpfennig
City:		Faichild
Country:		United States
State or Province:		Wisconsin
ZIP/Postal Code:		54741

PC-084

Comment:

084-1 NO! A thousand times no! Nuclear waste is a toxin, in human terms, 'forever.' In the best scenario, it will need to be monitored from leaking into the environment and belongs in underground bunkers, monitored for decades or centuries. Do

084-2 not bring such toxic material into our country for deposition!

084-1 There is no 'safe forever' containment that exists and we do not need to further risk contamination of our local environments anywhere in the United States. NO! A thousand times NO!

First Name: Marushka

Middle Name:

Last Name: France

City: Redwood City

Country: United States

State or Province: California

ZIP/Postal Code: 94062

Comment:

085-1 This is probably one of the most unintelligent ideas I have seen in my life. There is absolutely no logical reason that is material should be sent to America. 1) the potential safety and environment impact of an accident during shipment should be seen as an absolute. 2) there would be absolutely no incentive for the great scientists/physicists in Germany to generate a safer alternative to nuclear waste storage if they are able to ship all of their waste to the US. 3) the storage facilities for nuclear waste are no more safe and possibly even less safe than those in Germany which are under question. 085-1

First Name: Erika

Middle Name:

Last Name: Sego

City: Surprise

Country: United States

State or Province: Arizona

ZIP/Postal Code: 85379

Comment:	086-1	I am absolutely opposed to this - NO foreign nuclear waste is acceptable! Germany needs to solve their own problems and deal with their own waste instead of dumping it in other countries. We have enough issues with properly/safely handling our own waste.
First Name:		anonymous
Middle Name:		Anonymous
Last Name:		Anonymous
City:		Everett
Conntry:		United States
State or Province:		Washington
ZIP/Postal Code:		98208

Comment:

087-1 The US has more than enough nuclear waste of our own with no clear plan on how to neutralize or safely store it for the 480,000 years or more that it will be dangerous (Plutonium half-life of 24,000 years times 20 half-life cycles to "go flat").

087-2 Add to that the dangers of transport over the oceans and then overland on our decaying rail lines and you are looking at a recipe for potential disaster. We don't even know if we have

087-3 the technology to handle whatever Germany did in manufacturing these graphite balls - we don't have this kind of technology. When, oh when will we start waking up from the insanity of nuclear waste proliferation and realize that this technology is failed, deadly, and turning our entire country into a deadly nuke waste dump (e.g., all reactors, North St. Louis, Apollo Pennsylvania, spent fuel rods in EVERY nuclear reactor that has ever been built, uranium mining tailings, weapons manufacturing waste -- this is insane. Let

087-4 Germany figure out a different resolution to their nuclear waste problem, no matter what Ike promised them back in the 1950's. As a country, we've gone back on more important promises than that. Err on the side of the safety of the American people.

Don't accept Germany's atomic waste.

First Name: Libbe

Middle Name:

Last Name: HaLevy

City: Los Angeles

Country: United States

State or Province: California

ZIP/Postal Code: 91042

PC-088

Comment:

088-1 I am extremely concerned about the US/German plans to reprocess and store about 200,000 kg of commercial German pebble fuel elements from nuclear power plants, possibly being sent to the U.S. The US environment can not store its own nuclear used elements much less some from other countries. The general rule is that the waste has to remain in the country of its origin and should be enforced.

088-2 Since there were several severe accidents in AVR reactor (which were hushed up for decades), the fuel elements are in a very bad shape and their reprocessing will probably produce huge amounts of secondary waste which will hinder the intended cleaning of the SRS site..... .

First Name: anonymous

Middle Name:

Last Name: Anonymous

City: Houma

Country: United States

State or Province: Louisiana

ZIP/Postal Code: 70364

Comment:	089-1	Are you people CRAZY?????? [Let Germany deal with its own nuclear waste.]
First Name:		Deb
Middle Name:		
Last Name:		Bledsoe
City:		Denham Springs
Country:		United States
State or Province:		Louisiana
ZIP/Postal Code:		70726

Comment:

090-1 No, do not allow the transfer of spent nuclear fuel to the US from Germany or any other country. We have too much radioactive pollution already, and we don't know what to do with the tons of spent fuel we already have from our nuclear plants and the weapons industries. The cost of nuclear power keeps rising, way past "too cheap to meter". But that was just another lie wasn't it?

First Name: William

Middle Name:

Last Name: Martin

City: Gilmer

Country: United States

State or Province: Texas

ZIP/Postal Code: 75645

Comment:	091-1	What are you thinking ?. let Germany keep it's own Nuclear Trash!

First Name:	mark
Middle Name:	
Last Name:	thompson
City:	robersonville
Country:	United States
State or Province:	North Carolina
ZIP/Postal Code:	27871

From:
Sent: Wednesday, April 13, 2016 12:44 PM
To: GermanSpentNuclearFuelEA@leidos.com
Subject: [Germanspentnuclearfuelea] Draft EA for German SNF

Tracy Williams, NEPA Compliance Officer
Draft Spent Nuclear Fuel from Germany EA
U. S. Department of Energy
P.O. Box A
Aiken, South Carolina 29802

Dear Ms. Williams,

092-1 I am opposed to receipt of spent nuclear fuels from Germany to the Savannah River Plant. I have read SC DHEC's comments by Shelly Wilson and I completely agree with this assessment. It is unacceptable to bring more spent nuclear fuel to SRP from Germany or any other foreign country until we have an exit strategy for this fuel after it is treated. SRP is not a suitable long term storage site for spent nuclear fuels, whether these fuels have been processed or are waiting to be processed.

Larry Powell

Hilton Head Island, SC

PC-093

Oliver Krischer
Member of the German Bundestag
Deputy Chairman of the
Alliance 90/The Greens parliamentary group

Oliver Krischer MdB Platz der Republik 1 11011 Berlin

Ms. Tracy Williams
NEPA Compliance Officer
U.S. Department of Energy
P.O. Box B
Aiken, South Carolina 29802

15 February 2016

Alliance 90/The Greens
parliamentary group

Bundestag office in Berlin
Platz der Republik 1
11011 Berlin
Tel.: +49 (0)30 227 – 72059
Fax: +49 (0)30 227 – 76056
Email:
oliver.krischer@bundestag.de

Constituency office in Düren
Friedrich-Ebert-Platz 13
52351 Düren
Tel.: +49 (0)2421 – 189286
Fax: +49 (0)2421 – 189287
Email:
oliver.krischer@wk.bundestag.de

Constituency office in Aachen
Franzstraße 34
52064 Aachen
oliver.krischer@wk.bundestag.de

Comments on "Draft Environmental Assessment for the Acceptance and Disposition of Used Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Republic of Germany" (DEA) dealing with processing of German pebble bed NPP fuel elements at SRS

Dear Ms. Williams

I am deeply concerned about the US/German plans to reprocess and store about 200,000 kg of commercial German pebble fuel elements from the nuclear power plants AVR Juelich (15 MWel) and THTR-300 (300 MWel) at SRS. The reasons for my comments are:

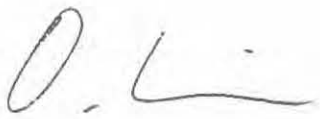
- European Union and German laws do not allow the export of nuclear waste, except for proliferation relevant waste from neutron generating research reactors. The reasonable general rule is that the waste has to remain in the country of its origin. AVR and THTR are obviously no research reactors and are not listed as research reactors by the International Atomic Energy Agency, but as nuclear power plants. There are several legal expertizes, which underline this position. For that German environmental organisations as BUND (friends of the earth) and Greenpeace have announced legal actions in case of a transport of the German fuel to SRS.

- Reprocessing of fuel elements is prohibited by law in Germany for commercial fuel elements. Both, AVR and THTR were both owned and operated by commercial utilities (and THTR still is) and produced electricity (4.4 bn kWh) to the grid. For both German NPPs sister plants existed in the US:

Peach Bottom HTGR for AVR and Fort St. Vrain HTGR for THTR, and these US plants are considered as commercial in the US. The very poor performance of these German pebble bed NPP may not be taken as argument for non-existing commercial intentions: They were commercial NPPs.

- There is no significant proliferation risk for the AVR waste, as several expertizes (e.g. from the NNSA 2013) indicate. In average the spent AVR waste does not contain HEU. A conditioning and final storage in Germany is possible.
- The fuel elements were mainly (96 %) fabricated in Germany at Nukem, US origin is only the HEU content (830 kg).
- As an independent official experts group outlined 2014, there were several severe accidents in AVR reactor (which were hushed up for decades). The fuel elements are thus in a very bad shape. Their reprocessing will probably produce huge amounts of secondary waste, which will hinder the intended cleaning of the SRS site. About 4 % of the THTR fuel elements are broken with probably similar consequences.
- The German government has officially announced here in the past years that there are no plans to export the waste from THTR to the US, but only for the AVR and that they wonder about an "Draft Environmental Assessment" (DEA) by DOE for THTR waste. Having in mind that it seems that the German side has officially supported the DEA for THTR waste too, we guess that the German export plans for the AVR waste are only the first step of an ecologically highly problematic export of all German nuclear waste to other countries. Russia has already similar offers.

Yours sincerely,



Oliver Krischer

March 6 2016

Tracy Williams
NEPA Compliance
Officer U.S.
Department of
Energy
P.O. Box B
Aiken, South Carolina
29802.

Subject: Comments on Draft Spent Nuclear Fuel from Germany EA

I am writing as a concerned citizen of South Carolina. I am an economist, having served many years on the faculty of the Moore School of Business, University of South Carolina. My research has included work on the energy sector and on the regulation of nuclear energy.

My primary comment on the EA is that it fails to adequately consider the No Action Alternative that is, leaving the HEU in place in Germany. The summary of the EA states this alternative in the following way: "Under the No Action Alternative, the spent fuel would not be transported to the United States for management and disposition." (p.S2) The summary further states: "No Action Alternative
094-1 The SNF containing U.S.-origin HEU from the AVR and THTR reactors would remain in storage in Germany. It would not be transported to the United States for management and disposition. Because DOE would not undertake any actions involving the global commons, Joint Base Charleston- Weapons Station, or SRS under the No Action Alternative,there would be no additional impacts on these areas."(p. S9)

While the draft EA refers to the no action alternative in this brief way, it fails to consider the incremental environmental risks and costs avoided by leaving the HEU in place in Germany.
094-2 Transportation of HEU across the ocean and across South Carolina involves risks that the EA does not address. For example, interception of shipments by terrorists is an increasingly possible outcome, and is not addressed in the EA. Both environmental risks and social costs are substantially increased once one of the action alternatives is selected, rather than the no action alternative.

From an economic point of view, the costs and risks of transportation of Germany HEU to SRS are a waste of resources and a social waste. Germany has a well-developed nuclear industry and
094-1 intends to develop a site for geological disposal of nuclear waste. Given those plans, Germany could easily retain the HEU fuel for disposal in Germany, rather than imposing environmental risks on the world, the United States and on South Carolina. The EIA treatment of the no action alternative should spell out the fact that this alternative is entirely feasible and that it avoids the added cost and risk of ocean transportation, while having no negative incremental environmental impact.

The Savannah River Site does not have the mission of permanent storage of nuclear waste. The primary mission of SRS at present is reducing the environmental risks of the liquid waste remaining from Cold War weapon production. This waste is being glassified and stored at SRS until the nation completes a long term disposal site, previously thought to be at Yucca Mountain, which may no longer be an option. Sending German nuclear waste to the SRS when no permanent
094-3 disposal site is available nationally is an environmental risk that is unfair to all Americans and especially to South Carolinians like me.

094-1 The draft EA devotes very little explicit coverage to the no action alternative. This treatment leaves the reader with the impression that the decision to select one of the action alternatives has already been made. The revisions to the draft EA should provide much more explicit coverage of the no action alternative, and point out the social costs and environmental risks of the action alternatives in comparison to the no action alternative. The draft EA suggests that the environmental risk and environmental impact of the action alternatives is relatively small, but fails to point out that these impacts could be avoided altogether by selecting the no action alternative.

Sincerely,

Ronald P. Wilder, PhD

Columbia, SC 29210

D H E C
PROMOTE PROTECT PROSPER
Catherine E. Heigel, Director
Promoting and protecting the health of the public and the environment

March 1, 2016

Ms. Tracy Williams
NEPA Compliance Officer
US Department of Energy
P.O. Box B
Aiken, South Carolina 29802

RE: Draft Environmental Assessment
Acceptance and Disposition of Spent Nuclear Fuel
Containing U.S.-Origin Highly Enriched Uranium
from the Federal Republic of Germany
January 25, 2016 Public Notice

Dear Ms. Williams:

On January 25, 2016 the United States Department of Energy requested comment on a Draft Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany.

Attached are comments from the South Carolina Department of Health and Environmental Control on the Draft Environmental Assessment.

Please contact me at (803) 898-3138 if you have any questions.

Sincerely,

Shelly Wilson

Shelly Wilson
Permitting and Federal Facilities Liaison

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
2600 Bull Street • Columbia, SC 29201 • Phone: (803) 898-3432 • www.scdhec.gov

Comments from the South Carolina Department of Health and Environmental Control (DHEC) on the Draft Environmental Assessment for the Acceptance and Disposition of Spent Nuclear Fuel Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany

Comment 1

095-1 The Savannah River Site (SRS) in South Carolina currently stores more than its fair share of nuclear materials and wastes. Plutonium and spent fuel have been shipped to SRS from around the nation and the world for safeguarding and storage. The largest portion of surplus plutonium in the nation is stored at SRS. Thirty seven million gallons of highly radioactive and toxic liquid waste from the Cold War era are stored in aging and degrading tanks. All of these stockpiles will take significant time and money to disposition. For example, high level waste, which has been accumulating at SRS since the late 1950's, will take at least 16 more years to disposition at a steady funding rate of $687 million per year (a funding rate at least $100 million higher than recent years). Without steady funding of $687 million per year, high level waste treatment completion is delayed at least 7 more years. The proportion of cost and risk from these stockpiles is a significant liability for the nation, and a disproportionate liability for this region.

Although SRS has served national and international security needs, the people of South Carolina and Georgia are continuing to bear the burden of risk and uncertainty from legacy stockpiles of plutonium, spent fuel and high level waste. The overall risk burden over the years has only increased. Should there be an accident, our State will bear the consequences of endangerment to public health, the environment and our economic security.

DOE should not bring any additional spent fuel to SRS unless an equitable level of risk is first reduced. Risk reduction is accomplished by processing the waste/material to reduce the hazard, disposing residuals appropriately and closing the excess SRS storage areas. DOE should commit funding to equitably reduce the current risk burden first to South Carolina and Georgia citizens before considering any additional spent fuel receipt.

Comment 2

095-2 DOE has a big challenge ahead to substantially reduce legacy risk-bearing stockpiles in South Carolina (plutonium, spent fuel and high level waste). DOE has worked extensively to bring shipments into South Carolina, but hasn't completed much of the work for risk to leave the State. DOE should complete all work and decisions, in consultation and under a schedule with South Carolina representatives, to disposition these stockpiles and reduce risk.

Comment 3

095-3 The Draft Environmental Assessment (EA) notes that Forschungszentrum Julich, an interdisciplinary research center funded by the German government, will bear the costs associated with proposed management of the German spent fuel at SRS. Simply bearing these strict costs is not equitable for South Carolina, where a large burden of high level waste has been

095-3

awaiting treatment and disposal since the 1950s. A robust treatment and storage system does not yet exist at SRS. The high level waste tanks are aging, have leak sites and limited storage capacity. Some are sitting in groundwater. Treatment facilities and infrastructure are still being constructed to reduce the risk from existing waste in a timely manner. Additional waste from German spent fuel would cost communities time in getting risk reduced; time is money. An equitable cost arrangement would factor in money needed for optimized, accelerated treatment of existing waste before any additional spent fuel is received at SRS, in addition to money needed for German spent fuel management. The time cost of longer risk burden should not fall to communities around SRS and our nation.

095-4

Comment 4
Section S.2 of the Summary notes that the capabilities of the SRS Liquid Nuclear Waste Facilities do not exist elsewhere in the United States. The facilities for timely risk reduction of liquid waste do not yet exist at SRS; they are not yet complete. The Salt Waste Processing Facility, a key workhorse facility for the salt portion of waste, is not yet operational. Optimal infrastructure for treatment is still due to be constructed. Additional treatment capacity would be welcome given the significant volume of waste to be treated, currently projected to continue through 2039.

DOE has not funded the Liquid Nuclear Waste Facilities to run at optimal capacities since FY2014, when the budget for liquid waste was reduced by over $100 million. DOE could have invested earlier in additional or optimized treatment capacities to ensure that waste volumes were being sufficiently reduced through waste treatment. Instead, in a recent February 18, 2016 letter, DOE has asked DHEC to reuse old-style tanks that have already been emptied. The current Liquid Waste System Plan (Revision 19) shows that most risk reduction regulatory milestones past FY16 are in jeopardy of being missed by 2-10 years. Additional spent fuel, which will produce additional high level liquid waste, should not be considered until adequate high level waste treatment facilities exist and operate at rates that support high level waste tank closure and waste treatment completion milestones.

095-5

Comment 5
Section S.4 of the Summary states that "...any decision by the Participants (signatories to the Statement of Intent) to proceed with the transportation of the spent fuel for acceptance, processing, and disposition depends on compliance with all applicable requirements of United States law...". The SRS is currently out of compliance with its Saltstone Disposal Facility Permit, specifically Special Condition A.1.d.i-iii. In addition the current Liquid Waste System Plan (Revision 19) shows that most risk reduction regulatory milestones past FY16 are in jeopardy of being missed by 2-10 years. These facts do not show compliance with United States law and implementing mechanisms for the liquid waste facilities. SRS should be in compliance with regulatory requirements before considering acceptance of additional spent fuel that would add burden to liquid waste facilities.

095-6

Comment 6
New waste streams require approval from DHEC before placement in the Saltstone Disposal Facility. Section 3116 of the 2005 National Defense Authorization Act does not allow disposal of high level waste residuals unless covered by a DHEC issued permit.

095-7

Comment 7
Additional disposal of radioactive waste in South Carolina from treatment of waste not currently at the site potentially conflicts with several Common Goals and Values agreed upon by SRS representatives, DHEC and the Governors Nuclear Advisory Council. These are:

- Maximize amount of waste ready for disposal in deep geologic repository. Make significant effort to ensure maximum amount of long lived radionuclides are disposed in a deep geologic repository.
- Limit disposal of radioactive waste onsite at SRS so that residual radioactivity is as low as reasonably achievable.
- Ensure DOE's strategy and plans are subject to public involvement and acceptance.

Johnsen, Steven (MA)

From:
Sent: Friday, March 25, 2016 8:49 PM
To: Tracy Williams
Cc: Secretary Moniz
Subject: Ruth Thomas re DOE/EA-1977 German nuclear waste shipment proposal

To: Tracy Williams, Savannah River Site

From: Ruth Thomas, Environmentalists Inc.
To: the.secretary@doe.gov, tracy.williams@srs.gov
Re: Draft environmental assessment for the acceptance and disposition of spent nuclear fuel containing US-origin highly-enriched uranium from the Federal Republic of Germany. DOE/EA-1977, January 2016 US Dept of Energy Savannah River Operations (SRS) Office, Aiken, SC
I am writing on behalf of Environmentalists Inc. We still have not received several documents that we have requested from SRS.gov, so this is the first of our comments about the proposed shipment of highly enriched uranium from Germany to SRS. We will follow up when we have received the requested documents.

096-1

1) The Draft Environmental Assessment (EA) describes the various tentative proposals for treating and managing spent nuclear fuel from Germany. There are a number of diagrams related to various tentative proposals for treating and managing the spent nuclear fuel from Germany. The small size of the print, mostly white on black, the square blocks representing the steps in the various processes, are difficult to follow. Both the diagram and the text show that the DOE is uncertain about what particular processes are most likely to chosen. On page 2-14 the removal of graphite from the spent fuel pebbles is discussed, both carbon digestion processes are in the research stage, two of these are under investigation. "Process development currently underway will determine operating parameters" p. 214.

At the June 24, 2014 Scoping Meeting held at the North Community Center in North Augusta, GA, concerns were raised regarding the experimental stage of this process. The EA doesn't address such questions as:

a - Have prototypes been built and operated?

b - How can you analyze these proposed carbon digestive systems when the designS of both are incomplete?

c - If these prototypes are still in the design stage, how can you predict what the environmental impact would be, or even predict if either of the processes are feasible?

096-2

2) The length of time predicted by the DOE to get the fuel ready for treatment and storage is from five to seven years. If this optimistic assumption is wrong, the German radioactive waste would remain in South Carolina indefinitely. During this time the waste would e stored.

3) The word in the title, "disposition" of spent nuclear fuel, is not defined in the EA, nor the word "disposal." As with other wording, the special language used by the DOE cannot be applied to radioactive materials. For example, "low-level" leads to misunderstandings and errors, as does the word "cleanup." Neither of these words can be applied to the radioactive materials of nuclear power or to the manufacture of nuclear weapons.

096-3

4) The DOE divides the public comments into those which support the proposal and those in opposition. No other consideration, such as whether the speaker was an official or a staff member of DOE, or a person hired as a contract worker from a corporation or a nuclear company, or an independent researcher or someone representing a public interest organization. No distinction was made between those with a vested interest in nuclear power or nuclear weapons. The motivation of those opposed to the proposal is not identified, such as the people living close to the Savannah River Site or one of the highways leading to the SRS, or those representing the poor in Germany and South Carolina. No information about the speakers is included. For example: those studying nuclear issues for a long time, 20, 30 or 40 years in some cases, or those who represented large numbers of members such as the Sierra Club, League of Women Voters, Beyond Nuclear, or representatives of environmental civic independent research organizations whose leaders are well qualified as experts in understanding the unique and destructive capabilities of nuclear materials and nuclear fission.

096-4

5) The DOE didn't raise any questions of those favoring the proposal, and remarked, "Note, all comments in support of the proposed project." The opposition comments were grouped together, and three concerns were selected by the DOE as typical of citizens' positions. Rather than addressing those that gave input, the DOE proceeded to focus in on their own ideas, which appeared to be an attempt to draw attention away from criticism. In one case, however, the DOE admitted that the speaker had pointed out a mistake in DOE's planning. We have yet to learn what the outcomes would have been if the mistake had not been discovered by someone. A question about the funding was not allowed to be answered. The remainder of the text had to do with DOE's plans rather than what citizens had tried to communicate to the DOE, such as how this particular DOE project and others in the past have had a detrimental effect on people and the environment.

096-5

6) Laura Lance told of living close to the SRS, and that her father worked there for many years. She talked about there never being any emergency plans for those living in the community around the SRS. The residents did not hear of accidents until long after they had happened. They were not alerted in time to have done anything. She felt betrayed. There were others who spoke of similar situations, including Rev. Charles Utley of Blue Ridge Environmental Defense League.

096-6 7) We have not received any of the references listed that DOE used in support of the EA, even though we've asked repeatedly for several weeks. Some of the documents listed appear to be directly connected to the proposal.

8) The following list includes a few of the DOE projects which demonstrate that the agency's track record includes numerous mistakes resulting in sizable areas of the country being too contaminated for people to live in:

Marshall Islands
Rocky Flats CO
Church Rock NM
Uranium mines and milling facilities
Nuclear Fuel Services in Irwin TN
St Louis MO dumping of high level waste in a sanitary landfill

096-7 The coverage in Chapter 14 outlined the numerous uncertainties and problems that would be avoided if the fuel was left in Germany. The no-action alternative is what should be done.

Please circulate this letter. We will write again when we have the rest of the information we requested.

Ruth Thomas
Environmentalists, Inc.

Columbus, NC 28722

April 4, 2016

U.S. Department of Energy
Savannah River Operations Office
P.O. Box A
Attention: Ms. Tracy Williams, NEPA Compliance Officer
Aiken, South Carolina 29802

Subject: Draft EA for the Acceptance and Disposition of Spent Nuclear Fuel (SNF) Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany

Dear Ms. Williams:

Please consider my enclosed comments regarding the subject draft Environmental Assessment (EA). As a member of the Savannah River Site Citizens Advisory Board (CAB), I intend to propose that the CAB also adopt these comments. However, because it was not possible for the CAB to adopt these comments before the end of the public comment period, Ms. Maxine Maxted (DOE-SR) encouraged me to submit these comments sooner (as my own), to enable them to be considered. If adopted by the CAB they will be provided at a later date.

Sincerely,

David F. Hoel

Aiken, SC, 29803

Enclosure

April 4, 2016

Comments on the draft EA for the Acceptance and Disposition of Spent Nuclear Fuel (SNF) Containing U.S.-Origin Highly Enriched Uranium from the Federal Republic of Germany:

097-1

1. DOE has not established an adequate and compelling purpose and need for the proposal[i].
   - A formal statement by National Nuclear Security Administration clearly indicates that the German Spent Nuclear Fuel (SNF) is not a proliferation risk. Therefore, bringing it to the U.S. for safeguarding is unnecessary.
   - Processing the German SNF is unnecessary because the current physical state of the German SNF is stable and substantially proliferation resistant.
   - Germany is a wealthy and stable first-world ally capable of safely and securely managing this SNF without US assistance.

097-2

2. DOE has not identified nor evaluated all reasonable technological and siting alternatives (as required by NEPA[ii]) if the SNF is brought to the US.
   - Not processing the German SNF is a reasonable technological alternative because the current physical form of the SNF is stable and amenable to long-term storage and disposal as is.
   - Processing the German SNF at SRS would actually invite more environmental impacts and risk than not processing; therefore, the alternative of bringing it to the U.S. but not processing must be assessed.[iii]
   - If constructing a processing facility in K-Area is considered a reasonable alternative (rather than processing the SNF in H-Canyon), then clearly there are other reasonable processing location alternatives than only at SRS.

097-3

While evaluating the German SNF proposal, it is appropriate to consider the backdrop of other overriding environmental issues facing the SRS. While the Savannah River Operations Office and its contractors have done their best to keep commitments for cleanup and disposition of SRS materials and wastes, this cannot also be said of the support received from DOE Headquarters. DOE has failed in timely establishment of a geologic repository as required by the Nuclear Waste Policy Act; consistently failed to provide sufficient resources for timely disposition of SRS surplus plutonium and spent nuclear fuel; and continues to underfund and delay its legal cleanup commitments, especially regarding treatment of liquid radioactive waste and closure of tanks.

Findings regarding the German SNF proposal:

097-1 1) It is not needed for US national security or nuclear nonproliferation goals, therefore the purpose and need for the proposal is lacking.

097-2 2) All reasonable technological and siting alternatives have not been evaluated.

097-4 3) Even if predicted environmental effects may be small, they still represent an unwarranted environmental risk to the Central Savannah River Area.

097-5 4) It will unnecessarily add to an already large indefinite SNF and waste storage and disposal burden at SRS.

April 4, 2016

097-3 5) DOE failures to faithfully keep pace with its SRS cleanup commitments impede the acceptability of this proposal by the citizens of South Carolina and Georgia.

Conclusion:

097-6 Based on the above noted findings, I oppose the proposal to receive the German SNF for treatment and storage In the U.S. and support the "No Action" alternative.

---

[i] The President's Council on Environmental Quality National Environmental Policy Act (NEPA) Regulations require that federal agencies shall "*...specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.*" 40 CFR 1502.13

[ii] NEPA Regulations require that federal agencies "*... Rigorously explore and objectively evaluate all reasonable alternatives...*" 40 CFR 1502.14(a)

[iii] NEPA Regulations require that federal agencies "*...Use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment.*" 40 CFR 1500.1(e)

U.S. DEPARTMENT OF ENERGY

PUBLIC SCOPING MEETING

ENVIRONMENTAL ASSESSMENT FOR THE ACCEPTANCE AND DISPOSITION OF USED NUCLEAR FUEL CONTAINING U.S.-ORIGIN HIGHLY ENRICHED URANIUM FROM THE FEDERAL REPUBLIC OF GERMANY

DATE: February 4, 2016

7:04 p.m.

North Augusta Community Center

495 Brookside Avenue

North Augusta, SC 29841

Holmes Brown, Facilitator

Maxcine Maxted, Department of Energy, EA Document Manager

REPORTED BY: Claire R. Netzler, CCR

ATKINSON-BAKER, INC.

COURT REPORTERS (800) 288-3376

www.depo.com

FORMAL COMMENT SESSION

INDEX

FORMAL COMMENT SESSION

INDEX - continued

FORMAL COMMENTS FROM PUBLIC HEARING ON FEBRUARY 4, 2016

(In session at 7:04 p.m.)

MR. BROWN: Good evening. Welcome to this meeting to discuss the Department of Energy's Draft Environmental Assessment on a proposed project to accept used nuclear fuel from the Federal Republic of Germany at the Savannah River Site. I hope you had an opportunity to browse the displays in the back of the room and talk with project staff during the just-completed open house. My name is Holmes Brown. I will serve as the Facilitator for tonight's meeting. My job is to make sure the meeting runs on time and that everybody has an opportunity to speak. I'm not an advocate of any party or particular position.

I will now like to explain the format and ground rules to assure timely participation by everyone. The slide presentation that you'll see this evening will be available on the DOE Savannah River Office website at sro.srs.gov and then go to the German HEU Project portion, and there are a number of documents, including the slideshow, available at that point. There are three parts to the meeting this evening: The just-concluded open house, the DOE slide presentation, and the formal comment period. Both the slide presentation and the formal comment period are being Webcast to a wider

audience. Those who wish to submit comments but prefer not to speak at this meeting or appear on the Webcast can do so in a number of ways, which are listed on the hand-out that you received at the registration desk, and, again, a reminder that all comments count equally in whatever format they're submitted.

The public information period began with the just-concluded open house and continues with a presentation by the EA Document Manager, Maxcine Maxted. She also serves as the Spent Nuclear Fuel Program Manager for the Savannah River Site. Ms. Maxted will discuss the origins and composition of the used fuel, potential transportation modes and casks, alternatives for the processing and disposition of the HEU and comparisons of the impacts of the alternatives. She will also explain the National Environmental Policy Act, or NEPA, that governs the Environmental Assessment process, and please refrain from questions during the slide presentation. The speakers additionally may not defer or yield their assigned minutes to other speakers.

We will now resume the information period. I would like to introduce Terry Speirs, Deputy Manager of DOE for the Savannah River Site. He will offer welcoming remarks and will introduce Maxcine Maxted, EA Document Manager. Terry?

MR. SPEIRS: Thank you. As Holmes said, I am Terry Speirs. I am the Deputy Manager for the Department of Energy Savannah River Operations Office. I'm here this evening to welcome you on behalf of the Department and our contractor, Savannah River Nuclear Solutions, to our public meeting on the spent nuclear fuel from Germany. Welcome to all those in the public who are here with us in the lovely North Augusta Community Center as well as those who have joined us on our Webcast. Just to reiterate what Holmes said, Maxcine Maxted will follow with a presentation on the Draft EA and on its content and some of the background regarding the spent nuclear fuel from Germany, and then we look forward -- and really the meat of this is your comments. We're here to receive your comments as members of the public. We're very interested in those, so we'll welcome them and we'll receive them tonight either in verbal or in written form as Holmes had suggested. We'll certainly be considering your comments with the Final Environmental Assessment when it's issued by the Department, and with that, again, welcome and, Holmes, I'll turn it back over to you.

MR. BROWN: Okay. Maxcine Maxted will now present the slide presentation.

MS. MAXTED: Thank you, Holmes. Thank you, Terry. Welcome everyone. So I want to give you a presentation

on the Draft Spent Nuclear Fuel from Germany EA -- Environmental Assessment.

(Slide presentation was given from 7:10 to 7:43 p.m.)

MR. BROWN: Thank you, Ms. Maxted. This concludes the information portion of the meeting. We will take a five minute break while I review the sign-up sheets for the people making public presentation, and we will begin the public comment period at that point. Thanks very much.

(Brief break from 7:44 to 7:53 p.m.)

MR. BROWN: Okay. Thanks very much. It's now time to begin the formal comment period. This is your opportunity to provide DOE with comments on the Draft Environment Assessment. Our court reporter for tonight, who was here last time, is Claire Rodriguez, who will transcribe all of your statements.

Let me review a few ground rules for formal comments. Please step up to the microphone over there when your name is called, introduce yourself providing your organizational affiliation where appropriate, and please speak directly into the microphone. The technicians say get within about three inches or so, and they are adjustable, so -- since speakers come in all sizes. Again, so the court reporter can get all of your

comments and, again, because we're Webcasting tonight to make sure that the Webcast is picking up all of your comments. If you have a written version of your statement, please provide a copy to the court reporter after you've completed your statement, and you can leave them on her desk over there. I will call two names at a time. The first of the speaker to come to the microphone and the second person who will follow. That way we can save time in transition. In view of the number of people who have indicated an interest in speaking tonight, I am going to ask the people to confine their statement to three minutes.

Now, normally, we figure that there will be an hour-and-a-half for speakers. We've ran a little overtime on the slide presentation and so on, so what I want to do is start the 90 minute period now. We've got about 30 speakers, so that will work out to about three minutes per person. I will let the speakers know when they have a minute left, so at that point if you can conclude your comment. Again, if you have a statement longer than the three minutes, please summarize your key points in the allotted time. As we've stated before, all comments count equally, so whether they're submitted as a speaker or later in written form given to the court reporter, they will all count equally.

Maxcine Maxted of DOE will be serving as the Hearing Officer during this formal comment period. We ask that people not ask questions or make comments. The DOE will just be observing. Your questions and comments will be addressed during the preparation of the Final Environmental Assessment. So with that by way of introduction, let's get started on those folks who have signed up to speak, and our first speaker is Tom Clements, and if you can -- thanks.

MR. CLEMENTS: Good evening, everyone. My name is Tom Clements, and I am the Director of Savannah River Site Watch, a public interest organization that tracks a lot of the issues out at the Site. And before I begin just reading some comments, I wanna say that I was the one who informed the public that this project was afoot. I'm still baffled as to why they left it up to me to inform the public before a Citizens Advisory Board Meeting, but I had heard about it from a German Bundestag and people in Germany before DOE would even inform people about it. And I also wanna add, I have visited the Jülich facility where the casks are stored. I've met with German government officials on two occasions, and I've actually touched one of the casks and gone into the reactor building where the AVR reactor is located. I'm gonna submit some written comments and I'm also gonna

submit a statement from a local group, Don't Waste Aiken, for the record.

Savannah River Site Watch is alarmed that unnecessary plans are continuing to import spent fuel from Germany for reprocessing at the Savannah River Site. These 900,000 graphite balls are from two long-closed commercial nuclear power reactors, and we feel that this action must be terminated. The import and the technologies you've seen presented are highly speculative and will result in negative environmental impacts, and actually could damage U.S. Nuclear Non-Proliferation Policy. I'm just gonna read a number of bullet points that are further explained in my long notes, which I would be glad to email to anybody. The Europe -- under European Union and German laws and regulations, export of nuclear waste, except for proliferation relevant waste for research reactors, is not allowed. Likewise, reprocessing of commercial fuel elements is prohibited by law in Germany as both the AVR and THTR were not research reactors. These were experimental power reactors connected to the grid. The export of spent fuel from them is not permitted. A legal process has already begun before the EU to block the export, and once an export license application is applied for, there will be more legal proceedings to begin in Germany. This is gonna be

1-1

1-2

hung up for many years. Next, there's been no need established to do this. We've heard the presentation, but the Environmental Draft and Environmental Assessment does not really say why this needs to be done. While DOE rhetorically claims in a few sentences that there is a need, there's really no explanation of why we need to import this material. In the document, DOE has rejected the option of direct disposal of the graphite balls, but this is the option that Germany has been planning to pursue for decades. It was only in 2012 that this reprocessing option came up, and if DOE wants to help Germany with direct disposal, that's totally fine. Despite the claims in the draft document that the project is being pursued for nuclear non-proliferation reasons, the DOE's National Nuclear Security Administration has established there is no nuclear non-proliferation concern, and I've given this memo to several of you.

MR. BROWN: You've got a minute left.

MR. CLEMENTS: Okay. We assessed this material is low attractiveness, which only requires category four security protection. We also assessed the material is not attractive to sub-state terrorist entities in its current state. Since the material is stored in a secured environment in a politically stable country, it is not a proliferation concern. I challenge anyone in here and

DOE to counter what NNSA has said about the proliferation concern and why this project is being pursued if there's a claim of nuclear non-proliferation. And just in closing, I want to say two things: that the biggest thing of concern to me is that this is part of the tip of the spear to import more nuclear materials to Savannah River Site. With the waste burden already at the Site, we don't need that. The development of the reprocessing techniques, to me, is the biggest proliferation threat here, but DOE has refused to do a nuclear non-proliferation impact assessment on development of those reprocessing options.

MR. BROWN: Okay.

MR. CLEMENTS: Finally, the Environmental Assessment should be cancelled and the whole proposal should be terminated. Thank you very much.

MR. BROWN: Thank you. Suzanne Rhodes is next and Pamela Greenlaw will follow her.

MS. RHODES: Okay. Thank you very much. I appreciate the opportunity to speak. I represent the League of Women Voters of South Carolina. The League's been concerned about SRS for about fourteen years, longer than I've been involved in it. I'm gonna give some written comments to be added to my spoken comments here. Our concern is why so much interest around the world is

coming -- waste are coming to SRS. Euratom, E-u-r-a-t-o-m, the European Atomic Group and the World Nuclear Association, among others, have clear laws and policies that the country that originates waste takes care of it. Germany, UK, France, and Japan all have their eyes on SRS, and they're all potential leaders in their regions for taking care of the country's waste there. There's no good reason for these countries to dump at SRS. Now, there are jobs at SRS associated with this, but let's think about the big picture. I want you to use this part of your brain and not your technical thing, please, because we're interested in public policy issues and the implications of what's going on. According to a recent NRC document that I have footnoted in my report, research and test reactors by definition do not produce electricity. The U.S. has about 31 research and test reactors for a variety of purposes. There are a bunch more that went around the country for as a part of Atoms for Peace back in the Eisenhower day. One of those shipments was just received back at SRS. And I want -- it's somewhere in Southern Africa on -- I wanna say Rhodesia, but I can't remember. Anyhow, those research reactors that went out for study and weren't developed further, legitimately came back and The League of Women Voters says that's non-proliferation, and we need to get

those scattered waste back here taken care of. There are 99 operating commercial reactors in this country. We have a bunch more, maybe half that many that have also been licensed, operated briefly or not at all. We have a pebble reactor. Although the industry's learned from these reactors, we don't call them research reactors and neither should Germany. The German reactors produced about 31 million -- megawatts of electricity over almost a 20 year period. By definition they did -- they produced electricity, so they're not research reactors, and this is where the fine line is.

2-1

MR. BROWN: You have one minute left.

MS. RHODES: Okay. Are we talking about U.S. origin fuel? Oh my God, Westinghouse has provided reactors for half the reactors in the world. It's not where the fuel or the mining was, it's the country of origin. The League of Women Voters is wondering what's really going on. DOE headquarters is pushing this German shipment.

2-2

NRC headquarters was involved in a secret shipment of Exelon commercial waste from Illinois to here. Japanese plutonium that came largely from the UK is destined to come here. These leaders need to be pushing Congress to get serious about permanent repository. Thank you very much.

MR. BROWN: Thank you. Okay. Pamela Greenlaw.

Elaine Cooper will be next.

MS. GREENLAW: My name is Pamela Greenlaw. I'm coming as an individual concerned citizen. My comments are -- some of them are actually questions, which I have to ask in a different venue, but it doesn't seem to me to 3-1 make a lot of sense to say we have a new HTGR fuel digestion process and there's no prototype, which means there's no data. If you have no data, you can't analyze it. If you can't analyze it, you cannot predict the environmental impact. That's a no go. That's just -- I'm sorry. I'm an elementary school teacher. My kids wouldn't have let me get away with that kind of thinking at all. My second comment, and I may have misheard it. I heard in the presentation that this is a 95 percent 3-2 reduction of fuel volume. It's not. It's a reduction of the volume, but it's not a reduction of fuel. The carbon sleeve is not fuel. So they're trying to do a razzle-dazzle, sock-em quick, ta-ta-ta-ta-ta magic show. Don't buy it. They're gonna have to really be real with us. Please be real with us. You have been in many of your displays. Let's continue that scientific aspect. I have a question about your air quality slide that there would 3-3 be minor changes in the criteria that air pollutants may require modification of the Clean Air Act permit. We need a detailed explanation of what you mean by the

criteria. We also need to know what this modification of
3-3 the air -- Clean Air Act Permit is. We need details. We
can't --

MR. BROWN: One minute.

MS. GREENLAW: Okay. Thank you. Yeah, I'm
finishing up. The no-action alternative of keeping it in
3-4 Germany does not -- I don't -- and I may have misheard
again, but does it really preclude us from giving them
assistance to keep the fuel where it is in Germany?
Thank you.

MR. BROWN: Thank you. Elaine Cooper. Dawn Gillas
will be next.

MS. COOPER: Hello. I'm Elaine Cooper from
Columbia, South Carolina. I have lived in South Carolina
for about 37, 38 years. I am live streaming this event
on Periscope for more of the public to participate. We
have several viewers here tonight who have been writing
in their reviews. Because we don't have much of the
public here tonight, we don't really have the first
population here that represents South Carolina. Hey, can
we have a show of hands of people who are here who have
no financial interest, that they don't have a job at
Savannah River Site or they weren't employed? Can we
have a show of hands? So you can see there's almost
really not many representatives of the public, so I hope

you do have more meetings tonight. And so it simply said, I am a member of the Sierra Club, and I am frankly shocked that we would even consider waste coming in from Germany or any other out-of-country, out-of-state into South Carolina. We have enough waste here. Thank you for my children, and my grandchildren, and your grandchildren, and all the community who is not represented here tonight.

4-1

MR. BROWN: Okay. Thanks very much. Dawn Gillas and Donald Bridges will be next.

MS. GILLAS: I'm Dawn Gillas, a member of the public. The first thing I wanna say is it's the U.S. origin materials from the Atoms for Peace Program, not Westinghouse sending fuel over to a reactor. And through that program, it does imply that the Department of Energy has some responsibilities for the final disposition of this material given the -- where it sits now meets particular requirements, which is what this EA is talking about -- all the different requirements and nothing is going to be done until these requirements are met. And the point that it's an experimental reactor just because it put some power to the grid -- a little bit of power to the grid, EBR2, which is Experimental Breeder Reactor Two out in Idaho, put a little bit of power to the grid. It was an experiment reactor. It was a research reactor.

5-1

The whole point is can this fuel do that? Can it actually produce fuel to go to the grid? So it's still an experimental research reactor. As far as it coming here, I think it should come here. I think that the SRS has the facilities, has the expertise to deal with this material, which is not very common in the world, and I think we should use that expertise to deal with this material. And we already have here at Savannah River Site a wide variety of materials that have -- each one has to be dealt with and, yes, this is another one to be dealt with, but we've got the expertise to do it, so I think that we should do this here. And as far as the transportation is concerned, it's the requirements that transportation casks go through are just absolutely amazing, so there's -- the shipping of it, I don't see any problems with at all. So, okay, and then I have a question that I'll submit later. Thank you.

5-2

MR. BROWN: Okay. Thanks a lot. Okay. Donald Bridges, and Chuck, I think it's Goergen, is next. I know he spoke last time, I should have remembered how to pronounce it correctly, so let me know if I -- how I did.

MR. BRIDGES: My name is Donald Bridges, and I live in North Augusta. I am the Chair of the Citizens for Nuclear Technology Awareness Organization. We're a non-profit located in Aiken, and I would like to make these

comments on behalf of what we refer to as CNTA. CNTA would like to speak in support of receiving, processing, and later preparing this nuclear material for disposition. CNTA strongly supports these actions for the following reasons: (1) receipt and processing of the Highly Enriched Uranium serves a national interest in the policy by reducing and eliminating the HEU from civil commerce. In short, it serves the national interest by making the world safer by removing such material from potential misuse. (Secondly, receipt and processing of this HEU should be done in this area, because SRS is the only site in the free world that could process this material with the facilities, the technical expertise, and the infrastructure. (Third, this action provides jobs for SRS in this area. It's consistent with the traditional and historical role of the Site for over sixty years. It's been successful both for the Site, surrounding communities. (The proposed work will be carried out safely by well-trained operators who routinely work with nuclear materials in safe, well-controlled conditions. The environmental impact will be negligible as determined by a very thoroughly exhaustive study. (Further, the entire work-scope will be funded by the Germans offering a significant economic boom to the area with a program that will cost as much as several

6-1
6-2
6-3
6-4
6-3 con't

hundred million dollars over a four to six year period. It's much needed. It would help the Site who has experienced some layoffs in recent years.

6-3 con't

MR. BROWN: About one minute left.

MR. BRIDGES: Okay. Processing this material will necessarily involve some R&D but it will enhance the technical expertise of the Site. Overall, this Site will be a positive -- it will be a positive move for the Site. It's in the best local interest. It will also serve the community of both the nuclear community nationally and internationally. There are a lot of reasons why the site is qualified to do it. They've had excellence in safety records and done this thing commonly in the past. It's just well-matched to the Site capabilities, and with that I close.

6-1 con't

MR. BROWN: Thank you.

MR. BROWN: Daniel Kaminsky will follow Chuck.

MR. GOERGEN: My name is Chuck Goergen. I am retired from the Savannah River Site. I've got over 40 years experience in the nuclear field, and I run a company called Nuclear Vision Consulting. So I am in favor of the HEU material being brought from Germany to the Savannah River Site for the interim storage processing and disposition. I see this as an international and U.S. security issue. The United States

7-1

7-1 con't

has a policy objective to reduce and eventually eliminate HEU from civil commerce. We were the supplier of this HEU and bear some responsibility. The nuclear -- over fifty heads of state support the elimination of the commercial HEU, and HEU is anything that has an isotopic U235 content greater than twenty-percent and this started out at 90-something percent, and it's not that deep of a burn, so most of that is still there. HEU can be relatively easily converted into an improvised nuclear device that's called an atom bomb, a radiological device, or other radiological exposure device. It can be shielded and most easily smuggled across borders than plutonium. The unclassified amount for U235 to make a nuclear weapon is 25 kilograms, so the 900 kilograms in this HEU material represents many, many Hiroshima-type bomb equivalents. In this case, I think SRNL has proved their moniker, we put science to work, and so they have -- the researchers have discovered and developed an innovative flow sheet to process material that has had over thirty years of research in trying to treat that material and find a solution.

MR. BROWN: One minute left.

MR. GOERGEN: Okay. The receipt of this material will eliminate the origin -- U.S. origin HEU and processing will isotopically dilute the HEU to LEU making

7-1 con't

7-1 con't

it no longer a threat to nuclear weapons and that's something that we can all benefit from. So SRS has the security to protect the material until processing to the waste form. SRS has the capability and experience to design the equipment that protects the nuclear criticality safety, the chemical processing safety, and the environment, so I am in favor. I will submit these comments and any other ones in writing, also.

MR. BROWN: Thanks very much. Daniel Kaminsky and Rose Hayes will be next.

MR. KAMINSKY: Hi. I'm Dan Kaminsky speaking as a member of the public this evening. I have been on the Citizens Advisory Board for the past year. I also have a family, a growing family, here in the CSRA. We live in Beech Island, which we literally see the glow of the lights and hopefully that's all that's glowing. First of all, thank you for the many members of the public. I invite you to attend the next Citizens Advisory Board. They are published. I know it's usually populated in the paper and it's also on the DOE website, so please attend. It's my understanding speaking with my German colleagues that these research reactors, though they were connected to the grid, the actual output I believe someone stated was thirty megawatts. I'd like some perspective to that. We're installing a one megawatt solar panel grid at our

manufacturing site in Graniteville and thirty megawatts over that many years is a dismal amount of energy, so keep that in perspective. Comments as a public member for sure if Germany can safely dispose of this on their own, I welcome them to do that. If they can, do it. Someone offered the advice of SRS to do that without the transportation and things. I am not a nuclear expert by any stretch of the imagination, but if it can be done where it sits, it's probably the safest place to do it. But if it has to come to SRS, which I have a strong inkling that it does, sufficient funding must be earmarked for this project for the short-term and the long-term, and right now, Germany is signed up to provide that funding. We just have to make sure that it continues to flow until that product is dispositioned out of South Carolina. Most importantly, the final disposition of this material has to be formalized. We have to have somewhere for it to go. As a citizen, I am appalled that we would continue to stockpile things, add to the high-level waste tanks. That's, in my opinion, unacceptable. The tanks are aged. We're in the process of cleaning them up so they can be systematically closed. Continually adding more and more to those waste tanks is not in our best interest.

8-1

8-2

MR. BROWN: One minute.

MR. KAMINSKY: Thank you. And once we do find a final disposition site, let's take some of the rest of the waste with it. SRS should be using some of this as leverage to negotiate to get some of the things that we've been promised to get off of our land for many, many years to have it go with it. We have a large backlog of things to clean up at the Site. We certainly don't necessarily need more. This is a viable opportunity for the Site to continue its operations. I do believe everything that I've been told with the tours and such, SRS has done everything in our best interest in a very safe manner. They uphold that above everything else and I have been more than pleasantly pleased at what I've learned in the last year visiting the Site, so thank you.

8-2 Con't

MR. BROWN: Thank you. Okay. Rose Hayes and Marilyn Parsons will follow.

DR. HAYES: Thank you. Aside from the safety issues that have been the focus of much of the discussion this evening, I'd like to address the issue of disposition. It's used often in the document, the EA, and it's often used in other official documents. We hear it all the time. It's the end point of the plans that we are constantly given. When I say, we, I served six years on the Department of Energy's Site Specific Advisory Board for SRS and finished my term in 2015. The term is

9-1

misleading to the public. There is no disposition site. There is no federal repository. There is no viable plan for a federal repository. It's like saying we're going to build buildings without toilets. You simply can't offer the public a plan for something as serious as nuclear waste storage and indicate that somehow or another that it eventually will be disposed of when you have no plan whatsoever even on the table for this mythical disposal site. Secondly, the statistics that are provided here tonight are very impressive statistics with high probabilities for safety. Unfortunately, they're computer modeled. You can't test them. You can't verify them. They're simply garbage in, garbage out. That's what we used to say in the government. Thirdly, even if none of this were true, SRS has never been studied, tested, or licensed to be a federal repository. Therefore, it's probably not even legal to be sending all this stuff, whether it's domestic receipt or foreign receipt, to SRS. Fourthly, H-Canyon at one point was going to be taken down to min-safe or shuttered. Congress was going to shut off funds. We on the CAB argued against that point and some people who knew a great deal about that on the CAB, the Citizens Advisory Board, pointed out that first of all, if you took it down to the min-safe, it was so old, we could

9-1 Con't

9-2

9-3

9-4

9-4

probably never bring it back to code.

MR. BROWN: One minute left.

9-4 Con't

DR. HAYES: Thank you. And secondly, that if it simply was aging and then it has, you know, some years left, I guess, but not all that many. And now, today, maybe five or six years later, every time we're gonna have a receipt at SRS, H-Canyon suddenly becomes the solution. H-Canyon is old. It's aging, and its first failure rate or lifespan is probably limited at this point. And fifthly and finally, about the tanks, so many of the process procedures that were discussed here tonight talk about it ends up in the tanks. Well, the tanks are behind schedule. They're leaking. They're ancient. They're underground. One or more is leaking.

9-5

They're actually under threat of a lawsuit by the Governor of South Carolina and, I believe, the Attorney General. To say that we're gonna put more stuff in the tanks, which are a problem into themselves right now, is highly inadvisable, so I recommend that alternative that says, no-action at all at least by the United States.

Thank you.

MARILYN PARSON: I'd just like to pass.

MR. BROWN: Oh, okay. Marilyn Parson?

Okay. Ken, is it Kellum?

MR. KEHR: Kehr.

MR. BROWN: If you're Ken, then you're probably the right guy.

MR. KEHR: Actually, Ken Kehr was my father. I am Ken Kehr, Jr.

MR. BROWN: Oh, okay.

MR. KEHR: And I am on the Board of the North Augusta Chamber of Commerce. Tara Carroll was going to deliver this letter to Ms. Tracy Williams, an EPA Compliance Officer with the U.S. Department of Energy, and she is unable to attend tonight, so she asked me if I would read it on her behalf. Dear Ms. Williams: On behalf of the Board of Directors, staff, and members of the North Augusta Chamber of Commerce, thank you for the opportunity to express our support of the proposal to accept Highly Enriched Uranium from Germany for processing. The Savannah River Site has safely managed nuclear materials for sixty years. We feel it is in the best interest of our national security for SRS to continue leading the charge as demonstrated through technology development by Savannah River National Laboratory. The industry experts at SRNL have and continue to provide high tech innovation that helps to ensure SRS is the safest place to secure and process nuclear materials. As our friends and neighbors, these experts have been vital in creating a culture of

10-1

understanding, acceptance of the missions of the Savannah River Site, and we trust them to keep us safe. Again, thank you for the opportunity to express our support. Sincerely, Tara Carroll, President and CEO of the North Augusta Chamber of Commerce. On a personal note, what I'd like to say as well, I'm a lifelong resident of North Augusta. My dad was in reactor technology for 30-plus years. I grew up concerned about radiation. He assured me over and over again and I saw it through the parents of other children that the dedication and the commitment to excellence. He believed that it was the safest place you could possibly be, and he believed that the mission at that point in time was very, very important. I agree. I think there's much more mission that SRS is going to be able to provide for our community and, indeed, our world. Thank you very much.

MR. BROWN: Thank you. So I need to call the next speaker; it's Ernie Chaput. And Ernie usually needs little warning to be able to speak; right? So you're ready. Okay. Then Laura Lance is next.

MR. CHAPUT: Yes. My name is Ernest Chaput, and I'm a member of the public. I'm here to make about five points about the Draft EIS -- or EA. Excuse me. Number one, we should always remember what the purpose of this program is: it's to reduce the worldwide inventory of

11-1

potentially vulnerable materials, which are capable of being used in nuclear weapons. Highly Enriched Uranium is one of those materials. It's a long standing U.S. policy to consolidate and dispose of that material and that's a good policy. This supports that policy, and I support that policy. Secondly, SRS has the people and the infrastructure to dispose of this material and perform this program safely. Thirdly, I support the additional development activities, which I understand would be the next step, to validate and refine the alternatives and the flow sheets and the impacts and the costs. That's a necessary step that needs to be done and it should be done, so when the final decisions are made, they are made in the light of the best available information. And lastly, I support two additional tasks for the Department to consider. First, I think you need to develop the financial lockbox so that when money does flow, we know it flows to the right places and it stays in here in Savannah River. It's not skimmed off in Washington and elsewhere and secondly, I think there needs to be a look at alternative waste forms, which can increase the options for off-site disposal using existing facilities that might exist, to at least provide some relief to the -- of having to wait for a national repository or deep repository. There should be some more

11-1 Con't

11-2

11-3

11-4

11-5

11-5 Con't

options that we can use that currently exist. Thank you very much.

MR. BROWN: Thank you. Ms. Laura Lance. Rick McLeod will follow.

MS. LANCE: My name is Laura Lance, and I'm here as a citizen not very well versed in speaking. I apologize. Aiken seems to have become the epicenter for the nuclear waste industry, a lucrative high-dollar gain for those who work in shipping, import, and process of radioactive waste, and a win-win for the many countries around the world seeking to dispose of their own deadly or nuclear waste. There's a reason why countries like Germany aren't fighting as some of you are to have waste shipped into their country. They're fighting to get rid of it. Countries like Canada and Japan and the UK, which are as we speak, shipping their waste to Aiken, there's a reason why they're not hording this waste and trying to make a business model of it. Over the past decade or more, our town has been courted by the nuclear waste industry. These corporations -- I'm having to stand on my tiptoes, can you hear me if I don't?

12-1

MR. BROWN: You can bend -- it bends down.

MS. LANCE: Okay. Does that work?

MR. BROWN: That's fine.

MS. LANCE: Okay. I don't want to like yell. Our

12-1

town has been courted over the past, I don't know, ten or fifteen years by the nuclear waste industry. They give big money to charitable efforts and to schools and athletics, and to the professional and campaign coffers of local businesses and politicians, they put out millions in ads and PR to romance the community into accepting this radioactive waste. But this is all about money, and for the most part, the people who embrace this waste, do have moneyed interest in doing so. Going back to the legacy of the existing waste that we have, there was a lot of pay dirt generated in the 30 years of bomb making out at the plant, but not so much money or interest was invested in the necessary technologies for storing and safely storing this waste. Today we're flirting with relearning that lesson. It's being floated under the guise of the nuclear non-proliferation despite that the National Nuclear Security Administration has established that there is no proliferation concern if this material remains in Germany.

MR. BROWN: Ms. Lance, you have one minute.

MS. LANCE: Okay. I think if our heads weren't so easily turned by the money, the people of the community our jobs depend on it and that sort of thing, maybe we really would be asking more questions about the wisdom of trucking this radioactive -- highly radioactive waste

12-1 Con't

12-2

12-3

12-3 Con't

across the ocean with numerous risks that can't be calculated, and also, being trucking and barged inland by -- on rail bed, whatever, where at any point along the way, it is a potential target of sabotage or accident, and ditto once it, you know, safely arrives at the plant. That's an ongoing risk which has yet to be properly calculated. The ongoing nuclear waste shipments to SRS -- and they have been ongoing for years now -- they remind me of the life in the old roach motel ad: they check in, but they don't check out. It's the height of human folly to expect that this waste is going to be brought to Aiken and then be taken to this mythological repository that doesn't yet exist, and as it stands right now, all of the waste that is brought here is ours to keep forever, and there is no amount of money that can make that right.

12-1 Con't

MR. BROWN: Okay. Rick McLeod.

MR. McLEOD: I hope the time doesn't start until I get up there.

MR. BROWN: No, it doesn't. And Susan Parr will be following Rick.

MR. McLEOD: My name is Rick McLeod. I'm the Executive Director of the SRS Community Reuse Organization, and I plan on reading a letter that I'll leave with the court reporter. Our organization, the

Savannah River Site Community Reuse Organization, or SRSCRO, is the U.S. Department of Energy's designated community reuse organization for the Savannah River Site. It is governed by a twenty-two member Board of Directors composed of business, government, and academic leaders from Georgia and South Carolina. The SRSCRO is a 501(c)(3) private non-profit organization charged with developing and implementing a comprehensive strategy to diversify the economy of a designated five county region of Georgia and South Carolina. SRSCRO counties include Aiken, Allendale, and Barnwell in South Carolina and Augusta -- and Richmond-Augusta and also Columbia counties in Georgia. The SRSCRO is focused on the missions at SRS and ensuring the Site maintains its role as part of this nation's natural security structure. It is our understanding that following this public comment period, DOE will either issue a NEPA determination called a FONSI, or Finding of No Significant Impact, or announce its intent to prepare an Environmental Impact Statement. However, even if these actions are taken, they do not constitute a decision by DOE to accept the German material, but will be used to help formulate that decision. We'd like to receive confirmation of this understanding. We believe DOE should strongly consider preparing an EIS due to the duration, complexity, and

13-1

13-1

other uncertainties about the project. As stated during the public scoping meeting, we believe that Savannah

13-2

River Site has the capability to safely handle and process the German HEU. We further support the involvement of the Savannah River National Laboratory and its research efforts related to this program. Furthermore, we understand additional activities must be completed before DOE can make a decision on the acceptance of the German material. These include: 1) irradiated sample testing to confirm anticipated fission products pathways; 2) development of a pilot scale system including the remote handling of the CASTOR casks; 3) a Technology Readiness Assessment to confirm the Engineering Scale of the system has been achieved; and 4) fourth, establishment of a full cost recovery contract with the appropriate government entities. We support waiting on these results before these activities -- results from these activities before a final decision is made. We do believe this project has the potential of rendering the U.S. origin HEU in a form no longer usable for an improvised nuclear device, a radiological

13-3

dispersal device, or other radiological exposure devices. Before any decision is made to accept transport, process, and disposition the HEU compliance with all applicable requirements of U.S. laws and DOE requirements, including

NEPA, must be met and resolution of any technical, financial, and legal issues resolved. If a decision is made to accept this material, it must be under a full cost recovery scenario as mentioned previously.

13-3 Con't

MR. BROWN: Sorry, but is your letter just about over?

MR. McLEOD: It is.

MR. BROWN: Okay. I didn't wanna interrupt, but your time --

MR. McLEOD: This includes the appropriate legal framework or agreements to implement the project. We request such an agreement include a Community Commitment Plan from the German government. Such a plan is part of several existing DOE contracts and is included in the Department of Energy Acquisition Regulation section 970.5226-3 and also in 48CFR970.2673. This project will benefit greatly from its location in South Carolina and from the work force and other resources provided by the region. In recognition of these benefits, the German government should take meaningful action to implement its community commitment as described in those regulations. While we fully support DOE's objective in --

13-3 Con't

MR. BROWN: Excuse me. Is this your last paragraph?

MR. McLEOD: -- pursuing this project, a major concern for our region and state is that the proposed

13-3 Con't

13-3
Con't

nuclear material and other nuclear material currently here or coming to South Carolina -- to SRS will ultimately have a disposition path out of SRS. We appreciate the opportunity for comments. Thank you.

MR. BROWN: Okay. Again, if your statement's gonna run a little longer than three minutes, try and summarize your key points and the court reporter can fill things out. Okay. Susan Parr is our current speaker and Brenda Newman Bancroft will follow.

MS. PARR: Good evening. My name is Sue Parr as in Jack, not Carr. I am the President of the Augusta Metro Chamber of Commerce. Our organization serves as a platform for over a thousand businesses in the CSRA region who wish to voice their opinions on matters of public policy at the local, state, and federal levels. So we appreciate the opportunity to provide some thoughts and comments this evening. For over 60 years, the Savannah River Site has provided outstanding leadership in its missions to manage nuclear materials. Its facilities, human capital, and expertise represent the best in the industry and in many respects, the world. The scientists, researchers, and workers at SRS are our neighbors and friends. We trust them to keep our community safe as they carry out the missions that have been entrusted to them by our nation. In the world of

international nuclear material management, the United States must, without a doubt, assume and maintain a leadership role, especially at a time when we have the capabilities to offer innovation in an increasingly complex environment. As challenges and opportunities mold an ever-evolving industry, we have a responsibility long-term to discover and implement the technologies that will lead to an even safer and stabilized future for nuclear materials. U.S. superiority in developing and implementing technologies that minimize HEU and pioneer the safest and securest disposition of proliferant materials is already being demonstrated at the Site. The HTGR project exemplifies the capabilities of SRS as a preeminent resource our nation and the world can depend on. As the surrounding community, we are very proud of this distinction. We are here this evening to let you know that our community overwhelmingly embraces our role as a region vital to the future of solving some of the world's most difficult problems. Our region has worked very hard to cultivate an environment and culture that supports and understands the importance of Savannah River Site. We believe the relationship between the Site and the community serves as a model for our nation, and for what could be accomplished through education and awareness where value and appreciation for the missions

of the Site grow every day.

MR. BROWN: Okay. You have one minute left.

MS. PARR: Savannah River Site represents a compelling solution for the future of national and international technical leadership in the nuclear industry and is worthy of the opportunity to implement its plan for HTGR. Its unique assets should be valued for the state of our capabilities that they are in maximized for the betterment of our country and our world. Thank you very much.

14-1

MR. BROWN: Okay. Brenda Bancroft and Chris Hall will be next.

MS. BANCROFT: First, I'd like to thank DOE for your presentation, and I am an outsider. I'd like to thank the CAB, the Citizens Advisory Board for sending me their material for the past twenty years. I'd like to go back to something that you said. You mentioned President Eisenhower. Show me the document or tell me where I can find the document where President Eisenhower said that we would be responsible for the material, the spent material. If there's a document out there, a treaty, this is not about non-proliferation. It is not. And if there is a document out there, a treaty that says that we have to accept this material, I would like to see it. If not, because I think the United States should honor their

15-1

treaties, they should do what they say they're going to do. If President Eisenhower said we would be responsible for it, I think we should be responsible for it, but I don't think that document exists. I think that Germany should be responsible for this, and I thought about it before I came here tonight. I am an outsider, but I am a citizen. I'm a grandmother. I've lived in the area for a very long time. I know it means jobs and I'm sorry for that. We are losing jobs in the United States of America. We certainly are, but when it comes to accepting this material, which is not attractive to terrorists, I think that we should go back and look at what the DOE has given us to clean up what we already have at the Savannah River Site. I'm sorry, but that history is not an easy one to look at. We were promised --

MR. BROWN: One minute left.

MS. BANCROFT: One minute. So I'm not for bringing it here. I don't think we should bring it here, and I -- like I said, I'm sorry that we're going to lose jobs, but like we are losing jobs. And it's frightening to come here before you, because I don't know everything that you know, but I do know that when money -- when DOE puts money out there, which you just recently excluded the Savannah River Site when you decided to give money to the

15-1 Con't

15-1 Con't

15-1 Con't

different sites to record the history. Why were we excluded? I don't understand that. I know a lot about history and I know that the people in New Ellington, I hear that history all the time, and it's going to be lost because you excluded the Savannah River Site.

MR. BROWN: If you could wrap it up, please.

MS. BANCROFT: I'm finished and I appreciate your time.

MR. BROWN: Okay. Chris Hall and then Bill Lawless.

MR. HALL: Good evening. My name's Chris Hall, and I'm a resident of Aiken and I'm also the new Chapter Chair for the South Carolina Sierra Club, and my comments reflect both. The Sierra Club in South Carolina is an organization that represents 20,000 members and supporters, and I've come here to express our disapproval for this project. I've got some notes here that I want to read off, but first I want to make a comment on the fact that I've heard several times this evening that we know how to handle it. The only thing I can say to that is tell that to the people of Barnwell. For the last ten years, we've been gauging legal measures against Chem Nuclear as well as South Carolina Department of Health Environmental Control because of a weak area in Barnwell. While we appreciate the long history of the Savannah River Site and its role in the Cold War and defending our

16-1

country, we're also aware of the terrible toxic legacy left behind from that mission. As a community and as a state, we know the importance of clean-up and remediation for all the radioactive and other deadly contaminants created or brought here, and this should be the main focus of our work and of the DOE budget. It is with that in mind that we must voice our opposition to any more waste being brought here. SRS was not built or intended to be a dumping site for the radioactive waste. Already we've received radioactive garbage that we are having trouble getting rid of. Exit strategies are often dependent on available budgets, cooperative partners, legislative and administrative changes, and new regulatory policies. The uncertainty of what to do with all the world's radioactive waste weighs heavily on all citizens with sites like SRS in their backyards. We know the level of expertise and the operative facilities must make it an attractive location to many around the world who simply think it's easier to send their waste to us than to deal with it themselves. But the people of South Carolina are not interested in continuing to be a dumping location in the long chain of nuclear possibilities. Other countries who want nuclear power, nuclear research, or nuclear medical facilities must bear the risk, cost, and burden of the radioactive waste created in these

16-1 Con't

16-1 Con't

processes.

MR. BROWN: One minute.

MR. HALL: These highly industrialized countries are perfectly capable of handling this waste, and by allowing them to shirk their responsibilities, we risk the likely scenario of the U.S. becoming the world's nuclear waste dump. Bringing 900,000 highly radioactive granite spents fuel balls for processing at SRS will only add to the burden of waste at the Site. The people of South Carolina and citizens of Aiken want clean-up, not more waste. Let the people of Germany and all the other countries deal with their own nuclear waste and not look to the U.S. and, specifically, South Carolina and our area here in Aiken as their permanent solution to an unsolvable problem. Thank you.

16-1 Con't

MR. BROWN: Thanks. Okay. Bill Lawless and David Matos is next.

MR. LAWLESS: Hi, my name is Bill Lawless. I teach at Paine College. I live in Augusta, Georgia. I recommend that we take the German's spent nuclear fuel for several reasons. First off, the Savannah River Site is technically qualified. You've got enhanced jobs at the Savannah River Site. It would keep H-Canyon, if that's the option chosen, active. H-Canyon is one of the nation's top assets in this area and it's something that

17-1

17-1 Con't

we should keep active. SRS has the top safety record. SRS has the top environmental record. I've heard some scare stories tonight about the terrible releases that would come if we took this. As a comparison, if you look at just the human body, from health physics society are our bodies naturally radioactive? Yes. So if you sleep with someone in North Augusta, you're gonna be getting more radiation than you will get from the Savannah River Site. It will reduce proliferation. Once processed, this would lead to vitrification. If it's vitrified, it could be disposed at will. It allows the United States to keep its commitment. Some years ago when I was on the Citizens Advisory Board, we worked out a deal with DHEC, that's the Department of Health and Environmental Control, and the Savannah River Site where the -- this was a really nice deal. We would take in one drum of transuranic waste from Mound and other sites and we would send two drums of transuranic waste to WIPP. It was an extraordinary deal and it cleaned up the transuranic waste at the Savannah River Site. We've got rid of --

MR. BROWN: One minute left.

MR. HALL: We got rid of all the waste of -- that was a legacy transuranic waste. So here's the deal I propose. We make a deal on this German spent nuclear fuel. We take it for the right to ship Savannah River

17-2

17-2 Con't

Site vitrify -- it's vitrified high level waste to WIPP, especially it's vitrified high level waste that can be relabeled as transuranic waste, and that's something that the Citizens Advisory Board should take up as a motion. I even heard tonight another scare statement was that there are leaking tanks. That tells me, and I heard this from a former Citizens Advisory Board member -- that tells me that you can be on the Citizens Advisory Board for six years and not learn anything. That's all I've got to say.

MR. BROWN: Okay. Thank you. David Matos. Sandy Haskell will be after David.

MR. MATOS: Good evening. My name is David Matos. I'm a twenty year resident of Aiken County, and I'm also the President of the Carolina Peace Resource Center. It's a non-profit that focuses on peace, justice, and environmental issues. We've been coming to hearings on various DOE projects for many, many years and heard some bad ideas that didn't get through and, unfortunately, I think as it stands, this one is a bad idea. I don't think you can live in Aiken or the area and not understand that once nuclear waste lands somewhere, it is very hard to move it somewhere else, and that seems to be the big problem with this proposal to accept German shipments of Highly Enriched Uranium waste for processing

18-1

at the Savannah River Site. Well, we already have -- you know, they thought by now we would figure out the commercial waste problem. Yucca Mountain has failed. I know people say it's about politics; no, it's because it will leak. WIPP has had a fire. We have problems with WIPP and it was not designed to take the high -- the plutonium legacy wastes that are planned to be sent there. So we still have not figured out this problem and we probably won't figure out that problem any time soon with this new German HEU waste. So we have to honestly consider the possibility that it will be long-term or permanently held at the Savannah River Site and what is the economic liability of that? We heard, you know, it would be the height of irresponsibility for the Germans to ship it to us without us having established how we're gonna deal with the long-term disposal. We need to have a deep geologic isolation of these waste materials and we don't have a means to do it. We have it lined up so this is more waste. We need to clean up and not pile up. I am very concerned with what I heard about them using the tank farms for this, and my understanding of the tank farms issue is that it has been kited so far out to us to finally clean up this and we're having a race against the clock, because we are concerned that the tanks could leak. We are concerned that material could get out, and

18-1
Con't

now we have German nuclear waste that's gonna be cut into somehow this process and we're juggling these balls already with all these tanks, and now we wanna add a million more balls to that juggling act.

MR. BROWN: One minute.

MR. MATOS: Okay. So, you know, there's a lot been said about whether there's a proliferation risk with this waste and stuff like that. I do think the best idea is to keep it where it is at, especially since we don't have an idea of what we're gonna do with it long-term. You know, if there's a proliferation risk, then shipping it by rail via port facilities that are easily surveilled is a risk, and the economic consequences of that being attacked and disbursed in the environment needs to be honestly considered, Charleston's tourism industry and the port industry. Let's look into that. Is it a non-proliferation risk? If it's a non-proliferation risk then it's a risk of being attacked and the materials being released into the environment. It's called shape-charge, not blunt-force, people. That's not the problem there. So thank you very much. We have to consider South Carolina. We have to consider our environment, and we have to consider future generations. We should not accept that waste into our country and into South Carolina without a plan to actually deal with it

18-1 Con't

18-2

18-2 Con't

18-1 Con't

18-1 Con't

permanently and put it somewhere. Thank you.

MR. BROWN: Okay. Thanks. Sandy Haskell and Charles Utley will follow.

MR. HASKELL: Good evening. I'm Sandy Haskell. I'm a native of Aiken County, and I would like to voice my support in bringing the nuclear material to SRS. SRS has demonstrated for over sixty years that they have the ability and the capabilities to safely and efficiently process nuclear material. The Savannah River National Lab is world renowned in their abilities to create technologies and the means to properly and safely also handle nuclear materials. By bringing this material back to the U.S. where it originated, it would hopefully keep the material out of the hands of people that might want to use it for nefarious activities. And the fourth point is the Germans have accepted responsibility economically, which will hopefully minimize the impact to the U.S. tax payer. And with all this, I would voice my support in bringing the material back. Thank you very much.

19-1

MR. BROWN: Thank you. Charles Utley and Glenn Carroll will be next.

MR. UTLEY: Good afternoon. I'm Charles Utley with the Blue Ridge Environmental Defense League and with the Highland Park Improvement Committee. And I stand here before you this afternoon and I'm kinda puzzled for one

thing, because I thought we have had this conversation before where we renownly said that we didn't want any foreign waste, and that it went before the CAB and the CAB said it's -- I just don't know how many times we have to keep bringing it before us, but, however, it's before us again tonight. And I wanna thank Tom Clements if he's still here because I had written a piece, because I thought I was not going to have an opportunity to respond to this request. But, however, it is and I've heard your requests and I noticed you said things that -- you said, a little. There was little effect on the economic, the air, the environmental justice, those who live in proximity. They were little. And I like to look at a little, because for a moment you said, 25,000 tons, a little, that's gonna travel across a big ocean. That's a large impact. If everything was equal, you know what we would be doing tonight? We would be discussing the little impact it has on Bamberg that closed a little hospital that no one seemed to care about. That would be an impact. That's one of the things that I would say if we were really interested in the impact, little has a great deal when you're talking to whomever you're speaking to, and the word little may have a different meaning. It could mean huge. It has a huge impact on those who are with children, those who are looking for

20-1

children, those who desire to have good jobs, and by the way, it's not about jobs. It's not about jobs. It's about the almighty dollar. If we got away with the dollar then we okay with the job. You just said it had very little economic impact. A little, which means it has no impact on the poor man or the one who needs the job, because those who will have the job, are gonna keep the job and that's a huge thing. So it depends on how you use little. So we have to be careful in how we use little because it does have an impact and the one thing we have a little of is a plan. You don't have a plan.

MR. BROWN: You have about one minute left. Sorry.

MR. UTLEY: You have little to no plan, and without a plan, you can't do anything. So I'm gonna say, get a plan, clean it up, and don't come with something little, but come with something huge that is gonna be something that's gonna stay where it is. If you make the mess, my mom say you clean it up. So go clean up your own German waste. I think they are able, I think they are capable, and God knows we don't need it. And good evening.

MR. BROWN: Thank you. Glenn will be followed by Gloria Tatum.

MS. CARROLL: I'm very appreciative of the thoughtful comments I've heard tonight. My name is Glenn Carroll. I'm Coordinator of Nuclear Watch South. We're

20-1 Con't

20-2

20-2 Con't

based in Georgia, and we've come over tonight because Savannah River Site affects Georgian's, too. We have more than a thousand members in our Grassroots Group in Georgia and South Carolina. We say, no nuclear waste imports to Savannah River Site. The Germans are already dealing with these pebbles very effectively in robust casks as waste. What we have seen tonight from the Environment Assessment is sketchy plans to transport and process the spent German fuel to make it into waste.

21-1

Now, the NNSA says it's not a terrorist threat. We've described very hard and iffy maybe processes to get those grains out of some waste that is protecting it right now. We don't know that our government -- unless we get phase two going and those millions more dollars, we don't know if we can get those grains out, why do we think terrorists can get those little itty-bitty grains out and mount them up and hurt us? It's illegal in Germany to export the waste. A little respect for international law. Now, I have been following this and I really didn't think we were gonna have to come out again tonight for this loser idea, but here we are. And I have a credibility issue with DOE. You're calling these reactors research reactors and they are not and this is a legal term and it matters. They're experimental reactors. That's why it's illegal in Germany to export

21-2

21-3

21-3 Con't

21-3 Con't

the waste to the U.S., and the Julich reactor had an accident, so it's all crapped up and that wasn't mentioned and that's a big deal. So I feel like this is very much being misrepresented to the public, but I would like to give a little credit to DOE's marketing plan. We're gonna digest the radioactive waste. Yum, yum. And I'm hungry, we need to get out of here, but I love this one --

MR. BROWN: Okay. You need to wrap it up. You've got a minute.

MS. CARROLL: Vaping is all the rage. What? Bite the radioactive waste. Come on! So I do like the idea of assisting Germany. Do I have time left?

MR. BROWN: Yes, one minute.

MS. CARROLL: Well, let's get this done and eat. Thank you for not bringing the German waste here. We need to get on with it. There's work to be done. Germany is sophisticated. Technically, they are doing a really good job containing the waste now. The no-action alternative is the one. Thank you very much.

21-1 Con't

MR. BROWN: Thank you. Gloria Tatum and Betsy Rivard will follow Gloria.

MS. TATUM: Good evening. My name's Gloria Tatum. I'm an individual citizen, and the Savannah River Site must not become an international nuclear waste dump.

22-1

This is a wet, rainy area where groundwater in some places is only a few feet below the ground. This is not a good area for an international nuclear waste dump site. For over seventy years, scientists have not been able to come up with a solution for a safe long-term -- and by long-term, I mean hundreds of thousands of years, because that's how long it will take to keep some of these elements that are dangerous out of the environment. There's no solution for this nuclear waste. We have some interim solutions, but no long-term solution, and a wet area like Savannah River Site is not a good option.

22-1 Con't

Germany is quite capable of taking care of their own commercial spent fuel. Savannah River doesn't even know how to do that, so why are they bringing it over here? We have -- this would just add more radiation -- radioactive nuclear waste to the already overburdened radioactive waste at Savannah River Site. I mean, maybe they should put the nuclear waste and let people in North Augusta sleep with it, because it seems that sleeping with each other is more dangerous than sleeping with the nuclear waste, so maybe they could put it there in everybody's bed.

22-2

This misguided and dangerous plan to bring more radioactive commercial spent fuel from Germany is not about non-proliferation, it's about money. Money, M-O-N-E-Y. This is what this is about.

22-3

MR. BROWN: You have one minute.

MS. TATUM: Money for everyone along the line from the ships to the transporting it over land to the majority of the people in this room who will make profits off of that to the Savannah National Lab. This is a shameful way to make money by endangering the health of citizens, future generations, and the environment. Anyone who tells you there is little risk of increased cancer from more nuclear waste, they are lying to you. Thank you.

22-4

MR. BROWN: Okay. Betsy Rivard and Susan Corbett.

MS. RIVARD: Hi. I'm Betsy Rivard and I'm from Atlanta. There have been some great comments. I don't know if I can add anything to the wonderful comments that have been made, but I am for the no-action alternative. I think that the German waste should stay in Germany. We don't need more waste in South Carolina. I live in Georgia across the river, I don't really want more waste in South Carolina. I think that there's plenty of work in dealing with the waste that's already at Savannah River Site, and I'm sure there's jobs in that -- cleaning up that waste. I believe that this is against the German law, and I do think that it should be considered commercial nuclear waste and that is something that is illegal in Germany and in the European Union. I think

23-1

23-2

23-3

that there will be a lot of waste created in this taking apart of the graphite balls. I appreciated the illustration about the -- or saying that the very radioactive part would be reduced to the size of a milk carton in, you know, one of these CASTOR casks, but I think that that -- all that graphite is contaminated, so that's gonna take a lot more volume. I wish the slideshow would actually show how much waste is generated in the different options. I think, you know, it's kind of disingenuous to say that, you know, it's only a milk carton full. It's not really quite accurate, I think.

23-3 Con't

And I wonder about these comments what -- I know it's part of NEPA and that the public is allowed to make comments, but what impact do they actually have on the final decision? I would love to know that. That's never been explained to me.

23-4

MR. BROWN: Just one minute left.

MS. RIVARD: Pardon me?

MR. BROWN: One minute.

MS. RIVARD: Okay. Well, I'm pretty much finished. I do think that I probably will feel funny eating black sesame seeds from here on out.

MR. BROWN: Okay. Susan Corbett and Wayne Rickman is next.

MS. CORBETT: Good evening. My name is Susan

Corbett. I live over in Lexington, South Carolina, and I am also on the Board of the Sierra Club Chapter -- South Carolina Chapter. I'll try to get through this. I have four pages, but I will try to speak quickly. I was doing some research today on two international health environmental health groups -- New York-based Blacksmith Institute, Green Cross Switzerland -- indentifying the top toxic pollutants in the world that are putting hundreds of millions of people at risk and they are in no particular order: lead, mercury, arsenic, chromium, pesticides, and radionuclides. Radioactive materials are dangerous. They're carcinogenic, they're toxic. There's no safe level of exposure, and I don't care what bogus comparisons you make about sleeping with someone, it's not the same as ingesting cesium, plutonium, strontium, tritium, or all those other things. The world has a problem with nuclear waste. Nuclear activities have created some of the most dangerous contaminated sites in the world. Places like Cellfield, England, Washington -- Hanford, Washington, Mayak, Russia. The world has also managed to stockpile hundreds of thousands of tons of radioactive spent fuel from commercial reactors, and to date there's really no permanent solution anywhere. If you could go down a list of proposed permanent sites around the world, they're all in discussion, still

locating, talking about it. Onkalo, Finland is probably the only one that's actually being built, so it's easy to understand why a functioning facility like SRS would suddenly become a very attractive target. But I'm here to say that the one solution that we should not be allowed -- that should not be allowed is for the U.S. and specifically for Savannah River is that we are gonna be the end game in this global problem. And I don't think that the Department of Energy should be in the business of targeting our country as the world's nuclear waste repository, nor South Carolina and SRS as the dumping ground for more radioactive garbage. Under various guises such as a country of origin, a nuclear security, the DOE is trying to bring waste in from all over the world, and we have to ask why. In this particular case, the information says that there's no proliferation risk, Germany is a highly sophisticated company and -- country, and even the directive from the NNSA says that we should, quote, help Germany develop and implement an appropriate disposition pathway for this material.

MR. BROWN: Okay. If you can hit your key points within the next minute.

MS. CORBETT: Yes, one more minute.

MR. BROWN: Okay.

MS. CORBETT: We don't think that's a -- that South

24-1

24-2

24-1 Con't

Carolina is an appropriate solution. Let me just say this: Savannah River Site is already one of the most -- I don't know where the people who advocate for bringing this here think it's gonna go. The Yucca Mountain is not gonna open; okay? It has too many problems. WIPP has already exploded in our faces. We can't even keep one site open for fifty years. Where do they think this is gonna go? Savannah River Site is already awash in some of the most contaminated materials, carcogenic, volatile organic compounds, radioactive materials. To allow DOE to dump yet another generation of deadly waste in our state in the hopes that some day we will find another state to be our exit strategy is irresponsible on the part of the DOE. The elected officials and public officials who sanction it and not in keeping with the wishes of the majority of South Carolinians, we say, stop opening the door for nuclear waste, make other countries be responsible for their waste, and we call for the no-action alternative. Thank you.

24-1 Con't

MR. BROWN: Thank you. Okay. Wayne Rickman and Leslie Minerd.

MR. RICKMAN: Hi. I'm Wayne Rickman, and I'm a resident of Aiken, a retired submarine officer, and a member of the Board of CNTA. The Savannah River Site from inception has been in the forefront of national

security among other national defense related roles, their capabilities, their professionalism, and the dedication of the SRS employees is clearly demonstrated in the Vital National Security Program of Non-Proliferation and Nuclear Threat Reduction. With the dissolution of the Soviet Union in 1991, the control and reduction of nuclear materials has been and continues to be of the highest priority. In this case, the U.S. objective, the minimization of Highly Enriched Uranium is met by returning this fuel to the United States for safe storage and stabilization. The stabilization will result in HEU being place in a form no longer usable for improvised nuclear device or radiological dispersion device or other radiological exposure devices. Savannah River Site contains two national assets: the Savannah River National Laboratory and H-Canyon. The Savannah River National Laboratory has and continues to perform at the highest level, securing, packaging, and shipping nuclear materials worldwide. H-Canyon is the only large hardened nuclear material processing facility in the United States capable of disposing of HEU so that it's not usable in any terrorist nuclear device. Given the proven capabilities of Savannah River National Laboratory to design a safe process and a proven credible nuclear operational safety record of the H-Canyon personnel,

25-1

25-1 Con't

these two observations confirms and reinforces the proposal that this important and vital necessary operation should be conducted at SRS. The safety record of the employees at SRS is excellent, and having personally reviewed other DOE sites management safety process, my assessment is that DOE could not have picked a better, safer, more capable site for this necessary non-proliferation mission of securing and stabilization of the nuclear materials, than SRS.

25-2

MR. BROWN: Okay. One more minute.

MR. RICKMAN: This proposal allows the confluence of these two national priorities and principles to combine with the two identical -- two identified national assets here at SRS to reduce the threat margin for the citizens of the United States and allow the world to be a safer place. Thank you.

25-1 Con't

MR. BROWN: Thank you. Okay. It's Leslie, you're next, and Robert Guld will follow.

MS. MINERD: Hi. I'm Leslie Minerd. I live in Columbia, South Carolina, and I'm here to agree with the option of do nothing. The reason is when I hear the expression of German engineering I get this idea of this country that knows what to do with technology and cars, aside from that Jetta TDI I had. Do not buy a Volkswagen TDI. I'm telling you. But other than that, I don't see

26-1

26-1 Con't

why we're having to take their waste. I think it's setting a very bad precedent. If it was Afghanistan or the Democratic Republic of Congo, I would say, you know, maybe, but opening the doors to a country such as Germany for their waste, it's sending a bad signal -- we're easy, which brings us back to what Bill Lawless said. I am renouncing my flesh after what he told me. Anyway, since the failure of that -- okay, back to us being easy.

26-1 Con't

Since of the failure of Yucca, there was the suggestion by I guess it's Argonne National Labs that basically what it boiled down to from my analysis of it was they were suggesting that South Carolina become the new Yucca Mountain, and that's really what we fear. Not only are we going to become the national repository, but this is sending the message that, hey, the heck with that, let's just be the international repository for nuclear waste.

26-1 Con't

And the south -- I know some of you might not agree with this, but I hope y'all are scientifically minded. The planet is warming up, and the prediction is that the Southeast is going to be getting a lot more rain. I just found out the other day in Columbia, South Carolina last year, we received eighty-four inches of rain. My business, which isn't even near a river or a creek, but it's downhill. I'm in this building that's sixteen-feet underground, it flooded for ten days. We are living in a

26-1 Con't

26-1 Con't

wet climate and it's gonna get wetter. This is not a good place to be setting yourself up to be the international repository for nuclear waste.

MR. BROWN: Okay. You got about one minute left.

MS. MINERD: Okay. Yeah, I'm pretty much done. I was just gonna say, yeah, this guy, I think he knows a

26-2

lot more about any of this than most of us here, Mr. Jackson Crocker, and he said says this is not a proliferationing threat, so let's go with that. Thanks.

MR. BROWN: Okay. Thank you. Next, Robert Guld, and Reverend Brendolyn Jenkins Boseman will follow Robert.

MR. GULD: My name is Bob Guld. I practice Environmental Law in Columbia, South Carolina, and I

27-1

volunteer with the Sierra Club. I wanna speak against this proposal and urge that the DOE reject this notion of bringing German nuclear waste to Savannah River Site. I want to endorse the comments I heard from many others. I won't attempt to repeat them. Those opposed in this idea. The point I want to make is this represents in my view a fundamental breach of faith by the Department of

27-2

Energy with the people of South Carolina. They promised us that there was an exit strategy for the high level nuclear waste accumulating in these corroding, leaking steel tanks, and when they agreed to take more of this at

27-2 Con't

a point where they are behind schedule and where they refuse to meet their existing commitments to safely manage the high level waste accumulated already at the Site, that represents a fundamental breach of faith. And although I don't agree with our Governor on much, I must say that the notion of suing the Department of Energy to make them honor their legal commitments to the people of South Carolina is very attractive to me. I think the Environmental Assessment is flawed in many respects. I heard someone say that risk assessments that are based on no actual historic experience and can't be field verified are not of any value, and I think the more than a

27-3

thousand former Department of Energy Savannah River Site workers who died waiting for compensation for the injuries caused by exposure to radioactive materials and other toxins while working at this facility, ought to count for something in your risk calculation instead of the near zero value that you have put by worker and public health risks. That they may put the lie to this Environmental Assessment and you need to reconsider it. In Sierra Club's experience, this represents yet another trail of a series of failed technologies, the leaking tanks, the leaking Chem Nuclear low level waste burial ground that's already contaminating surface streams, having left a plume of tritium over a half mile outside

of the burial trenches.

MR. BROWN: You have one minute left.

MR. GULD: The failure to demonstrate a need for this proposal where the Germans are managing it just fine in secured casks, you want to convert this material that's now safe and secure in solid form into a liquid in the H-Canyon? That is insane. There is no proliferation risk. There's a flawed cost analysis. This represents SRS mission creep in the most extreme. And we heard the honest answer from somebody with the boosters here: hundreds of millions of dollars over several years to manage this stuff. That's what's really this is about. This is about trying to create a mission when you should be cleaning up the mess you already have, and then all you bright folks who work out there, turn your talents to researching clean energy, clean technology. Let's do something good at Savannah River Site instead of proliferating nuclear waste. Thank you.

27-4

27-5

MR. BROWN: Okay. The Reverend Brendolyn Jenkins Boseman.

REV. BOSEMAN: Good evening. I am Reverend Brendolyn Jenkins Boseman. I'm a local pastor in Augusta, Georgia, and I serve as the Executive Director of the Immani Group, a community based non-profit where one of our programmatic areas is environmental justice.

I serve as a community partner on environmental justice issues at Savannah River Site for the EPA, and I'm a former Co-Chair of the Savannah River Site Citizen's Advisory Board, and to my brother and my colleague, I did learn something. I thank you for the opportunity to stand tonight to voice my adamant opposition on the reception and storage of additional spent nuclear fuel from Germany. My reasoning is as follows: We have no place for permanent storage of materials currently at Savannah River Site, much less an inception and the acceptance of one million units, balls, units for -- of
28-1 spent nuclear fuel from another country. Secondly, SRS, my backyard, South Carolina should not be the dumping ground for these materials even as I understand the capacity and competence of the tremendous workforce at Savannah River Site. They are world class employees and we applaud that. Thirdly, we have no clear path for it for geological repository, no path for it for one in the near future. The reception of the spent nuclear fuel
28-2 rods present a potential environmental hazard beyond epic proportions. Fifthly, the transport of these materials
28-3 from our port through communities that do not have shared nor common communicated emergency preparedness plans.
28-4 Six, public health -- the public health impact that is not acceptable even for a minimal increase in

28-4 Con't

28-5 Con't

28-1 Con't

28-6

radiological emissions. The slide said, one in fifty or one in one-hundred. That sounds minimal unless you are the one. Seventh, although SRS may have capacity to store this material, this technology has not been proven successful. My recommendation is provide all the assistance to Germany and allow them to keep the materials there. Finally, the executive order on environmental justice means meaningful involvement of communities, minority and low-income communities, so I stand to invite this body from the Department of Energy to join us as at our next environmental justice community meeting and meaningfully share this information with those impacted communities. Thank you.

MR. BROWN: Thanks very much. That concludes the list of folks who had signed up to speak tonight. We've run a bit over time. I appreciate your patience, and mainly I appreciate people taking the time to come and listen to the -- show and offer your comments. So with that, we are adjourned. Thanks.

(Meeting adjourned at 9:26 p.m.)

///

///

///

///

CERTIFICATE

STATE OF SOUTH CAROLINA

AIKEN COUNTY

I hereby certify that the foregoing meeting transcript, consisting of pages 4 through 66 was taken down by me and transcribed by me and that the same is a true, correct and complete transcript of said meeting.

I further certify that I am a disinterested party to this action and that I am neither of kin nor counsel to any of the parties hereto.

This the 16th day of February, 2016.

Claire R. Netzler, CCR

Certified Court Reporter and

Notary Public