Statement of Intent

between

the Federal Ministry of Education and Research of the Federal Republic of Germany

and

the Ministry for Innovation, Science and Research of the State of North Rhine-Westphalia on behalf of the North Rhine-Westphalian State Government

the Department of Energy of the United States of America

for the Proposed Use of Savannah River Site Facilities for Disposition of German Research Reactor Pebble Bed Fuel

I. Background

1. The Department of Energy (DOE) of the United States of America, in cooperation with the Federal Ministry of Education and Research (BMBF) of the Federal Republic of Germany and the Ministry for Innovation, Science and Research of the State of North Rhine-Westphalia on behalf of the North Rhine-Westphalian State Government (hereinafter collectively "the Participants"), is considering the feasibility of DOE acceptance of graphite-based spent nuclear fuel that contains United States-origin highly enriched uranium (HEU) and has been determined to have been irradiated in Germany for research and development purposes (hereinafter "the German Research Reactor Pebble Bed Fuel" or "the fuel"), and disposition of the fuel using DOE facilities at the Savannah River Site (SRS), near Aiken, South Carolina.

2. DOE's acceptance of the fuel would support the United States' HEU minimization policy objective of seeking to reduce, and eventually to eliminate, HEU from civil commerce by removing United States-origin HEU from Germany and returning it to the United States for safe storage and disposition, and converting it into a form no longer usable for a nuclear weapon or an improvised nuclear material dispersal device. Disposition of the fuel would also contribute to the objectives of the Nuclear Security Summit in 2014.

3. The fuel under consideration is coated HEU/thorium fuel kernels embedded in a spherical graphite matrix used in the early research and development of pebble bed reactors.

4. DOE is considering the feasibility of using H-Canyon facilities at SRS to chemically remove the graphite from the fuel kernels. Based on positive results of research and development done to date, it appears technically feasible to utilize the H-Canyon facilities at SRS to chemically remove the graphite from the fuel kernels by using a molten salt technique being developed by the Savannah River National Laboratory. The remaining fuel kernels could then be processed through the H-Canyon system for disposition.

5. In consideration of the foregoing, the Participants express their willingness to engage in cooperation with the aim of creating the necessary prerequisites no later than the first quarter of 2015 for conclusion of an appropriate legal framework for returning the fuel to the United States.

II. Planned Cooperation

The Participants intend to take the following actions as soon as possible.

1. DOE (or its contractors) is/are to conduct any reviews and work required by United States law for acceptance of the fuel and its processing and disposition. This includes compliance with all applicable requirements of the United States National Environmental Policy Act (NEPA). The Participants share the conviction that a NEPA review should start as soon as possible.

2. The NEPA review is to include preparation of an environmental assessment (EA) to analyze the potential environmental consequences of the proposed acceptance, processing, and disposition of the fuel, and providing notice of DOE's intent to prepare an EA to the States of Georgia and South Carolina, and the general public, and publication of such notice in the United States' *Federal Register*. The EA is to inform DOE's decision whether to issue a finding of no significant impact, which would conclude the NEPA review, or prepare a more detailed environmental impact statement.

3. DOE intends to undertake other activities mutually decided by the Participants, including additional technical and engineering work, and project management, in order for DOE to reach a decision on the proposed acceptance, processing, and disposition of the German Research Reactor Pebble Bed Fuel. The NEPA review and the activities necessary to support NEPA described in this paragraph constitute the preparatory phase.

4. *Forschungszentrum Jülich* (FZJ) is to bear the costs of the preparatory phase work and, if there is a decision to proceed with the project, the costs associated with the acceptance, processing, and disposition of the fuel. DOE and FZJ should finalize as soon as possible a contract for completion of the preparatory phase. If there is a decision to proceed with the project, the terms and conditions for acceptance, processing, and disposition of the fuel should be set forth in a contract, including provisions to be applied in the event of premature termination of the project.

III. General Considerations

1. Cooperative activities under this Statement of Intent are to commence immediately after signature by the Participants.

2. Each Participant is to conduct the activities contemplated by this Statement of Intent in accordance with all applicable laws and regulations and any international agreements to which its government is a party.

3. Cooperative activities under this Statement of Intent are subject to the availability of funds, personnel, and other resources.

4. This Statement of Intent does not create any legally binding obligations between or among the Participants.

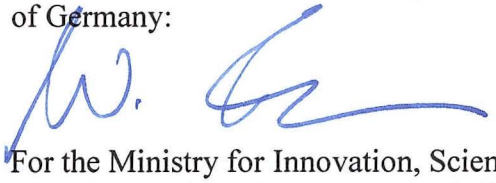
5. This Statement of Intent may be revised at any time in writing by the Participants' mutual consent in writing.

6. The Participants may discontinue this Statement of Intent at any time. A Participant that decides to discontinue its participation in the activities under this Statement of Intent should provide prompt advance notice in writing to the other Participants.

7. Any decision by the Participants to proceed with the transportation of the fuel for storage, processing, and disposition depends upon compliance with all applicable requirements of United States law and DOE requirements, including NEPA, and resolution by the Participants of any technical, financial, and legal issues that may be identified during consideration of the feasibility of the project and development of an appropriate legal framework.

Signed in three originals, at Washington on the 28th day of March 2014 and at Bonn on the 01. day of April 2014.

For the Federal Ministry of Education
and Research of the Federal Republic
of Germany:



For the Ministry for Innovation, Science and Research
of the State of North Rhine-Westphalia
on behalf of the North Rhine-Westphalian State Government:

For the Department of Energy
of the United States of America: