# MEMORANDUM OF UNDERSTANDING BETWEEN SAVANNAH RIVER NUCLEAR SOLUTIONS, LLC As Managing and Operating Contractor for SAVANNAH RIVER NATIONAL LABORATORY AND NUCLEAR PROTECTION PRODUCTS AS

## NUCLEAR PROTECTION PRODUCTS, AS CONCERNING

#### NUCLEAR MATERIAL PACKAGING & MATERIALS SCIENCE TECHNOLOGY

This Memorandum of Understanding (MOU) is between Savannah River Nuclear Solutions, LLC (SRNS) as Managing and Operating Contractor for the US DOE Savannah River National Laboratory (SRNL) under Contract No.DE-AC09-08SR22470, and Nuclear Protection Products, AS (NPP). NPP and SRNS may individually be referred to as a "Participant" or collectively as the "Participants".

### **Background and Purpose**

Almost a decade ago, the U.S. Department of Energy (US DOE) and the Royal Ministry of Petroleum and Energy of the Kingdom of Norway entered into a Memorandum of Understanding to encourage cooperation and enhance relations related to energy research, development, and demonstration. In furtherance of those objectives NPP and SRNS now desire to strengthen their research and development capabilities and explore opportunities for collaboration. NPP is interested in developing and manufacturing the next generation of containers and packages to seal, save, and secure nuclear materials as well as other materials and wastes that are toxic and hazardous. Initiated by an idea to safely store spent fuel from the Norwegian nuclear research reactors at Kieller and Halden, NPP together with Norway's Institute for Energy Technology (IFE) established a strategy to fabricate containers from materials that will not notably deteriorate over time. SRNL is the applied research and development laboratory for the US DOE's Office of Environmental Management. Both Participants are known for their innovative, practical applications of strategies and technologies designed to address major issues affecting national and international environmental issues. In view of these common interests and objectives, the Participants desire to foster scientific and technical collaboration in areas of mutual interest by:

- Exchanging information on results of studies on trends in the fields of Nuclear Material Packaging & Materials Science;
- Visiting the other Participant's facilities;
- Collaborating on alternative container and packaging concepts and designs;
- Conducting and participating in joint scientific meetings:
- Authoring joint publications and presentations; and
- Exploring funding opportunities that benefit both organizations.



#### Areas of Cooperation

Initial efforts are planned to center on:

- Nuclear Material Packaging Development
- Regulatory Package Testing
- Package Maintenance
- Package Certification
- Materials Research

The Participants intend to notify each other of projects on which they can collaborate and provide each other with the necessary information and support reasonably requested by the other Participant to facilitate fulfillment of the objectives of the MOU.

#### **General Considerations**

- Cooperation under this MOU may commence upon signature by both Participants, continue for an initial period of five (5) years, and may be extended for additional periods by the Participants' mutual consent in writing.
- 2. The Participants may revise this MOU at any time by mutual consent in writing.
- 3. The Participants may terminate this MOU at any time by mutual consent in writing. Alternatively, a Participant that wishes to discontinue its participation in this MOU should endeavor to provide at least sixty (60) days advance written notice to the other Participant. In the event of discontinuation, all ongoing joint activities not completed as of the discontinuation date may continue to their completion under the terms of this MOU.
- 4. The Participants intend to pursue the goals and purposes of this MOU in good faith.
- 5. The Participants intend to exchange information in accordance with the information protection requirements set forth in SRNS's contract with US DOE and NPP's operating directives. The Participants acknowledge that neither can undertake activities which are inconsistent with their individual contractual obligations.
- 6. During the course of this MOU, the Participants may wish to exchange information of a proprietary nature. Any such exchange should be made under a separate written Nondisclosure Agreement specific to the subject matter being discussed. No classified information is permitted to be exchanged under this MOU or a subsequent Nondisclosure Agreement. The Participants understand that information shared with SRNS may be subject to the Freedom of Information Act (FOIA), 5 U.S.C. 552a.
- No work or funds are committed under this MOU. Any commitment of work or funds is to be made under a separate agreement following the contracting requirements of each Participant.



- 8. Each Participant is responsible for all costs, risks and liabilities arising from its conduct of the activities contemplated by this MOU. Implementation of this MOU is subject to the availability of funding, personnel, and other resources.
- 9. Information and reports of collaborative activities that are non-proprietary in nature should be made publicly available, in accordance with applicable laws, regulations or a Participant's internal policies. The publication of any such materials by a Participant may be made upon expiration of a thirty (30) day period of review. A Participant should not unreasonably refuse to incorporate revisions to such materials suggested by the other Participant during the said period of review.
- 10. Each Participant should conduct the activities contemplated by this MOU in accordance with applicable laws and regulations to which it is subject, including export control laws.
- 11. This MOU may be transferred from SRNS to US DOE or a US DOE designee without prior approval from NPP. SRNS intends to notify NPP as soon as practicable if a transfer of MOU implementation from SRNS to another party is imminent.
- 12. Conflicts or issues that may arise during implementation of this MOU should be resolved by consultations between the Participants.

Signed in duplicate

FOR SAVANNAH RIVER NUCLEAR SOLUTIONS, LLC:

John W. Temple

Senior Vice President, Contracts Management

7/11/2013

Date:

FOR NUCLEAR PROTECTION PRODUCTS, AS:

Sorgen K H Bertheau

President

Concurrin

Date: 07/1//

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Terry A. Michalske

Director, Savannah River National Laboratory

Date: