

MEMORANDUM OF UNDERSTANDING
BETWEEN
SAVANNAH RIVER NUCLEAR SOLUTIONS, LLC
As Managing and Operating Contractor for
SAVANNAH RIVER NATIONAL LABORATORY
AND
THE INTERNATIONAL UNION OF RADIOECOLOGY
CONCERNING COOPERATION IN THE AREA OF
RADIOECOLOGY

This Memorandum of Understanding (MOU) is between Savannah River Nuclear Solutions, LLC (SRNS) as Managing and Operating Contractor for the U.S. Department of Energy's (US DOE) Savannah River National Laboratory (SRNL) under Contract No. DE-AC09-08SR22470, and the International Union of Radioecology (IUR), an independent, non-political and non-profit professional society, whose registered office is at Grees n°44, 2490 Balen, Belgium (secretariat at Centre d'Etudes de Cadarache-Bât 229, BP 3, 13115 Saint-Paul-lez-Durance, France). IUR and SRNS may individually be referred to as a "Participant" or collectively as the "Participants".

Purpose

There is a mutual interest in promoting cooperation between the National Center for Radioecology (NCoRE), managed by SRNL, and the IUR. NCoRE is operating essentially at regional level as an R&D actor contributing to advance knowledge and understanding in radioecology whilst IUR promotes networking, coordination and linkage at international level such as to consolidate the scientific advancement and to strengthen the recognition of radioecology worldwide as a robust scientific discipline dealing with nuclear risks. Hence, both organizations share essentially the same scientific interests concerned with reaching a better description of environmental radioactivity, and a better understanding of its potential deleterious interaction with humans and ecological systems, irrespective of its actual source (natural or linked to human activities).

As a consequence, both organizations are dealing essentially with similar scientific issues, even though these are differentiated by the respective geographical focus and overall goals, as above mentioned. The Participants therefore recognize that there is a high reciprocal value to construct a stronger linkage between the two organizations, in a way that would also acknowledge their respective identities. In view of these common interests and objectives, the Participants desire to foster scientific and technical collaboration in areas of mutual interest by:

- Promoting the exchange of scientific information, whether through their respective web sites, their respective publications (*e.g.*, reports, newsletters) or the scientific workshops and conferences that they may support.

- Conducting joint activities and participating in joint task groups.
- Promoting the conduct of sound research into all aspects of environmental radioactivity and radioecology, and promoting its publication in the open scientific literature.
- Participating in activities related to creation of a common strategy for development and sustainment of expertise across all scientific disciplines relevant to problems associated with radioactivity in the environment.
- Authoring joint publications and presentations.

As these efforts develop and grow, the formation of alliances between the Participants, and their affiliated institutions, will be evaluated to more broadly support important initiatives in the principal focus areas mentioned above. The Participants will negotiate separate written agreements containing mutually agreeable terms and conditions when collaborative opportunities are identified which will address, among other items, the specific object of cooperation, funding, and protection and allocation of any intellectual property shared or developed.

Areas of Cooperation

Collaboration is encouraged on technical tasks that can assist IUR and SRNS in carrying out their respective missions. Initial efforts are planned to center on specific initiatives, which may include but are not limited to:

- Radiation ecology (including atmospheric, earth and ocean sciences)
- Radiation biology (environmental biology, molecular biology, biodiversity)
- Microbiology and biotechnology
- Environmental modeling (including atmospheric, earth and ocean sciences)
- Ecotoxicology
- Urban Radioecology
- Environmental health physics

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 objective of this MOU.

General Considerations

1. 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 discontinue 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 IUR's operating directives. The Participants acknowledge that neither Participant 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 non-disclosure agreement specific to the subject matter being discussed. No classified information is permitted to be exchanged under this MOU or a subsequent non-disclosure agreement.
7. 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 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. The Participants understand that information shared with SRNS may be subject to public release in accordance with the Freedom of Information Act (FOIA), 5 U.S.C. 552a.
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 IUR. SRNS intends to notify IUR 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.
13. This MOU has been written in English; to the extent any translated version of this MOU conflicts with the English version the Participants acknowledge that the English version will govern.

Key Implementing Officials

International Union of Radioecology - IUR

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President

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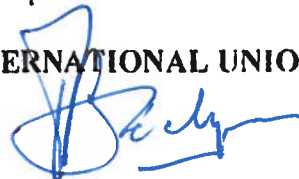
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Signed in duplicate.

FOR INTERNATIONAL UNION OF RADIOECOLOGY



Name: Dr. François Brechignac

Title: President

Date: 24 September 2012

FOR SAVANNAH RIVER NUCLEAR SOLUTIONS, LLC:

John W. Temple

Director, Contracts

Date:

Concurring:

Terry Michalske, Ph.D.

Director, Savannah River National Laboratory

Date:

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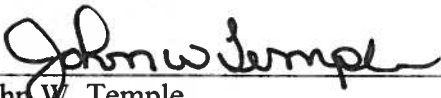
FOR INTERNATIONAL UNION OF RADIOECOLOGY

Name: Dr. François Brechignac

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FOR SAVANNAH RIVER NUCLEAR SOLUTIONS, LLC:



John W. Temple

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