

IMPLEMENTING AGREEMENT
BETWEEN
THE UNITED STATES NUCLEAR REGULATORY COMMISSION
AND
THE STATE OFFICE FOR NUCLEAR SAFETY OF THE CZECH REPUBLIC
RELATING TO
PARTICIPATION IN THE USNRC PROGRAM
OF SEVERE ACCIDENT RESEARCH

This Implementing Agreement is made between the United States Nuclear Regulatory Commission (NRC), and the State Office for Nuclear Safety of the Czech Republic (SUJB) hereinafter referred to as the "Parties":

Considering that the Parties:

1. Have a mutual interest in cooperation in the field of nuclear safety research with the objective of improving and thus ensuring the safety of civilian nuclear installations on an international basis;
2. Recognize a need to equitably share both the resources resulting from this research and the effort required to develop those resources;
3. Have an interest in cooperating in the area of severe accident research, and other related areas of nuclear safety research;
4. Recognize the Arrangement Between the United States Nuclear Regulatory Commission and the SUJB for the Exchange of Technical Information and Cooperation in Regulatory and Safety Research Matters (the Arrangement), which was signed on September 24, 2014, for 5 years, and this cooperation is an implementation thereof.

The Parties have AGREED as follows:

ARTICLE I - PROGRAM COOPERATION

The Parties, in accordance with the provisions of this Implementing Agreement and subject to applicable domestic laws and regulations in force in their respective countries, will join together in the NRC CSARP program and in similar research programs sponsored by SUJB. This

Implementing Agreement is not an international agreement and does not give rise to international legal rights or obligations.

ARTICLE II - FORMS OF COOPERATION

Cooperation between the Parties may include:

- A. The exchange of information in the form of technical reports, experimental data, correspondence, newsletters, visits, joint meetings, and such other means as the Parties agree.
- B. The temporary assignment of personnel of one Party or of its contractors to the laboratory or facilities owned by the other Party or in which it sponsors research. Each assignment shall be considered on a case-by-case basis and will generally require a separate agreement.
- C. The execution of joint programs and projects, including those involving a division of activities between the Parties. Each joint program and project shall be considered on a case-by-case basis and may be the subject of a separate agreement, if determined to be necessary by either of the Parties to this Implementing Agreement or their research organizations. Otherwise, it will be accomplished by an exchange of letters between the research organizations of the Parties, subject at least to the terms and conditions of this present Implementing Agreement.
- D. The use by one Party of facilities that are owned by the other Party or in which research is being sponsored by the other Party; such use of facilities may be subject to commercial terms and conditions.
- E. Visits or assignment of personnel, or use of the facilities owned or operated by entities other than the Parties to this Implementing Agreement; the Parties recognize that prior approval by such entities will, in general, be required regarding terms upon which such visit, assignment, or use shall be made.
- F. Any other form agreed between the Parties.

ARTICLE III - SCOPE OF IMPLEMENTING AGREEMENT

A. NRC Scope of Responsibility

Subject to the availability of appropriated funds, NRC shall provide during the duration of this Implementing Agreement, codes and services related to NRC severe accident safety research program areas specified in Part I of the Appendix.

Within the above guidelines and subject to SUJB's financial contributions as indicated in Article VII, NRC will provide SUJB with the following:

- (a) Copies of all pertinent technical program documents such as quick-look reports, technical memoranda and notes, and laboratory reports as soon as they have received appropriate management review;

- (b) Relevant severe accident codes and related documentation developed under this program and accommodate reasonable requests for assistance from SUJB for support in their implementation and use;
- (c) Permission for personnel sponsored by SUJB to participate in technical program review meetings and technical progress meetings except for those meetings concerned with administrative and fiscal matters.

B. SUJB Scope of Responsibility

SUJB will participate in the CSARP program by a combination of cash payments, as set forth in Article VII below, and technical contributions which will be drawn from the program elements described in the Appendix, Part II, attached hereto and made a part hereof. SUJB will employ its best efforts to perform severe accident research work complementary to the NRC program, subject to the understanding that the objective of SUJB's research program is to address its nuclear safety concerns and issues.

Subject to the availability of appropriated funds and relevant government approvals, SUJB will provide NRC with:

- (a) Results of SUJB research program in severe accidents as described in the Appendix, Part II;
- (b) Copies of reports, technical memoranda, and notes which are derived from its analyses using codes and data obtained from NRC's program, and which are at the disposal of SUJB;
- (c) All updates, modifications, and corrections made by SUJB to codes that have been supplied by NRC and documentation sufficient to enable an evaluation to be made by NRC;
- (d) Timely access to the results of SUJB safety research corresponding to those technical areas which constitute the scope of this cooperation.

ARTICLE IV - ADMINISTRATION OF THE IMPLEMENTING AGREEMENT

- A. The Parties will each designate one representative to coordinate and determine the detailed implementation of this cooperation. These representatives may, at their discretion, delegate this responsibility to the appropriate technical staff within their agencies with respect to a given issue. The designated representatives will be referred to as Administrators of this Implementing Agreement.
- B. This Implementing Agreement sets forth in Article V restrictions concerning dissemination of proprietary, confidential, or privileged information. Other information that may be restricted includes matters related to organization, budget, personnel, or management.
- C. The Parties will endeavor to select technical personnel for assignment to these cooperative programs who can contribute positively to the programs. Technical

personnel assigned to the program will be considered visiting scientists (non-salaried) within the program and will be expected to participate in the conduct of the analyses and experiments of the program as mutually agreed.

- D. Each Party to this Implementing Agreement will have access to all nonproprietary reports written by the other Party's technical personnel assigned to the respective programs that derive from its participation in this Implementing Agreement.
- E. Administrative details concerning questions such as security, indemnity, and liability related to the assignees or trainees will be addressed in personnel assignment agreements between the respective Parties.
- F. Travel costs, living expenses, and salaries of visiting technical personnel or personnel participating in program review meetings will be borne by their respective organizations.

ARTICLE V - EXCHANGE AND USE OF INFORMATION AND INTELLECTUAL PROPERTY

A. General

The Parties support the widest possible dissemination of information provided, created or exchanged under this Implementing Agreement, subject to the requirements of each Party's national laws, regulations and policies and the need to protect proprietary and other sensitive or privileged information, and subject to the provisions of the Intellectual Property Addendum, hereby incorporated into this Agreement.

B. Definitions

1. The term "information" means unclassified nuclear energy-related regulatory, safety, safeguards, waste management, scientific, or technical data, including information on results or methods of assessment, research, and any other knowledge provided, created or exchanged under this Agreement.
2. The term "proprietary information" means information created or made available under this Agreement that contains trade secrets or other privileged or sensitive commercial information (such that the person having the information may derive a commercial benefit from it or may have a commercial advantage over those who do not have it), and may only include information which:
 - (a) has been held in confidence by its owner;
 - (b) is of a type which is customarily held in confidence by its owner;
 - (c) has not been transmitted by the owner to other entities (including the receiving Party) except on the basis that it be held in confidence;
 - (d) is not otherwise available to the receiving Party from another source without restriction on its further dissemination;
 - (e) is not already in the possession of the receiving Party; and

- (f) is otherwise restricted by the provider.
- 3. The term "other confidential or privileged information" means non-classified information, other than "proprietary information," which has been transmitted and received in confidence under this Implementing Agreement and is protected from public disclosure under the laws, regulations, or policies of the country of the Party providing the information, or is otherwise restricted by the provider.

C. Marking Procedures for Documentary Proprietary Information

A Party receiving documentary proprietary information pursuant to this Agreement will respect the privileged nature of such information, provided that such proprietary information is clearly marked with the following (or substantially similar) restrictive legend:

"This document contains proprietary information furnished in confidence under an Agreement dated _____ between the United States Nuclear Regulatory Commission and SUJB and will not be disseminated outside these organizations, their consultants, contractors, and licensees, or concerned departments and agencies of the Government of the United States and the Government of the Czech Republic, without the prior written approval of (name of transmitting Party). This notice will be marked on each page of any reproduction hereof, in whole or in part. These limitations will automatically terminate when this proprietary information is disclosed by the owner without restriction."

This restrictive legend shall be respected by the Parties to this Implementing Agreement. Proprietary information bearing this restrictive legend shall not be made public or otherwise disseminated in any manner unspecified or contrary to the terms of this Implementing Agreement without the prior written consent of the transmitting Party. Proprietary information bearing this restrictive legend shall not be used by the receiving Party or its contractors and consultants for any commercial purposes without the prior written consent of the transmitting Party.

D. Dissemination of Documentary Proprietary Information

- 1. In general, proprietary information received under this Agreement may be disseminated by the receiving Party without prior consent to persons within or employed by the receiving Party, and to concerned Government departments and Government agencies in the country of the receiving Party, provided
 - (a) such dissemination is made on a case-by-case basis to persons or departments and agencies having a legitimate need for the proprietary information; and
 - (b) such proprietary information shall bear the restrictive legend appearing in section C above of this Agreement.
- 2. Proprietary information received under this Agreement may be disseminated by the receiving Party without prior consent to contractors and consultants of the receiving Party located within the geographical limits of that Party's nation,

provided

- (a) that the proprietary information is used by such contractors and consultants only for work within the scope of their contracts with the receiving Party relating to the subject matter of the proprietary information, and shall not be used by such contractors and consultants for any other private commercial purposes; and
 - (b) that such dissemination is made on a case-by-case basis to contractors and consultants having a legitimate need for the proprietary information and who have executed a non-disclosure agreement; and
 - (c) that such proprietary information shall bear the restrictive legend appearing in section C above of this Agreement.
3. With the prior written consent of the Party furnishing proprietary information under this Agreement, the receiving Party may disseminate such proprietary information more widely than otherwise permitted under the terms set forth in this Agreement. The Parties will endeavor to grant such approval to the extent permitted by their respective national laws, regulations and policies, provided
- (a) that the entities receiving proprietary information under Article V of this Agreement, including domestic organizations permitted or licensed by the receiving Party to construct or operate nuclear production or utilization facilities, or to use nuclear materials and radiation sources, have a legitimate need for the proprietary information and have executed a non-disclosure agreement; and
 - (b) that the entities receiving proprietary information under Article V of this Agreement, including domestic organizations permitted or licensed by the receiving Party to construct or operate nuclear production or utilization facilities, shall not use such proprietary information for any private commercial purposes; and
 - (c) that those entities receiving proprietary information under Article V of this Agreement that are domestic organizations permitted or licensed by the receiving Party, agree to use the proprietary information only for activities carried out under or within the terms of their specific permit or license.

E. Marking Procedures for Other Confidential or Privileged Information of a Documentary Nature

A Party receiving under this Agreement other confidential or privileged information shall respect its confidential nature, provided such information is clearly marked so as to indicate its confidential or privileged nature and is accompanied by a statement indicating:

- 1. that the information is protected from public disclosure by the Government of the transmitting Party; and
- 2. that the information is transmitted under the condition that it be maintained in

confidence.

F. Dissemination of Other Confidential or Privileged Information of a Documentary Nature

Other confidential or privileged information may be disseminated in the same manner as that set forth in Paragraph D above, Dissemination of Documentary Proprietary Information.

G. Non-Documentary Proprietary or Other Confidential or Privileged Information

Non-documentary proprietary or other confidential or privileged information provided in seminars and other meetings arranged under this Agreement, or information arising from the attachments of staff, use of facilities, or joint projects shall be treated by the Parties according to the principles specified for documentary information in this Agreement provided however, that the Party communicating such proprietary or other confidential or privileged information has placed the recipient on notice as to the character of the information communicated.

H. Business-Confidential Information

In the event that information identified in a timely fashion as business-confidential is furnished or created under a written arrangement, each Party shall protect such information in accordance with applicable laws, regulations, and administrative practice. Information may be identified as business-confidential if a person having the information may derive an economic benefit from it or may obtain a competitive advantage over those who do not have it, the information is not generally known or publicly available from other sources, and the owner has not previously made the information available without imposing in a timely manner an obligation to keep it confidential. Without prior written consent, neither of the Parties shall disclose any business-confidential information provided by the other Party except to employees and personnel authorized for the specific project pursuant to paragraph D above, Dissemination of Documentary Proprietary Information. All such disclosures shall be for use only within the scope of their contracts or employment with the Parties relating to cooperation under the relevant written arrangement. The Parties shall impose, or shall have imposed, an obligation on those receiving such information to keep it confidential.

I. Consultation

If, for any reason, one of the Parties becomes aware that it will be, or may reasonably be expected to become, unable to meet the non-dissemination provisions of this Agreement, it shall immediately inform the other Party. The Parties shall thereafter consult to define an appropriate course of action.

J. Other Considerations

1. Nothing contained in this Implementing Agreement shall preclude a Party from using or disseminating information received without restriction by a Party from sources outside of this Implementing Agreement.
2. All NRC computer codes disseminated under this Implementing Agreement are to be considered privileged information unless otherwise noted, are protected as

such by NRC and SUJB respectively, and shall be treated likewise by the Parties. They are, in particular, subject to all the provisions of this Article prior to dissemination. The codes are subject to this protection in both object and source forms and as recorded in any media.

3. NRC codes and other related analytical techniques covered under this Implementing Agreement, and any improvements, modifications or updates to such codes or techniques, are for the purpose of reactor and plant systems safety research and licensing and will not be used for commercial purposes, or for other benefits not related to the study of reactor safety without the prior consent of NRC.
4. Among the code uses that will be permitted under this Implementing Agreement are those related to research in the reactor safety area and analyses performed by CSARP members or their contractors that can assist regulators and plant personnel in assessing the safety of the plant, analyzing operating events, and training of operators. Specific examples of permitted analyses include: design basis accidents (e.g., loss-of-coolant-accidents), anticipated transients, accident management and emergency operating procedures, mid-loop operation, analyses to support PRA success criteria, power uprates and reload.

Prohibited uses of the NRC codes include: (1) analyses to develop a new reactor design and (2) analyses to support power uprates and reload in the U.S. unless performed by a U.S. subsidiary.

5. NRC codes and other related analytical techniques will not be advertised directly or by implication to obtain contracts related to the construction or servicing of nuclear facilities, nor shall advertising imply that NRC or SUJB has endorsed any particular analyses or techniques.
6. All reports published within the scope of this Implementing Agreement and all meetings held shall be in English.

ARTICLE VI - DISPUTES AND WARRANTY OF INFORMATION

- A. Information furnished by one Party to the other under this Implementing Agreement will be accurate to the best knowledge and belief of the Party supplying the information. However, the application or use of any information exchanged or transferred between the Parties under this Implementing Agreement will be the responsibility of the Party receiving the information, and the Transmitting Party does not warrant the suitability of the information for any particular use or application.
- B. Neither Party makes any warranties, whatsoever, for the ability or suitability of its codes or other analytical techniques to perform in any particular manner for any particular purpose, or to accomplish any particular task. Neither Party accepts any liability for damages of any type that may result from the use of its codes or other analytical techniques provided under this Implementing Agreement.
- C. Cooperation under this Implementing Agreement will be in accordance with the laws and regulations of the respective countries. Any dispute or questions between the Parties

concerning the interpretation or application of this Implementing Agreement arising during its term will be settled by mutual agreement of the Parties.

ARTICLE VII - FINANCIAL CONSIDERATIONS

- A. All costs arising from this Implementing Agreement will be borne by the Party that incurs them except when the Parties specifically agree otherwise. It is understood that the ability of the Parties to carry out their obligations is subject to the availability of funds. It is also understood that the terms herein agreed to represent feasible commitments according to the best understanding regarding resources and costs of the Parties at the time of signature.
- B. In addition to the in-kind technical contributions identified in Part II of the Appendix and on the date that this Implementing Agreement is signed, SUJB will contribute \$25,000 for the year 2015 and on the anniversary of that date each year for the duration of this five-year agreement.

ARTICLE VIII - FINAL PROVISIONS

- A. This Implementing Agreement will enter into force upon signature and shall remain in effect for a period of 5 years, provided that the underlying Arrangement will be renewed in a timely fashion. This Implementing Agreement may be amended or extended for an additional period of time upon mutual agreement by the Parties.
- B. The Parties enter into this Implementing Agreement with the understanding that reasonable allowances for normal delays will be made in completing the work. The Parties have the right to utilize information provided under this Implementing Agreement after the expiration date; however, all information protected by provisions of this Implementing Agreement as proprietary, confidential, privileged, or otherwise subject to restriction on disclosure will remain so protected indefinitely, unless mutually agreed to in writing.
- C. A Party may terminate this Implementing Agreement after providing the other Party written notice of its intent to terminate 180 days in advance. The Party not terminating will notify the terminating Party before the effective date of termination if termination will result in the terminating Party receiving a disproportionate share of the expected benefit from this Implementing Agreement. Both Parties will endeavor to reach an equitable settlement of the matter through negotiation.
- D. The Parties to this Implementing Agreement reserve the right to modify or extend the specific activities described in Article III within the intended scope of the Implementing Agreement upon written concurrence of its Administrators.

E. If the portion of the research program of any Party that is pertinent to this Implementing Agreement is substantially reduced or eliminated, the technical scope described in Article III may be revised to substitute research of equivalent programmatic interest upon mutual agreement of the Parties.

FOR THE UNITED STATES NUCLEAR
REGULATORY COMMISSION:

BY: Michael F. Weber

NAME: Michael F. Weber
(PRINT)

TITLE: Director
of Nuclear
Regulatory Research

DATE: December 10, 2015

PLACE: Rockville, Maryland

FOR THE STATE OFFICE FOR NUCLEAR
SAFETY OF THE CZECH REPUBLIC:

BY: D. Drabova

NAME: Dana Drabova
(PRINT)

TITLE: Chairman

DATE: January 15, 2016

PLACE: Prague

APPENDIX

Part I. USNRC SEVERE ACCIDENT RESEARCH PROGRAM AREAS

- Integrated Severe Accident Codes
 - MELCOR code development, assessment, and maintenance
 - MELCOR Cooperative Assessment Program (MCAP)
 - MELCOR code workshop
 - MELCOR plug-in for SNAP
 - MELCOR Accident Consequence Code System 2 (MACCS)
 - MELMACCS
 - SECPOP
 - MACCS Code Workshop
- Cooperative severe accident research program (CSARP) annual review meetings
- Symbolic Nuclear Analysis Package (SNAP). SNAP is a graphical user interface and provides a computational environment currently with pre-processor capabilities that assist the user in the development of MELCOR input decks and in running the code. SNAP and the MELCOR plug-in will be provided. Subsequent updates of SNAP and associated documentation that are released during the Implementing Agreement period will also be provided.

APPENDIX

Part II. SÚJB SEVERE ACCIDENT RESEARCH PROGRAM AREAS

- Severe Accident Codes
 - Improved MELCOR analytical models
 - Verification and validation of MELCOR models
 - Improved MACCS analytical models
 - MELCOR supporting tools on input deck preparation and result evaluation

- Severe Accident Code Experience
 - Experiences from analyzing nuclear power plants in the Czech Republic
 - Best practices applied to Severe Accident management analysis for Czech NPPs
 - MELCOR code application to training of technical support center staff

INTELLECTUAL PROPERTY ADDENDUM

Pursuant to Article V of this Agreement:

The Parties shall ensure adequate and effective protection of intellectual property created or furnished under this Agreement and relevant implementing arrangements. The Parties agree to notify one another in a timely fashion of any inventions or copyrighted works arising under this Agreement and to seek protection for such intellectual property in a timely fashion. Rights to such intellectual property shall be allocated as provided in this Addendum.

I. SCOPE

- A. This Addendum is applicable to all cooperative activities undertaken pursuant to this Agreement, except as otherwise specifically agreed by the Parties or their designees.
- B. For purposes of this Agreement, "intellectual property" shall have the meaning found in Article 2 of the Convention Establishing the World Intellectual Property Organization, done at Stockholm, July 14, 1967; viz., "intellectual property" shall include the rights relating to:

- literary, artistic and scientific works,
- performances of artists, phonograms, and broadcasts,
- inventions in all fields of human endeavor,
- scientific discoveries,
- industrial designs,
- trademarks, service marks, and commercial names and designations,
- protection against unfair competition,

and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields."

- C. This Addendum addresses the allocation of rights, interests, and royalties between the Parties. Each party shall ensure that the other Party can obtain rights to intellectual property allocated in accordance with the Addendum by obtaining those rights from its own participants through contracts or other legal means, if necessary. This Addendum does not otherwise alter or prejudice the allocation between a Party and its nationals, which shall be determined by that Party's laws and practices.

- D. Disputes concerning intellectual property arising under this Agreement should be resolved through discussions between the concerned participating institutions or, if necessary, the Parties or their designees. Upon mutual agreement of the Parties, a dispute shall be submitted to an arbitral tribunal for binding arbitration in accordance with the applicable rules of international law. Unless the Parties or their designees agree otherwise in writing, the arbitration rules of the United Nations Commission on International Trade Law (UNCITRAL) shall govern.
- E. Termination or expiration of this Agreement shall not affect rights or obligations under this Addendum.

II. ALLOCATION OF RIGHTS

- A. Each Party shall be entitled to a non-exclusive, irrevocable, royalty-free license in all countries to translate, reproduce, and publicly distribute scientific and technical journal articles, reports, and books directly arising from cooperation under this Agreement. All publicly distributed copies of copyrighted work prepared under this provision shall indicate the names of the authors of the work unless an author explicitly declines to be named.
- B. Rights to all forms of intellectual property, other than those rights described in Section II.A. of this Addendum, shall be allocated as follows:
 - 1. Visiting researchers, for example, scientists visiting primarily in furtherance of their education, shall receive intellectual property rights under the policies of the host institution. In addition, each visiting researcher named as an inventor shall be entitled to share in a portion of any royalties earned by the host institution from the licensing of such intellectual property.
 - 2. (a) For intellectual property created during joint research, for example, when the Parties, participating institutions, or participating personnel have agreed in advance on the scope of work, each Party shall be entitled to obtain all rights and interests in its own country. The Party in whose country the invention was made shall have first option to acquire all rights and interests in third countries. If research is not designated as "joint research", rights to intellectual property arising from the research will be allocated in accordance with Section II.B.1. of this Addendum. In addition, each person named as an inventor shall be entitled to share in a portion of any royalties earned by either institution from the licensing of the property.

(b) Notwithstanding Section II.B.2.(a) of this Addendum, if a type of intellectual property is available under the laws of one Party but not the other Party, the Party whose laws provide for this type of protection shall be entitled to all rights and interests worldwide. Persons named as inventors of the property shall nonetheless be entitled to royalties as provided in Section II.B.2.(a) of this Addendum.