

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, hereinafter referred to as USNRC, and the State Office for Nuclear Safety of the Czech Republic, hereinafter referred to as SÚJB.

Considering that the USNRC and the SÚJB, hereinafter referred to as the Parties:

1. Have a mutual interest in cooperation in the field of severe accident 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. Recognize the Arrangement Between the United States Nuclear Regulatory Commission (USNRC) and the State Office for Nuclear Safety of the Czech Republic (SÚJB) for the Exchange of Technical Information and Cooperation in Nuclear Safety Matters, signed on September 20, 2000, hereinafter referred to as the "Arrangement," and that this safety research cooperation is being undertaken as an implementation of this Arrangement;
4. Recognize that the USNRC and SÚJB have been cooperating in the area of severe accident research under cooperative Implementing Agreements since January 1, 1999, and that this Implementing Agreement continues the cooperation for an additional five years, through December 2009;

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 laws and regulations in force in their respective Countries, will join together in cooperative research for the severe accident research program sponsored by the USNRC and for similar research programs sponsored by the SÚJB.

ARTICLE II - FORMS OF COOPERATION

Cooperation between the Parties may take the following forms:

- A. 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. 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.
- C. 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.
- D. 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. If either Party wishes to visit, assign personnel, or use 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. USNRC Scope of Responsibility

Subject to the availability of appropriated funds, the USNRC will provide the following specified goods and services related to the nuclear reactor safety research area specified in this Implementing Agreement. The USNRC will make available to the SÚJB the results of the severe accident research program described in more detail in Part I of the Technical Appendix to this Implementing Agreement. Subject to SÚJB financial contributions as indicated in Article VI, the USNRC will:

- Provide the SÚJB with 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 USNRC management review.

- Make available to the SÚJB the severe accident codes developed under this program and provide limited assistance to the SÚJB in the application of these codes and other related codes which may be available to the NRC for transfer to the SÚJB.
- Permit personnel sponsored by the SÚJB to participate in technical review meetings and technical progress meetings except for those meetings primarily concerned with administrative and fiscal matters.
- Facilitate visits by personnel sponsored by the SÚJB to sites at which work relevant to the objective is being carried out.
- Permit the assignment of personnel sponsored by the SÚJB to participate and work in the USNRC's severe accident research program and to have full and ready access to relevant documentation, severe accident codes and results as described above.

B. SÚJB Scope of Responsibility

Subject to the availability of appropriated funds, the SÚJB will provide the following specified goods and services related to the nuclear reactor safety research areas specified in this Implementing Agreement:

- The SÚJB will make available to the USNRC results of the research program that is described in more detail in Part II of the Technical Appendix to this Implementing Agreement.
- The SÚJB will participate in the USNRC severe accident program and future related programs in this area of nuclear safety research.
- Assessments will be done by the SÚJB or its contractors in applications of severe accident codes received from the USNRC under the scope of this Implementing Agreement. The assessments will consist of applications done on Czech nuclear power plants. In general, the USNRC is expected to provide limited assistance in the specific SÚJB applications of NRC codes provided under this program.
- The SÚJB will provide the USNRC with comments on general collaboration resulting from SÚJB severe accidents research corresponding to technical areas under the scope of this Implementing Agreement.

ARTICLE IV - ADMINISTRATION OF THE IMPLEMENTING AGREEMENT

- A. The USNRC and the SÚJB will each designate one representative to coordinate and determine the detailed implementation of this Implementing Agreement. These representatives may, at their discretion, delegate this responsibility to the appropriate technical staff with respect to a given issue. The single designated representative will be referred to as an Administrator of this Implementing Agreement. Any notices

required under this Implementing Agreement will be addressed to the Administrators using the most efficient communication method.

- B. The Implementing Agreement provides 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 USNRC and the SÚJB will endeavor to select technical personnel for assignment to these cooperative programs who can contribute positively to the programs. USNRC and SÚJB technical personnel assigned for extended periods will be considered visiting scientists (non-salaried) within the programs in this Implementing Agreement and will be expected to participate in the conduct of the analysis and/or experiments as necessary.
- D. Each Party to this Implementing Agreement will have access to all reports written by its technical personnel assigned to the respective programs that derive from its participation in those programs.
- E. Travel costs, living expenses, and salaries will be borne by the Party who incurred them unless specified otherwise.

ARTICLE V - EXCHANGE AND USE OF INFORMATION AND INTELLECTUAL PROPERTY

A. General

The Parties support the widest possible dissemination of information provided or exchanged under this Implementing Agreement, subject both to the need to protect proprietary or other confidential or privileged information and to the provisions of both Article III and the Intellectual Property Addendum of the Arrangement, which shall govern this Implementing Agreement.

B. Other Considerations

- 1. All USNRC computer codes disseminated under this Implementing Agreement are to be considered privileged information unless otherwise noted, are protected as such by the USNRC, and shall be treated likewise by the SÚJB. They are, in particular, subject to all the provisions of this Article including the requirements for an agreement of confidentiality (Article II.4.b of the Arrangement) prior to dissemination, with the exception that they need not be marked with the restrictive designation. The codes are subject to this protection in both object and source forms and as recorded in any media.
- 2. The USNRC 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 USNRC.

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 the 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, analysis to support PRA success criteria, power upgrades and reload.

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

3. The USNRC 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 will advertising imply that the USNRC has endorsed any particular analyses or techniques.

ARTICLE VI - FINANCIAL CONSIDERATIONS

In addition to the technical contributions indicated under Article III.B., the SÚJB will contribute financially to the NRC program included in this Implementing Agreement. Upon signature of this Implementing Agreement, the SÚJB will pay the USNRC \$10,000.00 U.S. Dollars to participate in the Cooperative Severe Accident Research Program for calendar year 2005. This payment will be followed by annual payment of \$10,000 U.S. Dollars during the month of January 2006 through January 2009. In addition, technical contributions will be provided to the USNRC programs as described in the Technical Appendix (Part II).

ARTICLE VII - DISPUTES AND WARRANTY OF INFORMATION

- A. 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.
- B. Information furnished by one Party to the other under this Implementing Agreement shall be accurate to the best knowledge and belief of the Party supplying the information. However, neither Party gives any warranty as to the accuracy of such information or shall have any responsibility for the consequences of any use to which such information may be put by the other Party or by any third Party.
- C. The USNRC makes no warranties, whatsoever, for the ability or suitability of any USNRC code or other analytical technique to perform in any particular manner for any particular purpose, or to accomplish any particular task. The USNRC accepts no liability for damages of any type that may result from the use of its codes or other analytical techniques provided under this Implementing Agreement.

ARTICLE VIII - OTHER CONSIDERATIONS

- A. In the course of this cooperation, there may be requests by one Party to the other for specific in-kind services beyond the normal implementation of this Implementing Agreement. These requests will be considered on a case-by-case basis and may require specific funding. The requesting Party will cover the additional costs.
- B. All reports published within the scope of this Implementing Agreement and all meetings held will be in English.

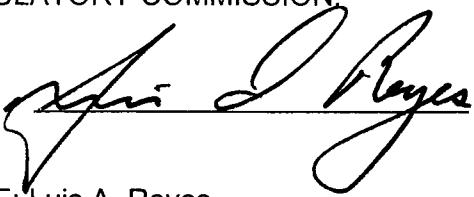
ARTICLE IX - FINAL PROVISIONS

- A. This Implementing Agreement will enter into force upon signature, with effect from January 1, 2005, and shall remain in force for a period of five years, through December 2009, conditioned on the renewal of the Arrangement. If the Arrangement is not renewed this Implementing Agreement will terminate on September 20, 2005.
- B. All information protected by provisions of this Implementing Agreement as proprietary, confidential, privileged, or otherwise subject to restriction on disclosure shall remain so protected indefinitely, unless mutually agreed to in writing. The USNRC and the SÚJB recognize the benefits of international cooperation and will endeavor to obtain a mutually agreeable continuation of this Implementing Agreement before its expiration.
- C. Either Party may withdraw from the present Implementing Agreement after providing the other Party written notice at least 180 days prior to its intended date of withdrawal. The Party not withdrawing shall reserve the right to determine if the withdrawal will result in the other Party receiving a disproportionate share of the expected benefit from this Implementing Agreement. If so, both Parties will endeavor to reach an equitable settlement of the matter through negotiation.
- D. All costs arising from implementation of this Implementing Agreement will be borne by the Party that incurs them except when specifically agreed to otherwise by both Parties.

- E. This Implementing Agreement may be amended by written agreement and concurrence of the Administrators of the Parties.

In WITNESS WHEREOF, the Parties have signed the present Implementing Agreement.

FOR THE UNITED STATES NUCLEAR
REGULATORY COMMISSION:

BY: 

NAME: Luis A. Reyes

TITLE: Executive Director for Operations

DATE: 3/14/05

PLACE: Rockville, Maryland

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

BY: 

NAME: Dana Drabova

TITLE: Chairman

DATE: 4/4/15

PLACE: Prague, Czech Republic

TECHNICAL APPENDIX

PART I: USNRC SEVERE ACCIDENT RESEARCH PROGRAM

1. INTEGRATED SEVERE ACCIDENT CODE

- MELCOR code development, assessment, and maintenance
- MELCOR Cooperative Assessment Program (MCAP)
- MELCOR Code workshop
- Cooperative severe accident research program (CSAERP annual review meeting)

TECHNICAL APPENDIX (contd.)

PART II: SÚJB SEVERE ACCIDENT RESEARCH PROGRAM AREAS

1. Implementation of the last version of the MELCOR code for the specific conditions of VVER-1000/320 and VVER-440/213 Nuclear Reactor designs (i.e., Temelin and Dukovany Nuclear Power Plants).
2. Independent validation of the MELCOR code
 - Code to experiment comparison
 - Code to code comparison
 - Benchmarking
3. Code comparison (MELCOR and CONTAIN) for the case of VVER-1000/320 and VVER-440/213 reactors
4. CONTAIN code quantification for the area of beyond design basis accident (BDBA) analysis.
5. Analysis of the selected experiments by MELCOR, SCDAP/RELAP5, and VICTORIA analytical codes.