

MARVIKEN

STUDSVIK ENERGITEKNIK AB

A G R E E M E N T

ON THE PARTICIPATION OF THE COMPANY PARTNERSHIP,
JAPAN, IN THE MARVIKEN-IV-JIT PROJECT

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A G R E E M E N T

between

TOSHIBA Corporation, being the contracting company on behalf
of the company partnership, Japan,*

and

ONTARIO HYDRO, CANADA
(hereinafter called "OH")

ELECTRIC POWER RESEARCH INSTITUTE, USA
(hereinafter called "EPRI")

STUDSVIK ENERGITEKNIK AB, SWEDEN
(hereinafter called "STUDSVIK")

N.V. TOT KEURING VAN ELECTOTECHNISCHE MATERIAL,
THE NETHERLANDS
(hereinafter called "KEMA")

TECHNICAL RESEARCH CENTRE OF FINLAND, FINLAND
(hereinafter called "VTT")

UNITED STATES NUCLEAR REGULATORY COMMISSION, USA
(hereinafter called "NRC")

hereinafter jointly called "the original contracting parties"

concerning

A JOINT PROJECT FOR PLANNING, DESIGN, EXPERIMENT PREPARATION,
PERFORMANCE AND REPORTING OF REACTOR SAFETY EXPERIMENTS
CONCERNING BLOWDOWN JET IMPINGEMENT LOAD

* The company partnership, Japan includes
TOSHIBA Corporation, HITACHI Ltd and
Tokyo Electric Power Co (TEPCO).

A. PREAMBLE

Considering

- that OH, EPRI, STUDSVIK, KEMA, VTT and NRC have entered into the project pursuant to an agreement signed by

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| OH | on April 16, 1980 |
| EPRI | on May 29, 1980 |
| STUDSVIK | on March 28, 1980 |
| KEMA | on July 14, 1980 |
| VTT | on July 28, 1980 |
| NRC | on June 19, 1980 |

hereinafter called "the initial agreement or the IA" (see attached AGREEMENT MX-IV-JIT),

- the mutual interest of the original parties to and the participation in the project pursuant to Article X of the initial agreement so as to include the company partnership, Japan,

TOSHIBA and the original contracting parties have this day agreed as follows:

B. PURPOSE OF THE AGREEMENT

The purpose of this agreement is to establish cooperation between the company partnership, Japan, and the original contracting parties in the Marviken-IV-JIT project which uses the Marviken reactor for a series of safety experiments. The project comprises a joint program for planning, design, experiment preparation, performance and reporting of reactor safety experiments concerning large scale blowdown jet investigation tests.

C. SCOPE OF THE PROJECT

The scope of the basic Marviken project is described in Article III and Appendices A through F of the initial agreement.

The TOSHIBA participation will make it possible to expand the test program. Thus, the number of tests in the test matrix (Appendix A) will be increased and the measurement system may be expanded by comparison with that described for the basic project (Appendix B).

It is agreed that the expanded test matrix will contain at least one blowdown jet impingement test simulating a steam line break.

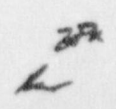
The specific arrangements necessary to provide for such a test and the detailed test conditions will have to be planned by the project, discussed by the project's Technical Advisory Committee (TAC) and approved by the project board.

It is also noted that the company partnership, Japan, has a special interest in the initial phase of the jet impingement tests and therefore requests that the incorporation of measurements which would make it possible to study the initial phase be considered by the project, the TAC and the project board.

D. ORGANIZATION OF THE PROJECT

The organization of the project is described in Article IV and Appendix C of the IA.

TOSHIBA shall appoint one member of the project board and has the right to designate one member to the Technical Advisory Committee (TAC).



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E. TIME SCHEDULE

As stated in Article V of the IA the project started on March 1, 1980.

Due to the participation of YOSHIBA the time schedule in Appendix E of the IA will be revised by the project board.

F. CONTRIBUTION TO THE PROJECT

The company partnership, Japan, undertakes to contribute a sum of 100 million yen for the participation in the project. This cash contribution will increase the project funds by Skr 1.7 million (conversion guaranteed by STUDSVIK).

In addition the company partnership, Japan, will make available upon ^{agreement}~~authorization~~ of TEPCO to all contracting parties the results and information from related small scale experiments which are planned to be performed by the company partnership, Japan.

The voting strength for each party (cf Article VI:2 of the IA) is evaluated on the basis of the cash contribution to the project. Thus, the voting strength of TOSHIBA will be equal to Skr 1.7 million divided by the total cash contribution to the project. The acceptance of further participants will thus reduce the voting strength for all previously committed parties.

The TOSHIBA commitment is conditioned upon the following instalments: 50 million yen on March 31, 1981 and 50 million yen on September 30, 1981.

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Payment of contributions shall be made to Studsvik.

The second paragraph of Article VI:6 of IA does not apply to TOSHIBA.

G. THE PROJECT BUDGET

The project budget for the basic program is described in Article VI and Appendix D of the IA.

Due to the participation of TOSHIBA the budget will be revised by the project board.

H. SUPPLY OF PERSONNEL

The rules for supply of personnel are the same as those outlined in Articles VI:3, VI:4 and VII of the IA.

I. INFORMATION AND USE OF RESULTS INCLUSIVE OF INVENTIONS

The results of the project shall be presented in the form of appropriate progress and final reports as specified in Appendix F of the IA.

All information derived from the project shall be made available to TOSHIBA, including the information from the related programs contributed according to Article VI:2 of the IA or incorporated through the acceptance of further participants.

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Article VIII:3 of the IA is replaced by the following provisions:

TOSHIBA may supply information on project progress and results to the company partnership, Japan. Information may also be submitted to government authorities when required for supporting licensing calculations. Information may not be made available to other organizations, or published, without the consent of the project board. Sixty days shall be allowed for such consent.

The project will not bear any responsibility for information which is not approved by the project board and which is not contained in the project reports as specified in Article VIII:1 of the IA. In such cases the company partnership, Japan, should carefully consider the possible necessity of due reserve provisions regarding the validity of the information with respect to the final total evaluation of the project results.

Prior to the termination of the project, the project board shall decide upon the principles governing the publishing and release of the results. After the project termination and until the date of release questions concerning the publishing of results will be handled by STUDSVIK.

After the date of release decided by the project board, the company partnership, Japan, may publish information derived from the project in Japan.

As regards inventions, Articles VIII:5 through VIII:8 of the IA apply.

J. LIABILITY

Article IX of the IA applies unchanged.

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K. ACCEPTANCE OF FURTHER PARTICIPANTS

If other interested parties wish to join the project, the project board will examine the economic and other conditions of such participation and prepare a recommendation to the original contracting parties. Acceptance of further participants requires unanimous agreement by the project board members of the original contracting parties.

L. UNFORESEEN OCCURRENCES AND THE RIGHT TO WITHDRAW

Article XI of the IA applies unchanged.

M. ARRANGEMENTS FOR TERMINATION OF THE PROJECT

The first paragraph of Article XII is revised to read:
Equipment purchased within the project budget is regarded as being the property of the parties, each having a share which is proportional to the cash contribution.

The rest of Article XII applies unchanged.

N. COVENANT AGAINST CONTINGENT FEES

Article XIII of the IA applies unchanged.

O. DISPUTES

Article XV of the IA applies unchanged.

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This agreement has been signed in seven copies, one for each party.

..... 1980

For TOSHIBA
JAPAN

.....

..... *March 26* 1980

For ONTARIO HYDRO
CANADA

..... *J. F. Morin*

..... *March 2* 1980

For ELECTRIC POWER RESEARCH
INSTITUTE
USA

..... *As Janner*

..... 1980

For STUDEVIK ENERGITEKNIK AB
SWEDEN

..... *13/04* 1980

For N.V. TOT KEURING VAN
ELECTROTECHNISCHE MATERIALEN
THE NETHERLANDS

.....

.....

..... 1980

For TECHNICAL RESEARCH CENTRE
OF FINLAND
FINLAND

..... *MAY 18* 1980

For UNITED STATES NUCLEAR
REGULATORY COMMISSION
USA

..... *W. L. L. L. L.*