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|  |  INTERNATIONALEUROPEAN COMMISSION SCIENCE AND DIRECTORATE-GENERAL 'Research' TECHNOLOGY CENTER |   |

**CONTACT EXPERT GROUP on CORIUM MANAGEMENT (CEG-CM)**

*To:* L.Bellemin (EC RTD-05) *Advice no.:* A-06

*Project code:* # 2936 *Date:* 27th November 2003

*Signatures:* A.Zurita (Chairman) and P.Hofmann (Secretary)

*Linked meeting(s):* - 4th CEG-CM meeting. St.Petersburg, 18-19 September 2003.

*Attending members:* - Adroguer (IRSN); Allelein (GRS); Azarian (FANP); Bottomley (JRC/ITU); Cognet (CEA/DEN/DSNI); Fischer (FANP); Stuckert (FZK), Tromm (FZK); Unger (RUB)

*Copies:*  - CEG-CM members; Gambier and Tocheny (ISTC, Moscow); Forsström (EC RTD-J.4); Veshchunov (IBRAE)

\* Subject: “Modelling of Reactor Core Behaviour under Severe Accident Conditions. Melt Formation, Relocation and Evolution of Molten Pool”.

\* EU Collaborators: IRSN, JRC-ITU and FZK.

\* Documents: Revised Work Plan on “Reactor Core Melting” (short title), November 2003. General description (21 pages) of ISTC project proposal #2936, “Nuclear Safety Institute of Russian Academy of Science”, Moscow.

\* Advice: **EU funding recommended**

\* Justification: Project focused on two topics with very high uncertainties: melt formation and progression in the core as well as melt behaviour in the lower RPV head, treated by the mechanistic codes SVECHA/MELT and CONV, respectively, in which updated and improved physical models will be implemented and verified. The used European codes are integral ones looking to a wider spectrum of severe accident phenomenology, and as such based on more simplified models.

\* Recommendations: A previous recommendation, i.e. modelling on liquefaction of irradiated oxide fuel, has been included in the work plan.

\* Comments: - This project is linked to various EC/FP projects: EURSAFE, COLOSS, ENTHALPY & LACOMERA of the Euratom 5th Framework Programme and the network SARNET in the Euratom 6th Framework Programme. Moreover, it is also linked to the international Phébus FP Programme.

 - The issue of this advice A-06 has been delayed to November due to the later ISTC formal registration of this proposal.

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| Dissemination level : REPU: publicRE: restricted to EC, CEG-CM members, ISTC and CIS beneficiariesCO: confidential, only for EC, CEG-CM members and ISTC |

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