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|  | INTERNATIONAL  EUROPEAN COMMISSION SCIENCE AND  DIRECTORATE-GENERAL 'Research' TECHNOLOGY CENTER |  |

**CONTACT EXPERT GROUP on SEVERE ACCIDENT MANAGEMENT (CEG-SAM)**

*To:* B. Rhode (EC, DG RTD N-3) *Advice no.:* A-10

*Project code:* # 3345 *Date:* 22nd Sept. 2005

*Signatures:* M. Hugon (Chairman) and P.Hofmann (Secretary)

*Linked meeting:*  8th CEG-SAM meeting, Podolsk and Moscow, Russia, September 14-16 2005.

*Attending members:* Allelein (GRS); Altstadt (FZR); Azarian (Framatome-ANP); Bottomley (JRC/ITU);

Clement (IRSN); Ducros (CEA); Dutheillet (EDF); Nie (Framatom-ANP); Hozer

(AEKI); Journeau (CEA); Kim (KAERI); Krause (AECL); Miassoedov, Stuckert,

Tromm (FZK); Thibault (EDF).

*Copies:*  CEG-SAM members; L. Samaniego (EC, DG RTD N-3), S. Webster (EC, DG RTD J-4), L.Tocheny (ISTC, Moscow)

\* Subject: - Proposal of “Ex-Vessel Source Term Analysis” - (EVAN)

ISTC Project # 3345

\* EU Collaborators: - IRSN, ITU, CEA, VTT, GRS, PSI.

\* Documents: - Revised project proposal #3345. “Ex-Vessel Source Term Analysis - EVAN”. Revised parts version Feb 2005. Atomenergoproekt St. Petersburg (SPAEP), NITI, St. Petersburg, CKTI, St. Petersburg, VNIIET, St. Petersburg, & IBRAE, Moscow.

\* Advice: - **EU funding recommended for Phase 1 (priority 1)**

\* Justification: - This project proposal has two phases: Phase 1 lasting 1 year for construction and scoping tests (cost: 350k€) and Phase 2 lasting 2 years for complete test studies (cost: 450k€).

- The group strongly supports the execution of this project aimed at reviewing the scenarios and the parameter used to bound severe reactor accidents and then to examine selected areas of uncertainty. These are the fission product releases from the corium molten pool, the aerosol transport processes that can occur in the primary circuit and finally the iodine behaviour in the containment. These will be examined in an experimental program concentrating on the selected areas with the greatest need for understanding. This data will be applied to improve the available models for these phenomena. The uncertainties in the codes can then be reduced with these new or verified models and finally checked against available integral data. This should contribute to improvement of the prediction of the severe accident codes by a better understanding of the key aspects of source term release. This project brings together five well-known institutes with very experienced personnel in this field and should enable a significant improvement in the understanding and the modelling of both Russian but also Western reactor types. This latter aspect will be particularly achieved by the collaborations with the EU research organisations (see above).

\* Recommendations: - Previous recommendations have been incorporated.

\* Comments: - This project will have close links to the EU SARNET Network of Excellence (FP6) Source Term Cluster.

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| Dissemination level : RE: restricted to EC, CEG-SAM members, ISTC and CIS beneficiaries |